Self-care support of long-term conditions and community pharmacy

A thesis submitted to the University of Manchester for the degree of Doctor of Philosophy in the Faculty of Medical and Human Sciences

2015

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Manchester Pharmacy School
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Abstract

The University of Manchester, Oladapo Joseph Ogunbayo
Doctor of Philosophy
Self-care support of long-term conditions and community pharmacy
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Long-term conditions (LTCs) such as diabetes, cardiovascular diseases, respiratory diseases and cancers are recognised as the greatest challenge facing public healthcare systems globally in the 21st century. Healthcare provision for people with LTCs is shifting towards a model that puts patients at the centre of their own care through supported self-care. Self-care support has emerged as a distinct concept in the management of LTCs and is now considered an inseparable component of high quality healthcare provided by healthcare professionals. People with LTCs are regular users of community pharmacy where dispensing and other services provide opportunities for self-care support. While self-care support as a concept has been explored extensively in health disciplines like nursing, medicine and health psychology, there is a paucity of published literature for self-care support in community pharmacy. The main aim of this programme of work was to explore the place and contribution of community pharmacy in self-care support of LTCs.

A preliminary scoping literature review captured and synthesised the overarching components of self-care support of LTCs into a single theoretical framework consisting of collaborative care planning, self-care information and advice, self-care skills support and training, self-care support networks and self-care technology. The research programme of work employed a mixed methods design consisting of three Work Streams. The qualitative arm of the programme consisted of semi-structured interviews with 24 patients with LTCs and 24 community pharmacists in England and Scotland; these informed the quantitative arm, which was a cross-sectional, online survey of 10,000 community pharmacists in England. The survey instrument was informed and developed from the findings of the pharmacists’ interviews in combination with existing literature. Data collection and analysis in the three work streams incorporated the theoretical framework of self-care support. The qualitative data analyses were undertaken thematically, while quantitative data were analysed using a range of descriptive and inferential statistics.

Interviews with patients explored their ‘lived experience’ with LTCs and found that self-care was an integral part of daily living; patients engaged in self-care in a variety of ways to attain normality in their lives. Patients used a wide range of resources for self-care support; family/carers, friends and healthcare professionals (mainly doctors and nurses). Patients viewed and used community pharmacy mainly for the supply of prescribed medicines and suggested that community pharmacy played minimal roles in self-care support. The interviews and survey of community pharmacists showed that pharmacists recognised the broad range of activities and principles of self-care. However, in terms of pharmacists’ contributions to self-care support, their perspectives were narrower and focussed on providing information and advice on medicines-use to patients, while other activities such as lifestyle advice were provided opportunistically. They indicated that they were already providing medicines-focussed self-care support through the services available in community pharmacy. The theoretical framework allowed detailed exploration of how community pharmacists operationalised the different elements of self-care support of LTCs. Collaborative care planning was viewed as important but not within the remit of community pharmacy. Self-care information and advice was undimensional and provided opportunistically and one-off, using the paternalistic biomedical model. Pharmacists valued the roles of patients’ personal communities but were not proactive in signposting to other support networks. Self-care skills training and support and the use of self-care technologies were limited. Barriers to providing self-care support were priority accorded to dispensing activities, the structure of the community pharmacy contract, lack of incentives to provide self-care support and patients’ expectations and lack of awareness of community pharmacy’s role in LTCs management.

The theoretical framework of self-care support of LTCs provided novel insights into the perspectives of patients and community pharmacists. The findings highlighted the need for a coherent LTC strategy if community pharmacy is to align with the self-care support paradigm. Recommendations are made for a comprehensive package of care, underpinned by self-care support. A case is also made for incorporating the often ‘unheard’ patient voice into community pharmacy research and interventions.
**Declaration**

No portion of the work referred to in the thesis has been submitted in support of an application for another degree or qualification of this or any other university or other institute of learning.

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Dedication

This PhD thesis is dedicated to the memory of my father

Joseph Olakunle Ogunbayo

(18/06/1948 – 06/07/2011)

Who passed away the same year I started the PhD programme.

I love you so much and will never forget you. Rest on dad!
Acknowledgements

Firstly, I say a big thank you to my supervisory team - Dr. Ellen Schafheutle, Professor Christopher Cutts and Professor Peter Noyce. Your time and dedication to this PhD programme made it possible and I can’t thank you enough for your exceptional guidance, direction, and belief in me throughout this PhD journey.

To the members of the pharmacy practice division, Manchester Pharmacy school – academic, research team and the admin team, I say thank you for providing me with the most conducive environment to carry out my research. To all my PhD colleagues and friends – we stood shoulder to shoulder throughout this journey. Many thanks for the peer support, inspiration and encouragement that you provided to me in the course of this PhD programme.

I acknowledge and say thank you to my study participants – community pharmacists and people living with LTCs, and all those that helped with participant recruitment. This programme could not have happened without you. I’m also grateful to Neil Matthews of the CPPE for helping to disseminate the survey used in the programme of work.

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To my mum - your unrelenting and steadfastness in prayers and encouragement kept me strong. To my wonderful brothers – Olanrewaju (Agbaman), Iredele (Darock) and Babaniyi (Smokey); I can’t find the words to express my appreciation. I couldn’t possibly have done this without you. To my sisters, Abiola and Banke, and the next Ogunbayo generation - Elnathan and Ellora of Iwade, Kent and Funminire and Damisire of Ibadan, Nigeria; your love and prayers kept me going.

Finally, I give all thanks and glory to God almighty for keeping me safe, and nourishing me in body, mind and soul before, during and after this PhD programme. I look up to You to continue to guide my steps according to your divine plan for my life.
The author

Dapo was born, and grew up, in Lagos Nigeria. He studied pharmacy for five years at the University of Ibadan where he graduated with a Bachelor of Pharmacy (B.Pharm) degree in 2006. He began his career as an intern pharmacist at the University College Hospital Ibadan. He worked as a community pharmacist during his national service in Ontisha, in the East of Nigeria. After his national service, he worked as a pharmaceutical sales representative with Pfizer Global Specialties, Nigeria and East Africa Region.

Dapo moved to the UK in 2009 where he studied for, and graduated with, a Master of Public Health (MPH) degree at Cardiff University. During his MPH programme, he undertook his dissertation in the area of pharmaceutical public health, working with a consultant in Pharmaceutical Public Health in Public Health Wales. His MPH dissertation experience got him interested in undertaking further research in the field of pharmaceutical public health. He commenced his PhD programme at the Manchester Pharmacy School at the University of Manchester in September 2011.

During his PhD programme, Dapo attended and presented his research at numerous conferences and authored a number of articles in The Pharmaceutical Journal and Research in Social and Administrative Pharmacy. He also contributed to teaching at the Manchester Pharmacy School, working as a teaching assistant and student demonstrator. Dapo was involved in public engagement at the University of Manchester, where he was appointed and worked as a Widening Participation (WP) fellow with the Faculty of Medical and Human Sciences (MHS), and as a tutor on the Manchester Access Programme (MAP). He also got involved in undertaking research and development of e-learning programmes for the Centre for Pharmacy Postgraduate Education (CPPE).

In his free time, Dapo likes to watch movies, TV series and documentaries. He is also likes to play chess and was a member of the University of Manchester Chess Club.
List of published articles and conference contributions

Published articles


Conference contributions

Ogunbayo, OJ, Schafheutle, EI, Cutts, C, Noyce, PR. “You just forget that the pharmacist is actually there…”: Views of people with long-term conditions (LTCs) on using community pharmacy for self-care support. *International Journal of Pharmacy Practice*; 2015: 23 (1) p. 2-27 Wiley Blackwell. Oral presentation at the Health Services Research & Pharmacy Practice Conference; 16th – 17th April 2015; Riddel Hall, Queen's University, Belfast, UK

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Ogunbayo, OJ, Schafheutle, EI, Cutts, C, Noyce, PR. Reframing the contribution of community pharmacy to self-care support. 2012; Manchester. Oral presentation at the Festival of Public Health; 2nd July, 2012: Stopford building, The University of Manchester, Oxford Road, Manchester, UK
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<td>AMS</td>
<td>Acute Medication Service</td>
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<tr>
<td>BMI</td>
<td>Body Mass Index</td>
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<td>BNF</td>
<td>British National Formulary</td>
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<td>CCG</td>
<td>Clinical Commissioning Group</td>
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<tr>
<td>CDSMP</td>
<td>Chronic Disease Self-Management Programme</td>
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<td>CMS</td>
<td>Chronic Medication Service</td>
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<td>COPD</td>
<td>Chronic Obstructive Pulmonary Disease</td>
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<td>CPCF</td>
<td>Community Pharmacy Contractual Framework</td>
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<td>MTM</td>
<td>Medication Therapy Management</td>
</tr>
<tr>
<td>MUR</td>
<td>Medicine Use Review</td>
</tr>
<tr>
<td>NHS</td>
<td>National Health Service</td>
</tr>
<tr>
<td>NMS</td>
<td>New Medicine Service</td>
</tr>
<tr>
<td>OTC</td>
<td>Over-The-Counter</td>
</tr>
<tr>
<td>PACP</td>
<td>Pharmacy Asthma Care Program</td>
</tr>
<tr>
<td>PCT</td>
<td>Primary Care Trust</td>
</tr>
<tr>
<td>PHS</td>
<td>Public Health Service</td>
</tr>
<tr>
<td>PSNC</td>
<td>Pharmaceutical Services Negotiating Committee</td>
</tr>
<tr>
<td>RPS</td>
<td>Royal Pharmaceutical Society</td>
</tr>
<tr>
<td>UK</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>USA</td>
<td>United States of America</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organisation</td>
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</tbody>
</table>
Organisation of thesis chapters

Chapter One describes the background literature that informed the development of this programme of work. It concludes by examining and highlighting the gaps and opportunities in existing literature, providing the premise for undertaking the research programme.

Chapter Two describes the overall programme of work undertaken. An overview of the methodological approach taken in the programme of work and the overall research design are outlined, followed by a detailed description and justification of the research methods of the main studies in the programme of work.

Chapter Three describes the preliminary scoping literature review undertaken that led to the development of a theoretical framework used in the main primary data collection and analysis of the programme of work.

Chapters Four to Six describe the three main empirical studies ('Work Streams') undertaken with each providing its aim and objectives, methods, results and discussion. Chapter Four is Work Stream One (Patients’ interviews), Chapter Five is Work Stream Two (Pharmacists' interviews) and Chapter Six is Work Stream Three (Pharmacists’ survey).

Chapter Seven is the general discussion chapter, which provides a summary of the main findings in context of existing literature and policy. It reflects on the overall strengths and limitations of the programme of work and concludes by describe the implications of the findings for policy and practice.

Chapter Eight provides the conclusion and recommendations that emerged from the programme of work undertaken.
1. Chapter One: Introduction

1.1 Overview
This chapter presents the background literature that informed the development of this programme of work. It provides an overview of the definition and burden of long-term conditions (LTCs) on healthcare systems and how governments and health policy have responded to the challenges of meeting the healthcare needs for LTCs. The chapter also examines and describes key concepts in the literature on self-care support, presenting it as a paradigm shift in the management of LTCs. A broad overview of the role of community pharmacy in relation to LTCs management is then described, and the chapter concludes by examining and highlighting the gaps and opportunities in existing literature on community pharmacy’s roles and involvement in self-care support of LTCs.

1.2 Long-term conditions

1.2.1 Definition and scope
The World Health Organization (WHO) describes a long-term condition (LTC) as a health problem that slowly progresses, has a long duration and rarely resolves completely.\(^1\) Other terms that are also used interchangeably, to describe LTCs include long-term health conditions, long-term illnesses, long-term diseases, chronic diseases, chronic illnesses, chronic conditions and non-communicable diseases.\(^1, 2\) The term “long-term conditions (LTCs)” and the WHO definition will be used for the purpose of this programme of work. While there is no definitive list of all LTCs, and some authors have offered different definitions and delineations in the ways that different terminologies are used,\(^3\) the common theme is that LTCs includes a wide range of health problems that require ongoing and complex management over an extended period of time, or even throughout a person’s lifetime.\(^4\) LTCs include non-communicable diseases such as diabetes, heart disease, asthma, cancers; mental health disorders, such as schizophrenia, depression; and physical deformities such as blindness, amputations, arthritis.\(^1, 2, 5\) Recently communicable diseases like the Human Immunodeficiency Virus and the Acquired Immunodeficiency Syndrome (HIV/AIDS) have also been described as a LTC, with the advent of effective treatments that ensure people now live longer and healthier with it.\(^4\)

1.2.2 Burden of LTCs

1.2.2.1 Mortality
The global burden of infectious diseases has reduced markedly over the last century with the discovery of antibiotics and with advancements in medical technology.\(^6\) However, the global prevalence of LTCs has, and will continue to rise substantially of over the next couple of decades,
with majority occurring in developing countries.\textsuperscript{7} The WHO in its Global status report on non-communicable diseases in 2010 estimates that 63% (about 36 million deaths) of all global deaths in 2008 were due to LTCs comprising mainly of cardiovascular diseases (17 million), cancers (7.6 million), chronic respiratory diseases (4.2 million deaths) and diabetes (1.3 million) (Figure 1.1).\textsuperscript{1} The report indicates that the burden of LTCs have reached epidemic proportions and projects that by 2020, LTCs will be the leading cause of mortality in all countries, except Africa, with a projected 15% global increase between 2010 and 2020. The greatest increases in deaths caused by LTCs will however occur among developing, low- and middle-income countries, populations and communities. While it was widely thought that LTCs like cardiovascular diseases and cancers affected more people in affluent, high-income countries, recent evidence in the WHO report suggests that countries of low and middle-income actually accounted for around 80% of all LTC deaths in 2008.\textsuperscript{1} Even in Africa where infectious diseases and infant and maternal deaths still account for the highest cause of deaths, the burden of LTCs is rapidly increasing and the WHO estimates that LTCs will become the leading cause of deaths by 2030.\textsuperscript{1}

Figure: 1.1 Proportion of global under-70 years deaths due to LTCs in 2008\textsuperscript{1}
In developed countries for example in the European region, LTCs account for the majority of total deaths but the WHO predicts that there will be no significant increase in deaths caused by LTCs. For example in the United Kingdom (UK), LTCs accounted for an estimated 85% of all deaths in 2005 but there was projected decrease of 0.8% in 2015. The reason for this stagnancy in the projected rate of mortality due to LTCs has been attributed to the high levels of social and economic developments reinforced by policy actions and strong health systems to tackle the risk factors associated with mortality due to LTCs. There is however a similar trend in the types of LTCs causing total deaths in the UK, when compared to global statistics as shown in Figure 1.2 below.

![Figure 1.2: Total deaths, both sexes, all ages, in the United Kingdom, 2014](image)

### 1.2.2.2 Morbidity

While mortality data on LTCs are relatively widely available, many countries do not have reliable morbidity data making it difficult to compare global statistics on morbidity due to LTCs. The development of summary measures such as the disability-adjusted life year (DALY) which combine mortality and non-fatal health outcomes to represent and quantify the years of life lost and years of life lived with disability now makes it easy to estimate the contributions of LTCs to the overall burden of disease of a given population. LTCs are the most common causes of disability worldwide and are the most common reason why people seek healthcare, particularly in developed countries.
there is growing recognition that the number of people living with LTCs will increase rapidly due to demographic changes in the population, improvements in medical technology and escalating exposures to risk factors. The rapidly ageing population in developed countries is particularly worrying for health policymakers and health services because the likelihood of developing LTCs increases rapidly with age. The growing impact of LTCs on the utilization and expenditure of healthcare services is a source of major concern for health services worldwide. There is evidence to indicate that health spending on LTCs has been, and will continue to increase over time with the cost of LTCs and their risk factors measured by cost-of-illness ranging from between 0.02% to 6.77% of many countries’ gross domestic product (GDP). LTCs also account for a sizeable chunk of total healthcare spending in most countries. In England for example, an estimated 70% of the total health and social care budget is attributed to caring for people with LTCs. International efforts to combat the global burden of LTCs is being led by the WHO, who together with world leaders agreed on a roadmap and commitments to develop action plans and policies aimed at strengthening national capacity, multi-sectoral action and boosting international cooperation to reduce exposure to risk factors, strengthening health systems and monitor progress in attaining the global NCD targets.

1.2.3 Risk factors of LTCs

There are no single identifiable causes of LTCs, rather, a complex combination of genetic, biological, environmental, behavioural and socioeconomic factors which may affect an individual at different stages of his life, from conception to old age, contributes to development of LTCs. Social inequality is also now being identified as an important contributory risk factor, with evidence suggesting that poorer social groups are at higher risks of developing LTCs over their life course. However, the main risk factors that are strongly associated with developing a LTC across all socioeconomic classes have been grouped into two; modifiable behavioural risk factors and metabolic/physiologic risk factors. The modifiable behavioural risk factors include tobacco use (first and second-hand smoking), harmful use of alcohol, low physical activity and unhealthy diet. Worldwide, tobacco use accounts for an estimated 6 million deaths yearly with a projected increase to 8 million by 2030; low physical activities accounts for 3.2 million deaths yearly; harmful drinking accounts for 3.3 million deaths yearly; while 1.7 million deaths from cardiovascular diseases were attributed to poor diet (e.g. excess salt/sodium intake). These risk factors are now the target of most preventive and control campaigns by the WHO and governments in almost all countries worldwide. Many of these behavioural risk factors also contribute to the widening inequalities in health since socially disadvantaged and vulnerable groups in society are more likely to engage in these behaviours. Exposure to these behavioural risk factors is strongly linked to the development of metabolic/physiologic risks due to the changes that they cause in the body system. The four key metabolic/physiologic risk factors that increase the risks of developing a LTC include high blood
pressure, high blood sugar (hyperglycaemia), high blood cholesterol (hyperlipidaemia) and overweight/obesity.

1.2.4 Prevalence of LTCs in the UK

An estimated 17.5 million people in the UK live with one or more LTCs. This number is projected to more than double by 2030, due mainly to changing demographics and improving medical technology. The most prevalent LTCs in England according to the 2010/2011 Quality and Outcomes Framework (QOF) disease register are hypertension, depression, asthma, diabetes and coronary heart disease. People with LTCs are intensive users of health and social services including community services, urgent and emergency care and acute services. In England for example, people with LTCs account for an estimated 80% of GP consultations and approximately 15% of people who have three or more LTC problems account for nearly 30% of inpatient days in the hospital. These have significant economic costs and implications to the National Health Service (NHS) and the UK economy at large. People with multiple, comorbid LTCs are on the increase due to an ageing population with an attendant increase in the average costs of health and care for managing these multiple/comorbid LTCs. It is projected that the additional spending on health and social care due to LTC comorbidities is likely to increase by about £5 billion in 2018 when compared to 2011. Already, it is estimated that the average health and social care cost per person per year is about £1,000 for a person without a LTC, £3,000 for a person with one LTC, £6,000 for a person with 2 LTCs and almost £8,000 for a person with three or more LTCs. LTCs currently account for 70% of the NHS budget, i.e., £7 for every £10 spent.

1.2.5 Tackling LTCs – interventions and management

The public health challenge of LTCs has prompted extensive research and policy initiatives into innovative and sustainable strategies for providing high-quality and resource-efficient interventions to tackle LTCs. Interventions for tackling LTCs are diverse in nature and there are no literature sources that have provided a clear classification of these interventions. Busse, Blumel and Scheller-Kriensen in their book highlighted four main interventions that policy-makers use in tackling LTCs; prevention and early detection; new providers, settings and qualifications; disease management programmes; and integrated care models. Prevention interventions that target healthy individuals who are at risk of developing a LTC are diverse, complex and often multifaceted. These interventions are usually population-wide interventions that target the determinants and risk factors for the development of LTCs and focus on surveillance and monitoring, prevention and early detection strategies. There is robust evidence of the value of preventive interventions for LTCs; interventions that target the 4 main behavioural risk factors including reducing tobacco use, promoting physical
activity, reducing harmful alcohol use and promoting healthy diets. A detailed review and critique of these preventive interventions is however beyond the scope of this project of work. However, it is important to note that in the UK and other developed countries, these preventive interventions are a crucial part of the overall strategy of providing healthcare for people with LTCs. The remainder of the discussion of interventions for LTCs will focus on the management of LTCs which combines both disease management and integrated care; both conceptualised as being at the two ends of a spectrum of interventions. New providers, settings and qualifications will not be discussed as it is not within the scope of this programme of work, however, references will be made to it in the later part of this thesis.

Interventions that target the ongoing management and treatment of LTCs are perhaps the most ubiquitous of all interventions in the field of medicine and healthcare. These interventions are targeted at people that are already diagnosed with a LTC and/or at high risk of developing a LTC. Management of LTCs is a key component of healthcare and has been a major area of research and policy initiatives over the last couple of decades because of the recognition of the potential challenges of meeting the current and future needs of people with LTCs. While healthcare for LTCs has been predominantly built on the biomedical model which is based on acute, episodic care, it is now well-recognised that this model will not meet the complex, long-term and changing needs of people with LTCs. Management of LTCs is now changing towards a model of care that better coordinates and integrates the care that patients with LTCs receive by bridging the gap between healthcare professionals, health providers and health institutions. There has been a surge in the number of models of care of LTCs in recent years, however, the Chronic Care Model (CCM) is perhaps the most influential model with sufficient evidence of improved quality of care, clinical outcomes and resource-efficiency. The CCM, developed by Edward Wagner and his team in the United States (US) in the late 1990s, recognises the failure of the traditional models that focus on acute care. The CCM focuses on providing an evidence-based, comprehensive framework on how healthcare is organised and provided in primary care to improve health outcomes for people with LTCs. The CCM aims to transform and deliver high-quality healthcare to people with LTCs through a combination of productive interactions between a prepared and proactive healthcare team and an informed and activated patient with LTCs with the effective use of community resources, patient registries and other supportive information systems and technology. The CCM was developed from the evidence synthesis of various disease management programmes and comprises of four interrelating systems of how health care for chronic care should be organized effectively (Figure 1.3): - self-management support; delivery system design; decision support; and clinical information systems.
The CCM has been studied and reviewed extensively in the literature with evidence suggesting that successful implementation of individual and/or multiple elements of the CCM can lead to improvements in the outcomes of effectiveness and cost effectiveness in the care of LTCs.\textsuperscript{32, 34, 37, 39, 40} The CCM has undergone a number of revisions and adaptations to include a number of additional elements, for example, the ‘care model’ introduced cultural competency, patient safety, care coordination, community policies and case management to the CCM,\textsuperscript{32, 41} while the Canadian ‘Expanded Chronic Care Model’ includes population health promotion and prevention components such as socioeconomic determinants of health and improved community participation in healthcare.\textsuperscript{42} The CCM has been highly influential in directing the policy initiatives, service redesign and implementation of strategies for the care of LTCs in many countries.\textsuperscript{32} In the UK, the NHS and Social Care LTC model\textsuperscript{43} outlined in 2005 (Figure 1.4) draws heavily from the CCM in combination with other approaches such as the “Kaiser Triangle” and the Evercare model in the US.\textsuperscript{43}
Self-care support (also self-management support) is an integral pillar of the NHS and Social Care LTC model, the Chronic Care Model and almost all other models of care. Self-care support is also, distinctively and increasingly, becoming a specific model of care on its own, particularly in the clinical interaction between healthcare professionals and patients with LTCs in primary care.\textsuperscript{44-48} The recognition of self-care support as a model in the management of LTCs is fostered by the growing research evidence that patients themselves are an underutilised resource in improving the clinical, economic and humanistic outcomes of healthcare provision for LTCs.\textsuperscript{49} Self-care support is gaining increasing traction as a central component and building block of modern healthcare provision for LTCs with the governments, policymakers, healthcare professionals and patients/patient groups and voluntary organisations now promoting this agenda.\textsuperscript{50} In the UK, self-care support of LTCs is now on top of the policy agenda of the Government as indicated by the myriads of whitepapers outlining strategies for promoting, implementing and incorporating key principles of self-care support as a way of delivering healthcare services in the NHS.\textsuperscript{26, 28, 44, 51-53}

1.3 Self-care support of LTCs

1.3.1 What is self-care?

‘Self-care has been defined by the World Health Organization (WHO) as;
The ability of individuals, families and communities to promote health, prevent disease and maintain health and to cope with illness and disability with or without the support of a health-care provider.\(^{50}\)pp.17

Self-care, the care of oneself, is a part of the day-to-day living of everyone, whether healthy or in ill-health, and ranges from simple actions to promote health such as daily hygienic activities like washing, cleaning and avoiding hazards in the environment, to more complex actions to restore health such as receiving medical treatment and rehabilitation activities.\(^{54}\) The UK Department of Health\(^{55}\) proposed a definition of self-care which, like the WHO definition, explicitly includes the roles of carers and others (family/carers, communities) as part of self-care. While these descriptions may appear simplistic, self-care is more complex and at some point has been referred to as a “movement”, “concept”, “framework”, “model”, “theory”, “process” or “phenomenon.”\(^{56}\) A content analysis of self-care definitions by Godfrey et al. 2011\(^{57}\) found 139 definitions of self-care. The authors also found that over time, the definition of self-care has been expanding and all-encompassing, from being predominantly about individuals, to now including the roles social networks, support systems and healthcare professionals, and proposed that self-care be conceptually viewed as a continuum of care.\(^{57}\)

1.3.2 Delineating ‘self-care’ and ‘self-management’

The terms ‘self-care’ and ‘self-management’ are often used interchangeably to describe the broad range of multidimensional activities and behaviours that people undertake to maintain and improve their health and wellbeing.\(^{25,45,48,50}\) While the terms self-care and self-management have been used extensively both in research and policy literature as concepts with similar and overlapping meanings,\(^{58}\) there are ambiguities in how they are defined and the scope of their usage.\(^{48}\) Self-care is most often used in relation to every individual, whether with a LTC or not, whereas self-management is often used specifically in relation to people with LTCs. Some authors have attempted to provide some clarity as to the conceptual meaning of self-care and self-management and have argued that both terms are conceptually different.\(^{45}\) In a thematic analysis of the conceptualisation of these terms in the LTCs management literature, Jones et al. 2011\(^{59}\) delineated self-care and self-management (Table 1.1) in relation to ‘who is involved’ (population), what is entailed (intervention) and what is achieved (outcome). In terms of population, self-care comprises of a broad network - the individual patient, his/her personal communities and may or may not include healthcare professionals; whereas self-management comprises of more focused networks – the individual patient, peers, support networks and healthcare professionals who are key collaborators. In terms of intervention, self-care is conceptualised as unavoidable but optional, meaning that it may include doing nothing or taking responsibility for health for self; whereas, self-management is inevitable and includes some desirable forms such as effective symptom management, illness-specific behaviours, lifestyle modifications, etc. In terms of outcomes, self-care is conceptualised as targeting prevention or maintenance of health – preventing diseases, maintaining an optimal lifestyle, restoring health and improving existing state of
health; self-management on the other hand is conceptualised as coping or controlling – minimising the impact of LTCs on health and normal functioning, coping with the psychological effect of ill-health, minimising pain, achieving self-efficacy, targeted behaviour changes and using health services appropriately. While there are many generic forms of self-management activities, some of which may be more effective than others, most self-management activities are disease-specific activities that involve ‘collaborative care planning and patient-centred problem solving.’

Table 1.1: Key characteristics and conceptual differences between self-care and self-management (adapted from Jones et al. 2011)

<table>
<thead>
<tr>
<th></th>
<th>Who is involved (population)</th>
<th>What is involved (Intervention)</th>
<th>Goals or targets (Outcomes)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Self-care</strong></td>
<td>Broad network</td>
<td>Unavoidable, but with preventive options</td>
<td>Prevention or maintenance</td>
</tr>
<tr>
<td></td>
<td>The individual alone</td>
<td>May include doing nothing Taking responsibility for health for self, helping others, children, and family</td>
<td>Prevention of disease and accidents, limitation of illness and restoration of health</td>
</tr>
<tr>
<td></td>
<td>Involvement of the person/patient, families, communities in collaboration with healthcare professionals</td>
<td>Asserting personal control, empowerment Managing emotion related to condition Goal attainment and behavioural change</td>
<td>Improvement in the existing state of health which may be a chronic condition Changes in lifestyle, maintenance of optimal levels of health Recovery from minor ailments and after discharge from hospital</td>
</tr>
<tr>
<td></td>
<td>May exclude healthcare professionals</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Self-management</strong></td>
<td>Focused networks</td>
<td>Inevitable, but with desirable forms of Self-management Long-term condition symptom management Generic vs illness specific behavioural tasks</td>
<td>Coping or controlling Minimise impact of CD on physical health status and functioning, and cope with the psychological effect of the illness Minimise pain, preventing complications, patient share in decision-making about treatment, gain a sense of control over their lives</td>
</tr>
<tr>
<td></td>
<td>Patients, peers, healthcare practitioners and support networks</td>
<td>Individual versus group tasks Medical and Role management of the condition Self-regulation/self-monitoring Active participation by person/patient Lifestyle change and education</td>
<td>Initiation or maintaining access to health services and practitioners Targeting change in behaviour</td>
</tr>
<tr>
<td></td>
<td>Healthcare professional is a key collaborator</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Co-ordination of community resources, health care organization</td>
<td></td>
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</tr>
</tbody>
</table>

Some authors have chosen preference for the use of self-management over self-care because self-management is specifically used in relation to people with LTCs. This programme of work chose the term ‘self-care’ because of its broader meaning and usage and to reflect the reality that people living with LTCs will at some point, likely to be in a state of good health and wellbeing regardless of their LTCs. Moreover, from a policy perspective, the UK Department of Health refers to, and uses both ‘self-care’ and ‘self-management’ interchangeably to mean the same thing. Hence, for the purpose
of this thesis, the term ‘self-care’ will be used to mean the same thing as both self-care and self-management. The definition of self-care adopted in this thesis is from the UK Department of Health’s working definition, and is as follows:

“Self-care is a part of daily living. It is the care taken by individuals towards their own health and well-being, and in their role as carers includes the care extended to their children, family, friends and others, whether in their homes, neighbourhoods, local communities, or elsewhere. Self-care includes the actions individuals and carers take for themselves, their children, their families and others to stay fit and maintain good physical and mental health; meet social and psychological needs; prevent illness or accidents; care for minor ailments and long-term conditions; and maintain health and wellbeing after an acute illness or discharge from hospital…”

1.3.3 Self-care support of LTCs

Unlike self-care and self-management, there is less ambiguity in the use of the terms ‘self-care support’ and ‘self-management support’ in the literature and policy as both terms are used interchangeably, although there is no universally accepted definition. This thesis adopted the use of the term ‘self-care support’ and the simplistic definition by the UK Department of Health, and: “Self-care support involves increasing the capacity, confidence and efficacy of the individual for self-care and building social capital in the community.” This definition is broad and reflects the roles played by the wider health and social care system, including healthcare professionals and other community resources outside the health system (e.g. voluntary groups), in self-care support. Self-care support refers to a wide range of systematic programmes, approaches and interventions to engage patients with LTCs to adopt positive self-care behaviours in the management of their health conditions with the aim of empowering patients, promoting their independence and improving their overall quality of life. Self-care support recognises that patients with LTCs are ‘experts’ in living and caring for their conditions since they spend the majority of their time outside the health system. For example, the UK Department of Health estimates patients with diabetes spend only approximately three hours in a year receiving professional care from healthcare professionals and support services, while they spend the remaining 8757 hours engaging in self-care. It is therefore viewed as an imperative to provide a systematic and formal system of support to patients with LTCs to engage in more responsible self-care behaviours that impacts on their health outcomes, such as adhering to their medications and treatment plans, making the desired lifestyle modifications and taking decisions and actions to prevent their LTCs symptoms from escalating and/or develop complications or deteriorate. Self-care support involves coordinated networks that can involve collaboration, partnerships and interactions between patients with LTCs and healthcare professionals, voluntary groups, support networks and the whole health system (for example, in the NHS).
1.3.4 Self-care support and health policy in the UK

Health policy in the NHS and other health systems across the world are responding to the rising tide of LTCs by developing and implementing health policy to transform how healthcare is provided and delivered to patients. The UK government in its Health and Social Care Act 2012 envisions a modern NHS delivering world-class healthcare, built around patients and led by healthcare professionals. Self-care support of LTCs is a key part of this policy drive to move healthcare provision for LTCs towards a truly patient-centred approach and healthcare professionals are expected to lead this drive. In 2002, the Wanless Report into the future of healthcare provision for the future specifically outlined support for self-care as the key approach that could potentially save billions of pounds for the NHS and UK economy. The report suggested that “self-care is one of the best examples of how partnerships between the public and the health service can work.....For every £100 spent on encouraging self-care, around £150 worth of benefits can be delivered in return.” Self-care has since, taken a centre-stage, in the management of LTCs on the UK policy agenda because of the increasing recognition and acceptance of the patient’s roles and responsibilities in achieving improved health outcomes. A number of key government publications on support for self-care have emerged in recent years, outlining the government’s goals of reducing the culture of dependency on the NHS with a focus on harnessing the potential for self-care support. It is recognised that supporting and promoting self-care of LTCs has many potential advantages some of which include; improving patient outcomes (reduced symptoms, improved quality of life), reducing utilization of health and social care services (reduced general practice (GP), accident and emergency (A&E) and hospital and social services) and reducing waste of medications. On the whole, it aims to improve the effectiveness and cost-effectiveness of health services.

A recent evidence synthesis of self-care support interventions for LTCs - the Practical systematic Review of Self-Management Support for long-term conditions (PRISMS) – which was funded by the UK National Institute for Health Research (NIHR) found that self-care support “is inseparable from high-quality care for people with LTCs.” In providing high-quality healthcare services for LTCs, the UK Department of Health views health service delivery as a spectrum of care - self-care of less complex cases of LTCs at one end and professional care of more complex cases of LTCs at the other end. The Department of Health outlines that healthcare provision in primary, secondary and tertiary care is ‘shared care’ between self-care and professional care, although the extent of care received depends on the complexity of the condition being managed. For LTCs, healthcare provision is divided into three levels based on the needs of the population with LTCs (Figure 1.5). The first level is case management which focuses on providing professional care for high risk, complex, multi-morbidity patients who need constant medical care and specialist attention and account for 5% of the population with LTCs. The second level is disease management focuses on providing care for medium risk patients in secondary or tertiary care who account for about 25% of the LTCs population; it involves ‘guideline based primary care’. The third level is self-care support (self-management) for low risk patients in primary care, who make up the majority of people with LTCs; an estimated 70 – 80%
of the population with LTCs. This recognition that self-care support of LTCs in primary care is vital to the NHS has driven the UK government policy agenda towards interventions that promotes its principles among health and social care professionals and the voluntary sector.

![Figure 1.5: The LTCs Pyramid](reproduced from Taylor et al. 2014)

### 1.3.5 Interventions for self-care support of LTCs

Self-care support interventions involve educating and training patients with skills and ability to monitor their conditions and/or to “effect the cognitive, behavioural and emotional responses necessary to maintain a satisfactory quality of life”. Self-care support interventions for LTCs are very broad and diverse but one commonality is that they all emphasise a systematic form of patient-centred collaboration between patients, health professionals and the health system, with the aim of promoting patient activation, education and empowerment. While coordination with the health system is crucial to the provision of self-care support, self-care support can be provided by either healthcare professionals or lay-led support networks, or both, although healthcare professionals are assumed to be a central provider of self-care support.

For most people with LTCs, engaging in self-care can be quite complex and tasking, and most often requires a drastic change in their ways of living. Healthcare professionals are now being
encouraged to play a central role in influencing how patients engage in self-care during their brief interactions and contact with patients. It is considered an ethical imperative for patients to be informed and involved in decisions about their care in consideration of their personal beliefs, and evidence of this indicated benefits of increased patient satisfaction, improved treatment adherence and improved health outcomes. Shared decision-making, patient involvement and patient empowerment are terms that have been used similarly, to describe a paradigm shift in the patient-health professional relationship, where the traditional health professional’s paternalistic approach to medical care is being replaced in favour of forming partnerships with patients and encouraging more patient participation in their medical care.

Lay-led self-care support is a growing area that has gained increasing recognition and wide acceptance since the late 1990s from the ground-breaking work of Kate Lorig and her colleagues on a community-based, generic patient education programme, the Chronic Disease Self-Management Programme (CDSMP). There is now a plethora of evidence of the benefits of variations of the CDSMP for different LTCs, across different cultural and socioeconomic populations and in different countries around the world. In the UK, a variation of the CDSMP introduced in 2001 by the UK Government is the Expert Patient Programme (EPP) which, although has shown some modest benefit of cost-effectiveness and improving health outcomes, the evidence appears to be inconclusive, and has been the subject of many debates in the literature. However, many systematic reviews and randomized controlled trials (RCTs) of a number of disease-specific, CDSMP-based programmes have shown potential benefits of improving patient outcomes and being cost-effective in the short term, although long-term, multicentre studies have not been done.

A whole systems approach to self-care support of LTCs is now being advocated in the UK and has been described as more likely to produce better effects on health outcomes and health services utilization, than single-focussed approaches like the EPP and CDSMP, where only patients are taught self-care skills in classes or lecture-type environments. This approach is said to be more comprehensive and it engages both patients and health professionals as well as the health service organization to support self-care of LTCs. The Whole system Informing Self-management Engagement (WISE) model is an example of the whole systems perspective applied to self-care of LTCs. Evidence from randomised trials using the WISE approach to support self-care in the UK suggests that it significantly improved health outcomes (self-efficacy) and reduced health services utilization, although the authors admitted that its full potential was not fully realised.

Many self-care support interventions target helping patients with LTCs to develop generic skills, although some interventions target skills for specific health conditions. For example, with diabetes, there are programmes for self-care support such as the Diabetes Education and Self-Management for Ongoing and Newly Diagnosed (DESMOND) and the Dose Adjustment For Normal Eating (DAFNE) programmes in diabetes. Many self-care support interventions focus on supporting patients to
develop new skills such as developing problem-solving, goals-setting skills adherence to medications and lifestyle modifications such as healthy diets. In order to help patients to make these behavioural changes and improve their confidence to better live with their condition, many self-care support interventions are underpinned by a wide range of behaviour change techniques such as cognitive behavioural therapy (CBT), behaviour change counselling, health coaching, motivational interviewing and other similar techniques used in clinical psychology, to support and improve self-care of long-term conditions (LTCs). Many of these behaviour change approaches were initially thought to improve mental health-related LTCs such as chronic depression and schizophrenia, however, they are now commonly applied to a wide range of physical LTCs.

1.3.6 Theoretical foundations of self-care support interventions

The fundamental aim of self-care support of LTCs is to influence and change patient behaviours. As stated earlier, patients with LTCs often need to change behaviours to minimise the impact of their LTCs on their daily living, for example, acquiring new skills such as self-monitoring blood pressure or using new devices, modifying existing behaviours such as changing their diets and exercising and giving-up some risky behaviours such as quitting smoking. Many self-care support interventions therefore draw heavily on theories of human behaviour to improve their effectiveness in changing and influencing patient behaviours. Although there are many theories that have been applied to self-care support interventions, these theories are not mutually exclusive; many of them overlap and adopt similar principles; there is no single theory that has been shown to be ideal for any type of self-care interventions. The four most commonly used theories in the context of self-care support of LTCs are the self-regulation or common sense model; social cognitive theory; the theory of planned behaviour and the trans-theoretical (‘stages of change’) model. Other human behaviour theories that have been mentioned in the literature are the rational choice theory, stress-coping framework and self-determination theory. An understanding of whether, and how, these theories are applied to self-care support interventions for LTCs, particularly in primary care, is important in measuring the impact of the interventions on changing patient behaviour. There is a suggestion that the use of behaviour change techniques underpinned by robust theoretical foundations may be lacking in primary care consultations with patients with LTCs.

1.3.7 Patient factors that influence self-care support

Changing patient behaviour has been established as the primary aim of most self-care support interventions that target people with LTCs. Many of these interventions are affected by a combination of complex and interrelated factors that affect peoples’ lives and their ability and willingness to undertake and engage in self-care behaviours. These factors determine and influence if, and how, patients change behaviours and the effectiveness of self-care support interventions. Some of these
factors include; patients’ confidence to engage in self-care (self-efficacy), patients’ motivations, beliefs and values, patients’ characteristics (type of LTCs, demography, socioeconomic status, ethnicity, culture, religion, etc.), patients’ health literacy and availability and access to self-care technology/assistive devices.  

Self-efficacy is an important indicator used to measure improvement in self-care behaviours in many self-care support interventions. Self-efficacy is a concept based on the social cognitive theory, that describes the “belief in one’s capability to organize and execute the course of action required to produce given attainments”. In relation to self-care of LTCs, self-efficacy has evolved to become a significant outcome of many programmes/interventions, since it is believed that improving self efficacy in people with LTCs will improve their confidence to carry out the desired self-care changes, which would improve their health outcomes. Many self-care and patient education programs use improved self efficacy as an outcome measure in the design of their programmes, including the EPP in the UK. While it is generally accepted that improved self efficacy is valued by people with LTCs and is important in influencing self-care behaviour change, some questions have been raised around its focus as a key outcome measure and its significance to patients (compared to other outcomes such as reduced symptoms), as well as its long term effectiveness.

Motivation to engage in self-care is also an important factor that influences self-care behaviours among people with LTCs; people who are not motivated or ‘activated’ may not benefit from programmes targeting improved behaviour change and self-efficacy. Many self-care support programmes and interventions such as the EPP have been criticised for targeting people that are already motivated and already engaging in positive self-care behaviours. Motivation to engage in self-care may be affected by an individual’s perception of his symptoms, cause and consequences of ill-health, beliefs in the effectiveness of self-care practices, and other personal values such as religious and cultural values. A study investigating factors that motivate people with LTC to engage in self-care behaviours identified an interconnecting range of internal factors such as the desire to live independently and in good health and wellness, and external factors such as interactions with family, friends and health professionals.

People with LTCs have diverse characteristics such as differences in health status, age, education, socioeconomic status and race/ethnicity, with different patients requiring different levels of self-care support. Some people such as those with multiple/co-morbid LTCs, the elderly and those with severe disabilities or impairments often require a more complex range of self-care activities, and are most often excluded or may find some of the common self-care support programmes irrelevant to them. For example, obese patients who have diabetes with coexisting arthritis may not be able to engage in self-care programmes promoting physical activities and exercises. A number of generic self-care support programmes such as the CDSMP and EPP have proven to be effective in improving problem-solving skills and patient confidence (self-efficacy), but a crucial drawback that has
been highlighted is that they may not appeal to socially and educationally disadvantaged groups in society, and may worsen health inequalities.\textsuperscript{54}

Health literacy is another important factor that influences self-care and self-care support interventions. Patient education is the fundamental component of many self-care support programmes, which involves teaching skills and improving the understanding of patients about their LTCs and ways of managing and living with it, in order to achieve positive health outcomes.\textsuperscript{143, 144} Some self-care practices are often complex and require advanced educational needs, for example, some diabetic people have to combine the use of home glucose monitoring devices, while trying to modify their diets and lifestyle, and may also be required to use insulin injections.\textsuperscript{143} While patients' knowledge of their condition is important in ensuring that they engage in self-care, it does not necessarily predict poorer health outcomes.\textsuperscript{145} People with limited levels of health literacy are more likely to have difficulties in understanding, or tend to misunderstand, complex health information written on materials such as pamphlets, leaflets, medication labels, consent forms, electronically etc.\textsuperscript{146, 147} While some reports have suggested that health literacy is an independent factor for poor health outcomes in people with LTCs,\textsuperscript{148, 149} others have associated low/limited health literacy with ethnicity, age and education.\textsuperscript{150} This is very important from a public health perspective since a greater number of people with LTCs are more likely to be from socially and economically-disadvantaged populations, who are also more likely to have a generally lower level of health literacy. Consequently, public health research and interventions involved in self-care support of LTCs have been described as capable of either reducing or worsening health inequalities.\textsuperscript{151} Health literacy has however been described as an under-examined mechanism/factor in health inequalities.\textsuperscript{151, 152}

Modern healthcare systems are technology-driven and the use of assisted-living technology, monitoring devices, web-based self-management tools, mobile technology applications and telephone-based support services is fast becoming a key component of self-care support for LTCs.\textsuperscript{153, 154} Information and communication technology (ICT) is currently used in a wide range of self-care activities supporting patients with LTCs, for example, in self-monitoring (tele-monitoring) blood sugar levels among diabetic patients,\textsuperscript{155} self-education and tele-caring of asthmatics and other telephone-based support services, e.g. NHS Direct.\textsuperscript{156} The scope of extending the use of ICT infrastructures and other technologies to support self-care of LTCs is very wide and fast-developing.

1.4 Community pharmacy in the UK

1.4.1 Community pharmacy and the NHS

The NHS in the UK, since it was founded in 1948, has undergone significant reforms by successive governments in order to meet the burgeoning needs of the population. In recent times, the NHS has been undergoing major reforms because of rising demands and treatment cost due to an ageing
population and the need to continue to provide expensive, high quality healthcare in the face of a very challenging financial and economic climate. These reforms have significant ramifications to organisation, funding and provision of pharmaceutical services by community pharmacy. The most radical reforms to the NHS are currently taking place in England, where the Health and Social Care Act 2012 introduced major changes that led to the abolishment of Primary Care Trusts (PCTs) which used to be responsible for organising primary healthcare services, including commissioning (planning and payment) of most community pharmacy services. The main organisations that now oversee commissioning of community pharmacy services in England include; NHS England – responsible for national and enhanced/local services; Clinical Commissioning Groups (CCGs) – responsible for commissioning local health services (not public health); and Local Authorities in conjunction with Public Health England – responsible for commissioning public health services.

1.4.2 Community pharmacy and healthcare provision in the NHS

The roles of community pharmacists as primary healthcare providers in the UK has evolved extensively over time and their potential to further contribute more significantly is continuously being recognized. The development of community pharmacy as a healthcare profession in Great Britain can be traced back to the compounding and dispensing of medicines by ‘apothecaries’ in the 13th century, to the combination and extension of the roles of chemists and druggists in the early 19th century where shops were set up to provide advice to the general public in addition to supplying them with drugs and chemicals. The establishment of the Pharmaceutical Society of Great Britain in 1841 and the introduction of examinations and registrations during the mid-nineteenth century marked the beginning of modern day community pharmacy as a healthcare profession in Great Britain. During this period, community pharmacy contributed to healthcare provision by compounding and selling medicines and other commodities, dispensing limited numbers of prescriptions and being a ready source of information and advice to the general public who could not pay to see a doctor.

The founding of the NHS in 1948 together with the rapid rise in the number of medicines in ready-to-use forms such as tablets and capsules during the 1950s and 1960s significantly increased the dispensing volumes and workload of community pharmacy. Dispensing of medicines became the principal feature of community pharmacy’s contributions to healthcare during this period with the bulk of their income dependent on the number of prescriptions dispensed. This led community pharmacies to expand their dispensaries, focussing more on the medicines supply function which was the major way of income generation, and less on the traditional advisory and patient counselling roles which were largely informal and not remunerated. However, following Government intervention in 1981, the highly influential Nuffield report in 1986 and a number of policy inquiries, reviews and the pharmacy profession soul-searching in the 1990s and early 2000s, community pharmacy’s potential to increase its contribution and extend its roles in providing healthcare and improving public health became more recognised and established.
Community pharmacy's involvement in the management of LTCs has historically been to supply prescribed medicines to patients safely, effectively and appropriately. However, it had been widely recognised that community pharmacy should go beyond the retail supply of medicines by providing additional support to help patients to make the best use of their medicines particularly around improving adherence to medicines, reducing prescribing errors and reducing medicines-related adverse health outcomes and hospital readmission. Community pharmacy's foray into the management of LTCs was given impetus in the early 1990s with the emergence of pharmaceutical care, which outlined the philosophy and practice of community pharmacy taking responsibility and working to maximise the use of medicines to achieve definite health outcomes and improve patients' quality of life.

In 2005, a new NHS contract for community pharmacy was introduced in England and Wales, which was the culmination of the campaign for extending community pharmacy's contribution to patient care beyond the dispensing and supply of medicines. The new contract resulted directly from the government's reform programme for the NHS in 2000. The new NHS contract for community pharmacy was considered as a major milestone in the history of community pharmacy because it introduced a three-tiered system through which community pharmacies were remunerated to provide extended services. Prior to 2005, community pharmacies were remunerated mainly through the number of prescription items dispensed but the new contract formalised and remunerated community pharmacies for providing a wide range of services asides dispensing (see Section 1.4.3).

In general, most community pharmacies across Great Britain are independent contractors to the NHS and provide pharmaceutical services to NHS patients via a framework that is negotiated and agreed between organisations representing community pharmacies and the NHS/Government. Also, most community pharmacies operate with a wide range of skill mix, which in addition to the pharmacist and depending on the country/setting may include a medicines counter assistant/healthcare assistant, a registered pharmacy technician, an accuracy checking technician, a dispensing assistant and a delivery driver. Currently, the role extension of community pharmacy in healthcare provision and public health is reflected in the wide range of pharmaceutical services provided in community pharmacies across Great Britain such as medication review and counselling services, minor ailment schemes, flu and vaccination services. Community pharmacy services and interventions are also expanding into areas such as; independent and supplementary prescribing; improving access to medicines through out-of-hours services and emergency supply of medicines; lifestyle interventions such as smoking cessation and weight management services; and the delivery of disease-specific interventions that focus on different aspects such symptom monitoring and management, goals-setting and proactive follow up and dose adjustment.
1.4.3 The community pharmacy contractual framework (CPCF)

The community pharmacy contractual framework (CPCF) provides the platform through which community pharmacies across Great Britain provide healthcare services and interventions. The CPCF provides the description of the services, the aims and intended outcomes of the services and the general outline and framework for all the services and interventions that are provided by community pharmacy. The pharmaceutical services in the CPCF are negotiated and agreed by organisations that represent community pharmacies and the Government, through the Department of Health and other NHS organisations and commissioners. Following devolution of some political and legislative powers to the individual countries of Great Britain (England, Wales and Scotland) in 1999, the ways that the NHS organises and provides healthcare to patients evolved separately in each country. Consequently, the individual countries outlined and developed their own health policy and strategy for the provision of NHS pharmaceutical services by community pharmacy to its populations.\textsuperscript{171, 178, 179} Hence, there are differences in the CPCF in England, Wales and Scotland and these differences reflect the variations in how health services are organised by the NHS in the devolved countries.

In England, the Pharmaceutical Services Negotiating Committee (PSNC)\textsuperscript{180} is the organisation that represents community pharmacy contractors in negotiating and agreeing the services in the CPCF with the NHS, while Community Pharmacy Wales (CPW) undertakes this role for community pharmacy contractors in Wales. Most of the services in the English CPCF negotiated by the PSNC have presently been adopted by the Welsh Assembly Government, although there are some differences in the contractual arrangements which are negotiated by CPW and which are specific to Welsh community pharmacy contractors.\textsuperscript{180} The new CPCF introduced in 2005 consisted of three tiers of services; essential, advanced and enhanced (now referred to as locally commissioned services in England).\textsuperscript{161} Since the introduction of the new CPCF, the nature and range of services provided by community pharmacies in both England and Wales have evolved gradually with the introduction of new services and changes to how some existing services are commissioned, delivered and remunerated. The main components of the current CPCF\textsuperscript{181} in England are summarised in Table 1.2 below.
Table 1.2: The community pharmacy contractual framework in England

<table>
<thead>
<tr>
<th>Main components</th>
<th>Description</th>
<th>Summary of services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Essential Services</td>
<td>These services are mandatorily offered by all community pharmacy contractors and are commissioned by NHS England.</td>
<td>Essential services include –</td>
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<td></td>
<td></td>
<td>- Dispensing medicines and appliances,</td>
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<td></td>
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<td>- Repeat dispensing,</td>
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<td></td>
<td></td>
<td>- Disposal of unwanted medicines,</td>
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<td></td>
<td></td>
<td>- Public Health (promotion of health lifestyles),</td>
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<td></td>
<td></td>
<td>- Signposting,</td>
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<td></td>
<td></td>
<td>- Support for self-care and clinical governance.</td>
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<tr>
<td>Advanced Services</td>
<td>Advanced services are commissioned by NHS England and are not mandatory. Community pharmacies can choose to provide these services once accreditation requirements have been met.</td>
<td>Consists of 4 main services –</td>
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<td></td>
<td></td>
<td>- Medicines-use Review and Prescription Intervention Service (MUR),</td>
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<td></td>
<td></td>
<td>- New Medicine Service (NMS),</td>
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<tr>
<td></td>
<td></td>
<td>- Appliance Use Review (AUR),</td>
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<tr>
<td></td>
<td></td>
<td>- Stoma Appliance Customisation (SAC).</td>
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<tr>
<td>Locally Commissioned Services</td>
<td>Local services can be contracted and commissioned by NHS England’s area teams, Clinical Commissioning Groups (CCGs) and Local Authorities.</td>
<td>Locally commissioned services consist of a wide range of services to meet local population needs. A few examples of such services include;</td>
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<td></td>
<td></td>
<td>- Minor ailments management,</td>
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<td></td>
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<td>- Palliative care services,</td>
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<td></td>
<td></td>
<td>- Out of hours services,</td>
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<td></td>
<td></td>
<td>- Care home services,</td>
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<td></td>
<td></td>
<td>- Gluten free food supply services,</td>
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<tr>
<td></td>
<td></td>
<td>- Independent and supplementary prescribing services,</td>
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<tr>
<td></td>
<td></td>
<td>- Medicines assessment and compliance support.</td>
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</tbody>
</table>

In Scotland, Community Pharmacy Scotland (CPS) is the organisation that is responsible for representing community pharmacy contractors in developing and negotiating NHS pharmaceutical services in the CPCF. The terms and conditions of the services in the CPCF as well as their remuneration and reimbursement are negotiated and agreed with the Scottish Government through the Scottish Executive Health Department, NHS Scotland, NHS Health Boards and the CHPs. In addition to the supply of medicines through dispensing of prescription medicines and sale of non-prescription medicines, the CPCF in Scotland consists of 4 components that were introduced and phased in since 2006; 1) Chronic Medication Service (CMS); 2) Minor Ailment Service (MAS), 3) Public Health Service (PHS); and 4) Acute Medication Service (AMS). Table 1.3 below provides a
brief description and summary of these services. The CMS component of the Scottish CPCF is discussed in more detail subsequently (in subsection 1.4.5.3 below). In addition to these nationally contracted services which are available across all community pharmacies in Scotland, there are additional, optional services such as locally commissioned services (e.g. advice to residential homes, medicines disposal services, etc), optometry referral, vaccine supply, healthy start vitamins, gluten free foods, stoma service, palliative care and yellow care reporting.\textsuperscript{183}

Table 1.3: Components of the CPCF in Scotland

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Summary of service</th>
</tr>
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<tbody>
<tr>
<td>Chronic Medication Service (CMS)</td>
<td>The CMS was introduced in 2010 to allow patients with LTCs to voluntarily register with a community pharmacy of their choice to receive pharmaceutical care</td>
<td>The CMS is undertaken by the pharmacist and consists of three main stages;</td>
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<tr>
<td></td>
<td></td>
<td>- Registration of patients</td>
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<td></td>
<td></td>
<td>- Pharmaceutical care planning and patient profiling</td>
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<td></td>
<td></td>
<td>- Shared care with patients’ GP establishing a serial prescription</td>
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<tr>
<td>Acute Medication Service (AMS)</td>
<td>The AMS was introduced in 2008 to utilise a computerized checking of prescriptions by pharmacists against patient’s records for acute episodes of care</td>
<td>The AMS is essentially a platform through which patients receive their prescribed medicines and counselling/advice from the pharmacy for an acute condition using the an electronic messaging system between the GPs and the community pharmacy – the Electronic Transfer of Prescription (ETP) and associated software, barcoding and electronic payment system (ePay).</td>
</tr>
<tr>
<td>Minor Ailment Service (MAS)</td>
<td>The MAS was introduced in 2006 to allow eligible individuals to register with a community pharmacy as the first point of call for the treatment of common illnesses.</td>
<td>The MAS allows community pharmacy to provide pharmaceutical care by treating, advising and/or referring registered patients to other healthcare professionals and resources where appropriate. Eligibility criteria to register for the MAS include age (under 16s and over 60s), health status, social status and employment status.</td>
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<tr>
<td>Public Health Service (PHS)</td>
<td>The PHS was introduced in 2006 with the aim of improving community pharmacy’s contributions to health protection, health improvement and medicines safety.</td>
<td>The PHS encourages community pharmacy to promote healthy lifestyle and offer suitable interventions to the public. Key components of the PHS include:</td>
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<td></td>
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<td>- Provision of public health advice</td>
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<td></td>
<td></td>
<td>- Promotion of self-care</td>
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<tr>
<td></td>
<td></td>
<td>- Participating in NHS, NHS approved and national health promotion campaigns</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Participating in local health promotion campaigns</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Provision of smoking cessation services</td>
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<td></td>
<td></td>
<td>- Provision of sexual health services including the supply of emergency hormonal contraception (EHC)</td>
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</tbody>
</table>
1.4.4 The management of LTCs in the CPCF

The services and interventions that involve community pharmacy in England and Scotland in the management of LTCs are embedded in the CPCF in both countries (Table 1.2 and 1.3 above respectively). The core services that specifically target people with LTCs are repeat/serial dispensing, the MUR, NMS and CMS.

1.4.4.1 Repeat dispensing in England

Patients with LTCs rely on long-term medications, the majority of which are dispensed by community pharmacies in England and Scotland. Repeat dispensing was introduced nationwide in England in 2004 as part of the Government’s vision for pharmacy in the NHS Plan171 following reports that it is convenient for patients and that it reduces waste.184, 185 Repeat dispensing involves community pharmacies dispensing repeat prescriptions issued by GPs to patients over several instalments without having to go back to the GP surgery each time for a new prescription.171 Repeat dispensing has been an essential service in the CPCF in England since 2005 and it allows the pharmacist to ascertain that the repeat prescription still meets the patient's needs and to respond to any patient queries.186 A review of repeat dispensing by community pharmacies in the UK found very little and/or poorly reported studies about the impact of repeat dispensing on quality of care, although there were indications that there were high levels of patients’ and healthcare professionals’ satisfaction as well as some cost savings to the NHS.187

1.4.4.2 The MUR and NMS in England

The MUR introduced in 2005 and the NMS introduced in 2011 are key medicines optimisation services which community pharmacy contractors are encouraged to offer to patients with LTCs. However, as advanced services, the MUR and NMS are not mandatorily provided by community pharmacies, although community pharmacies can opt whether or not to provide them as long as they meet the requirements and are accredited to deliver both services. The overall aim of both the MUR and the NMS is to help patients to get the most benefit from their prescribed medicines by improving adherence to medicines. There are four agreed national target groups of patients who maybe selected to receive the MUR service; 1) patients taking high risk medicines according to specified British National Formulary (BNF) subsections (non-steroidal anti-inflammatory drugs, anticoagulants, anti-platelets, diuretics); 2) patients recently discharged from hospitals, who had changes made to their medicines; 3) patients prescribed on certain respiratory medicines that are included in specified BNF subsections; and 4) patients with cardiovascular risk factors (this group was introduced in January 2015). The NMS on the other hand provide support to patients who are newly prescribed a medicine to manage a LTC with a current focus on patients with asthma/COPD, type 2 diabetes mellitus, hypertension and patients on antiplatelet/anticoagulant therapy.
Community pharmacists need to be accredited to provide both the MUR and NMS by completing an assessment provided by a higher education institution or NHS England. The MUR and NMS consultations normally take place face-to-face in a private consultation room in the community pharmacy, although it may also be carried out over the telephone or at the patient’s GP practice. In the case of the NMS which has a follow-up requirement, telephone consultations could be utilised for follow-up depending on the patient’s preference but face-to-face consultations are encouraged. Patients that receive the MUR and the NMS are typically identified opportunistically by the pharmacist or pharmacy staff although patients could also be referred by their GPs or other healthcare professional. The MUR and NMS consultations are delivered by the pharmacist using a structured format, guided by a national standard form/interview schedule to make their assessment and provide details of the discussion. Patients must provide written consent to receive the service and pharmacists are required to keep and record their discussions and other details of the MUR and NMS, which are shared with the patient and/or with the patients’ GPs when appropriate. Community pharmacies can only provide 400 MURs in any financial year, and since March 2015, they are now required to carry out at least 70% (50% previously) of their MURs on patients in one or more of the agreed national target groups within that financial year. The number of NMS that can be provided by community pharmacies is linked to the payment for providing a targeted number of services, which is in turn determined by a pre-defined maximum number of opportunities related to prescription volume per pharmacy. Patients can only receive one MUR per year. The MURs and NMS are delivered in the majority of community pharmacies with over 90% of community pharmacies providing the NMS as of January 2014. Remuneration for providing the MUR and NMS is based on a ‘fee-per-service’ model, where payment is based on meeting a set target on the number of MUR/NMS undertaken. Community pharmacies are remunerated £28 per MUR while reimbursement for providing the NMS can range between £20 and £28 based on the number of patients that receive the service per month, the number of prescription items dispensed and the number of completed NMS that falls within a target payment level.

The introduction of the MUR as part of the new CPCF in 2005 was aimed at recognising, formalising and remunerating community pharmacists for providing counselling and consultation with patients taking prescribed medicines. However, there is no evidence that the structure of the MUR at its onset was underpinned by robust research evidence such as randomised controlled trials (RCTs) and systematic review to demonstrate its effectiveness. The introduction of the NMS was developed from research evidence that demonstrated that a significant proportion of patients on newly prescribed medicines for a LTC experienced substantial difficulties which led them to become intentionally non-adherent. The NMS was thus underpinned by the work of Clifford et al where it was found that pharmacists providing follow-up telephone consultation and support to patients that were newly prescribed medicines significantly reduced non-adherence. Since the introduction of both the MUR and NMS services, a number of research studies have been conducted to evaluate their impact and effectiveness. These studies found that the MUR service is largely influenced by employers/organisational and commercial pressures to meet targets, in addition to lack of support.
from GPs and concerns about the quality of MURs provided.\textsuperscript{195, 198} Additionally, it was found that the MUR consultations were characterised by brief, close-ended interactions with a focus on completing a predetermined questions and ‘tick-box’ forms; and providing little opportunities for patient-centred interaction where the needs of patients are identified and addressed and where patients were able to ask questions.\textsuperscript{192} On the other hand, a national evaluation of the NMS found that the service had a significant impact on patient adherence with no increased cost to the NHS and possibility of it to be cost-effective on the long term.\textsuperscript{190} Prior to implementation of the NMS, community pharmacists were positive and enthusiastic about the service and identified potential barriers such lack of interest from GPs and the payment structure.\textsuperscript{199}

1.4.4.3 The CMS in Scotland

The CMS was introduced in 2010 as the last of the four components of the Scottish CPCF (see Table 1.3). It aims to introduce a more systematic approach to providing pharmaceutical care to patients with LTCs and \textit{“it formalises the roles of community pharmacists in the management of individual patients in order to assist it improving the patient’s understanding of their medicines and optimising the clinical benefits from their therapy.”}\textsuperscript{400} The CMS is offered at all community pharmacies across Scotland and community pharmacists must be trained and accredited to provide the CMS by their local health boards and by the NHS Education for Scotland Pharmacy.\textsuperscript{201} Patients with LTCs voluntarily register for the CMS with a community pharmacy of their choice to receive pharmaceutical care as part of a shared agreement between the patient, the community pharmacist and the doctor.\textsuperscript{200} The main eligibility criteria to be able to register for the CMS is that the patient must be registered on a permanent basis with a GP practice in Scotland, have at least one LTC that requires medication and provide their consent to data-sharing between their GP and community pharmacy.\textsuperscript{202} Patients with LTCs that are resident in a care home setting or a temporary resident in Scotland are not eligible to receive the CMS. In addition, patients can only register for the CMS with one pharmacy at a time, and may choose whether or not to register or withdraw from the service at any time.\textsuperscript{202}

The CMS is underpinned by ePay and Electronic Transfer of Prescriptions (ETP), which is a Scottish-wide system where community pharmacies submit prescription claims and process payments electronically. The CMS process has three main stages. Stage one involves patient registration where eligible patients are identified by the community pharmacy team, via referral by the patient’s GP or other and healthcare professional or via patients presenting themselves. Stage two is the pharmaceutical care planning process where the pharmacist assesses patients to identify and prioritise the unmet pharmaceutical care needs of the patient. Stage three is when shared care with the patient’s GP is developed with the community pharmacy establishing a serial prescription for either 24 or 48 weeks supported by national CMS disease-specific protocol. The pharmaceutical care planning process is the main consultative stage between the pharmacist and the patient where initial pharmaceutical care risk assessments and patient profiling is undertaken to identify and prioritise
patients’ unmet needs; pharmaceutical care needs; care issues; desired outcomes and actions needed are discussed and agreed with the patient; and a pharmaceutical care plan is implemented, monitored and reviewed regularly. Serial prescriptions can then be generated by the patient’s GP once they are satisfied of its suitability to the patient, which are serially dispensed by the community pharmacy at time intervals determined by the GP. Both the pharmaceutical care planning and serial dispensing stages form the basis of ongoing care with the patient through continued monitoring, planning and structured follow-up of patients. Remuneration for providing the CMS is based on a ‘capitation model’ of payment which is currently under review but it currently involves a calculation based on the number and type of prescription items dispensed.\textsuperscript{201, 203}

The CMS is built on the evidence base of two previous policy initiatives in Scotland – serial dispensing and pharmaceutical care model schemes (PCMS). Evidence from serial dispensing pilots showed that community pharmacists involved in providing repeat prescription interventions addressed patients’ problems around non-adherence with medicines and reduced wastage.\textsuperscript{201} The PCMS introduced in 1999 involved community pharmacy implementing evidence-based practice of identifying and assessing patients’ pharmaceutical care needs with action taken to improve the benefits of drug therapy and improve patients’ quality of life.\textsuperscript{201} The impetus for the introduction of the CMS was provided in 2002 when the Scottish Government outlined its commitment to maximising the skills and expertise of pharmacists to improve patient care and set out an action plan for the development of services based on pharmaceutical care in its White Paper, \textit{The Right Medicine}.\textsuperscript{178} In 2009, the principles of a generic framework that underpinned the CMS was provided in a white paper \textit{Establishing Effective Therapeutic Partnerships}\textsuperscript{204} where the main elements of the service were described from a previous framework.\textsuperscript{205} The counselling and advice provided by community pharmacists in the pharmaceutical care planning stage of the CMS is underpinned by the clinical resource and audit group (CRAG)’s framework for counselling and advice on medicines and appliance in community pharmacy practice.\textsuperscript{206} To date however, there are no research studies that have evaluated the effectiveness and impact of the CMS on health and health-resource use outcomes.

1.4.5 Research evidence on community pharmacy and the management of LTCs

The core services that involve community pharmacy in the management of LTCs in England and Scotland are embedded in the CPCF in both countries; the MUR and NMS in England\textsuperscript{173} and the CMS in Scotland.\textsuperscript{207} Although the ways that the MUR, NMS and CMS are structured and operationalised are different, they all essentially aim to extend the roles of community pharmacists in patients’ medication and disease management with the objectives of improving patients’ knowledge, understanding and adherence to medication therapy to improve health outcomes.\textsuperscript{173, 200} Internationally, there are comparable, albeit differently organised and delivered LTC services provided by community pharmacy. For example, in the United States (US), there is the Medication Therapy
Management (MTM), while in Australia, there is a similar MUR service (MedsCheck) and Home Medication Review (HMR) service in addition to different disease state management interventions such as Diabetes Medication Assistance Service (DMAS) and the Pharmacy Asthma Care Program (PACP). Despite the growing range of community pharmacy interventions and services for LTCs, there is however, still a recognition that community pharmacy potential remain untapped, particularly in developing a coordinated and standardised strategy for the ongoing management and care of LTCs in routine community pharmacy practice. Moreover, the management of LTCs has now taken a multidisciplinary approach that should involve collaboration and communication between different healthcare professionals, community pharmacy is regarded as working in isolation of other healthcare professionals. On the whole, there are ongoing efforts and calls for community pharmacy to continue to develop the evidence base to improve and expand its contributions to the management of LTCs.

Currently, the evidence base of the impact of community pharmacy LTCs-specific services on improving outcomes relating to patients, efficiency of the use of health resources is inconsistent and inconclusive. For example, while some evidence from the UK suggests that services such as the NMS improve outcomes like patients’ adherence to medicines, some other studies have suggested that community pharmacists’ contributions to the care of LTCs is growing but have yet to be fully realised. Whereas, evidence emanating from evaluation of interventions such as the MTM, DMAS and PACP indicate that community pharmacy’s contributions are significant and valuable in improving a whole range of outcomes. Some authors have however cautioned that findings from different published evidence in pharmacy literature need to be interpreted with considerable caution. They indicated that much of the published evidence may have inherent methodological challenges in identifying, measuring and evaluating “the range and complexity of pharmacists’ work in conducting medication review and pharmaceutical care”. A recent systematic review of interventions termed community pharmacy cognitive pharmaceutical services found that although there were some positive benefits of these services, there was a need for well-designed interventions to properly evaluate the impact of pharmacists’ intervention and impact on patient health outcomes. Similarly, a previous systematic review of community pharmacists’ interventions for diabetes and cardiovascular diseases concluded that most studies were poorly designed, time-intensive and lacked clinical significance. However another recent systematic review and meta-analysis of pharmacist-led medication review found some benefits of pharmacists’ interventions on outcomes such as improved clinical outcomes, reduced hospitalization and reduced mortality. On the whole, the impacts of community pharmacy’s expanding roles in the management of LTCs in the UK and elsewhere have been found to be inconclusive and ineffective in influencing government policy.

The majority of the research literature on the management of LTCs in community pharmacy describes interventions that target specific patient outcomes such as medicines adherence, improvements in quality of life and uptake/utilisation of services. The views and perspectives of patients with LTCs are usually incorporated in research that focus on interventions such as specific services.
LTCs-specific intervention, medicines management services, adherence-improving interventions, lifestyle and public health interventions. However, many of these studies focus on patients’ preferences, experiences and satisfaction of these services and interventions. While many of these studies generally reported favourable patient perspectives, experience and satisfaction with these services, there are few qualitative studies that have examined a holistic perspective of how patients with LTCs view and utilise community pharmacy for their LTCs in their everyday lives. Indeed, qualitative research that have explored patients’ perspectives of the holistic care that they receive from healthcare professionals are also limited. The few studies that exist are usually driven by agendas and priorities set by healthcare professional, which may lead to a mismatch between the research undertaken and the actual needs of patients. Patients’ needs are paramount in any research that recommends changes to services or interventions, and incorporating the views and perspectives of patients have been described as morally desirable, as well as potentially improving the effectiveness of an intervention. Research evidence from the field of social science research provided the three top priorities identified by patients with chronic kidney disease to meet their needs as coping, family life and mastery in the face of demanding treatment. A recent study that examined asthma patients’ perspectives on the roles of primary care teams as well as the role of pharmacists found that community pharmacists are currently viewed as having limited opportunities to collaborate in LTCs management.

1.4.6 Opportunities for self-care support of LTCs in community pharmacy?

Self-care support by healthcare professionals has emerged as a distinct concept in the management of LTCs and community pharmacy has an opportunity to play a key role. Community pharmacy is a readily available and trusted primary and public healthcare profession located at the heart of most communities with convenient opening hours and ability to reach the vast majority of the population; it is estimated that 99% of the population in England can get to a community pharmacy by car within 20 minutes, while 96% can do so by walking or by public transport. People with LTCs have more frequent contact with community pharmacy compared to other healthcare professions, although this contact is mostly related to access to, and supply of prescribed medicines. Medicines are most important intervention in the management of LTCs although the effectiveness of the medicines therapy is influenced by both the efficacy of the medicine and patient adherence. Hence, the supply of medicines through dispensing and repeat/serial dispensing activities provides opportunities for community pharmacy to engage in self-care support of LTCs. Community pharmacy is expected to provide appropriate information and advice to patients through patient education and counselling to promote the safe and effective use of medicines when supplying medicines to patients. Evidence however found that the rates and practice of patient counselling by community pharmacy when handing out dispensed medicines is very poor. Other opportunities for self-care support of LTCs in community pharmacy include the medicines-related services that specifically target LTCs such as the
MUR, NMS and CMS; and other services that target the general public such as healthy lifestyle promotion and preventive services. While some of these existing community pharmacy services and interventions for LTCs embed aspects of self-care support, for example the NMS has a follow-up element, while the CMS has a pharmaceutical care planning process, there is currently limited evidence of ‘self-care support’ as a holistic and distinctive concept in the management of LTCs in community pharmacy.

Furthermore, despite the growing evidence of self-care support of LTCs, studies suggests that many healthcare professionals including community pharmacists are yet to fully imbibe its principles into their practice and interactions with people with LTCs. While support for self-care is an essential service in the CPCF in England, the service specification describes a focus on how community pharmacy manages minor ailments and common conditions, rather than LTCs. Similarly, the recognition by the UK Government that self-care and self-care support delivered through community pharmacy can provide substantial financial savings to the NHS has led to a strong policy drive towards self-care support of minor ailments when compared to LTCs. This has seen significant investments and commissioning of locally enhanced minor ailment schemes in England and a national minor ailment service in Scotland. Moreover, most published research evidence that have described the concept and used the terminology of ‘self-care’ and/or ‘self-care support’ in community pharmacy, have focussed on the management of minor ailments and common conditions through provision of information and advice and/or treatment with non-prescription/over-the-counter (OTC) medicines. This suggests that the concept of self-care and self-care support in community pharmacy is more widely recognised as a concept in relation to minor ailments rather than LTCs.

Self-care support as a concept in the management of LTCs is not a terminology that is commonly used in community pharmacy. The roles of healthcare professionals and primary care teams in self-care support of LTCs have been explored extensively in the field of medicine and nursing, and evidence indicates that this has significant benefits. However, self-care support as a concept in the management of LTCs in community pharmacy has not been well-researched. Some aspects of self-care support of LTCs in community pharmacy may be carried out opportunistically, when the pharmacist intervenes at the point of dispensing prescribed medications, when the patient asks questions about their medication or conditions and/or during a specific service or intervention such as the MUR, CMS or lifestyle service such as stop smoking service. The majority of the published work in pharmacy has focused on one of the different aspects/components of self-care support such as medication reviews, medication management, adherence to medications, and disease-specific interventions. Self-care support of LTCs by healthcare professionals is however described as a much more comprehensive and multidimensional concept that looks at how care is provided to the patient as a whole, and not just as separate, uni-dimensional such as medicines use, or single disease-focussed intervention. Furthermore, an examination of many of the collaborative and whole systems approach to promoting self-care support of LTCs does not mention or involve community pharmacy (see Chapter 3). This may mean that community pharmacy is
generally seen as having little or no value in supporting self-care of LTCs or that their potential have not yet been realised.

1.5 Conclusion
This chapter provided an overview of long-term conditions, self-care support and community pharmacy practice. It established that self-care support has emerged in response to the current and future challenges of meeting the needs of people with LTCs. Both people with LTCs and community pharmacy are underutilised resources in self-care support and management of LTCs. There is limited knowledge and evidence on the roles and contributions of community pharmacy in providing self-care support of LTCs. In particular, there is limited evidence on how community pharmacists understand and practice self-care support as a distinct concept in the management of LTCs. Similarly, patients expect healthcare professionals to fulfil a comprehensive role in supporting self-care, but their perspective of the role and use of community pharmacy is unknown. These gaps provided the premise for undertaking this programme of work. The aim and objectives are provided at the beginning of the next chapter.
2. Chapter Two: Programme of work

2.1 Introduction
This chapter provides the overall aim and objectives of the programme of work undertaken in this PhD research project and the description of the overall methodological approach taken. An overview of the programme of work is presented followed by a description of the preliminary scoping literature review conducted and the subsequent design of the main research work undertaken. The justification of the key decisions and the methodological and philosophical grounding of the research design as well as a broad description of the general approach taken to address the overall aim and objectives of the programme of work are also discussed. The more detailed description of the methodological procedure and process undertaken are presented under the relevant chapters of this thesis (Chapters Three – Six). This chapter also discusses steps taken to ensure methodological rigour and reflexivity in the programme of work, as well as the ethical approvals required and obtained.

2.2 Overall aim and objectives

2.2.1 Aim
The overall aim of this programme of work was to explore the place and contribution of community pharmacy in providing self-care support to people with LTCs.

2.2.2 Objectives

1) To understand and examine what ‘self-care support’ as a concept in the management of LTCs means in community pharmacy practice in the context of extant literature

2) To understand how patients with LTCs engage in self-care and their views on community pharmacy’s contribution to providing self-care support

3) To explore the views of community pharmacists on how self-care support of LTCs is conceptualised and operationalised in community pharmacy

4) To identify and examine the core components of self-care support of LTCs in community pharmacy

In addition to the overarching aim and objectives, each piece of research work undertaken (Chapters Three – Six) has its own specific aim and objectives which all contribute to meeting the purpose of this programme of work.
2.3 Overview of programme of work

The overall programme of work consisted of a preliminary scoping literature review and three main studies where empirical data collection and analysis were undertaken. The preliminary scoping review was undertaken early-on in the programme of work to map and understand existing literature on self-care support of LTCs. This scoping review is described in section 2.4 below and in Chapter Three of this thesis. The three main studies are described in the overall research design in section 2.5 below as well as the relevant chapters of this thesis (Chapters Four to Six).

2.4 Mapping of the literature: A scoping review

A scoping review of the literature was undertaken as part of the early exploratory work undertaking of this programme of work to capture the depth and breadth of the literature around self-care support of LTCs in community pharmacy. This review was undertaken to provide clarity and understanding of the key issues relating to the existing research evidence around self-care support of LTCs. The scoping review also aimed to help guide a more focussed approach to understanding the vast topic area and to identify the gaps in the research topic. Scoping reviews are increasingly gaining popularity in health services research, as a means of mapping a large body of evidence that is complex and has not been extensively reviewed. Scoping reviews can be used as a preliminary step to a systematic review or to develop ideas for a research programme of work aimed at addressing a research problem.

"The main strengths of a scoping study lie in its ability to extract the essence of a diverse body of evidence and give meaning and significance to a topic that is both developmental and intellectually creative."

This scoping review was undertaken to identify and highlight how self-care support as a specific and distinct concept in the management of LTCs has been described in the community pharmacy literature. Early insights from the review, however, suggested a dearth of published evidence relating to self-care support of LTCs within the community pharmacy literature. It was then decided to expand the review to identify the main features of self-care support relating to LTCs within the published literature from other health disciplines, mainly medicine, nursing and health psychology, as well as from government policy documents and voluntary sectors dedicated to health policy and management of LTCs. As part of the literature review process and overall PhD project, it was thought important and necessary to stay on top of the vast amount of research studies, articles and policy changes constantly emerging from the expanding field of self-care support of LTCs. The scoping review of the literature therefore entailed an iterative and dynamic process undertaken throughout the duration of the PhD project to identify emerging research articles and policy initiatives/changes relating to the broad management of LTCs and specifically focussing on self-care support within and outside the pharmacy literature. The findings from the literature search were continuously examined to target and identify pertinent and emerging literature; new citation/content alerts and table of contents alerts were set-up with relevant electronic databases, websites and electronic journals. A more detailed
discussion of the scoping review process including; the literature search and identification strategy used; the electronic databases and additional means of identifying literature; the inclusion and exclusion criteria; and the appraisal and synthesis technique used is presented in Chapter Three of this thesis.

2.5 Overall research design

This research programme of work was undertaken using a mixed methods research design with a sequential exploratory strategy. Mixed methods research has gained increasing popularity and applications in social and health science research because it increases the overall strength of a study by exploiting the strengths of both qualitative and quantitative methods to help address the complexities of studying human knowledge and behaviours. The mixed methods design of this programme of work combined elements of both qualitative and quantitative research paradigms, while the sequential exploratory strategy adopted an approach where the research topic area is initially explored using qualitative methods, which then informed and led to the design of the quantitative research method. The overall programme of work consisted of three main ‘Work Streams’ embedded within the mixed methods design (Figure 2.1 below). Work Stream One (‘patients’ interviews’) and Work Stream Two (‘pharmacists’ interviews’) were undertaken using qualitative methods while Work Stream Three (‘pharmacists’ survey’) was undertaken using quantitative methods.

Figure 2.1: Overall design of research programme of work
2.6 Justification of the research design

2.6.1 Philosophical underpinning of the mixed methods design

Mixed method research has been described as the ‘third research paradigm’ that combines the social constructivist philosophy associated with qualitative research and the positivist/post-positivist philosophy associated with quantitative research.\(^{273}\) The social constructivist philosophy of qualitative research acknowledges that the subjective meanings and beliefs that individuals construct about a social phenomenon and advances that the aim of research is to make sense of these meanings and beliefs based on the specific contexts in which individuals live and work. The researcher seeks to understand this ‘social construction’ of human experience by relying on the individual’s views of the phenomenon under investigation, while also recognising that his/her (the researcher) own subjectivity cannot be separated from the phenomena he is investigating but is a part of the research process.\(^{274-277}\) The positivist/post-positivist philosophy of quantitative research on the other hand contends that a researcher can, and should be, objectively separated from the social phenomena under investigation.\(^{278, 279}\) The positivist philosophy holds the assumption that research is deterministic (causes determine effects or outcomes) and reductionist, whereby human experience and behaviour can be investigated through an objective observation and empirical measurement of the relationships between numeric (quantitative) variables.\(^{269, 280}\) While both qualitative and quantitative research paradigms have been previously described as philosophically, epistemologically and methodologically incompatible,\(^{281}\) mixed method research is now recognised as being able to effectively combine elements of both paradigms.\(^{273}\) Mixed methods research paradigm is often associated with the philosophical orientation of pragmatism and a transformative perspective.\(^{269, 273, 282}\) The pragmatic and transformative perspective of mixed method research paradigm is based on mixing ‘what works best’ in both qualitative (constructivist) and quantitative (positivists) paradigms to answer a research question.\(^{273, 283, 284}\) Hence, a pragmatic approach taken in this research aims to use qualitative method’s inductive approach to uncover perspectives of the key stakeholders of self-care support in community pharmacy (pharmacists and patients), and then use quantitative methods to deductively expand, triangulate and generalise the findings.\(^{282}\)

2.6.2 Methodological grounding

Mixed methods research combines and exploits the strengths while minimising the weaknesses of both qualitative and quantitative research paradigms to offer ‘completeness’ to a research inquiry.\(^{282}\)\(^{285}\) The integration of qualitative and quantitative methods in mixed methods research offers the advantage of exploring a phenomena in great depth using qualitative methods, while allowing for the findings to be triangulated and generalized using quantitative methods.\(^{282}\) In this research programme of work, qualitative methods were used to explore the views and perspectives of patients with long-term conditions (LTCs) in Work Stream One (Chapter Four) and community pharmacists in work stream two (chapter five). The findings from the qualitative research undertaken in Work Stream
Two in combination with the literature on self-care support (Chapter Three), were used to inform and design the quantitative research in Work Stream Three (Chapter Six). In mixed methods research, a priority-sequence model is used to guide the combination of the qualitative and quantitative components. This programme of work prioritised the qualitative components as the principal method over the quantitative component because of the very limited knowledge about the topic area, hence, qualitative methods was used to uncover and understand the perspectives of community pharmacists and patients with LTCs on self-care support of LTCs. This meant that the sequencing would serve as a follow-up to the principal method, hence the sequential exploratory strategy adopted for this programme of work. The methodological grounding for the individual qualitative and quantitative components of the mixed methods research design of this programme of work is presented next, although the more detailed methodological procedure undertaken in the different work streams is discussed in the relevant chapters.

### 2.6.2.1 Qualitative methods: Work Streams One and Two

**Design**

Qualitative research methods were used in both the patients’ interviews (Work Stream One) and the pharmacists’ interviews (Work Stream Two) to address the specific aims and objectives of both studies (see sections 4.2 and 5.2 in chapters four and five respectively). Qualitative research design is considered most suitable when exploring areas that are not well-understood or where there is very little known about the topic area. Qualitative methods are also useful in exploring and obtaining detailed understanding of a phenomenon to provide rich data that can be used to develop concepts and hypothesis about the phenomenon being examined. Self-care support has emerged as a distinct and well-established concept in the management of LTCs in health disciplines such as nursing and medicine as well as in research areas such as health psychology and health policy. It was however found that self-care support of LTCs has not been well-researched in the community pharmacy literature and there is limited knowledge of how it is conceptually understood and applied to community pharmacy practice. Hence, a qualitative approach was taken to gain insights into the perspectives of community pharmacists and patients with LTCs, and was considered the most appropriate method of inquiry to understand this phenomenon and obtain new empirical data to understand community pharmacy’s contributions to self-care support of LTCs. In addition, the application of qualitative methods was also considered important to identify the key concepts and hypothesis about community pharmacy’s current and potential roles in self-care support of LTCs. Both community pharmacists and patients with LTCs are direct stakeholders of the self-care support paradigm in community pharmacy and it was considered important to obtain insights into the perspectives and experiences of both groups. The inclusion of the patient perspective was considered a novel approach taken in this programme of work as the ‘patient voice’ has been considered largely ‘unheard’ in the majority of interventions and research in the management of LTCs.
**Philosophy and epistemology**

The qualitative method used in this programme of work was underpinned by the philosophical stance of phenomenology. Phenomenological research is concerned with describing and understanding the subjectivity of human experience as ‘lived’ and as ‘experienced’ and it surmises that individuals are influenced by the world around them and cannot be abstracted from it. Edmund Husserl (1859 – 1938), considered the founder of phenomenology, defined phenomenology as “the science of essence of consciousness”. Husserl suggested that phenomenology focussed on understanding the ‘lived experience’ of people from a first person point of view and believed that the meaning of this lived experience could be understood only through the interaction of the researcher and the participants. This programme of work aimed to explore the perspectives and experiences of participants to uncover concepts about how they lived and worked, and their experience and understanding of self-care of LTCs. Phenomenology consist of two worldviews, descriptive phenomenology and interpretative phenomenology, which can be considered as being at the extremes of a spectrum. The patients’ interviews adopted a worldview of descriptive phenomenology while the pharmacists’ interviews adopted interpretative phenomenology. The key difference between descriptive and interpretative phenomenology lies in the ways that the findings from the research process are generated and this is discussed further in the data analysis section of the different chapters of this thesis. Another key difference between descriptive and interpretative phenomenology is the idea of ‘bracketing’, which involves the researcher acknowledging and setting aside his/her own preconceptions about the phenomena under investigation. Bracketing referred to as transcendental subjectivity by Husserl is more commonly applied to descriptive phenomenology than interpretative phenomenology. While the idea of bracketing has been criticised as not being pragmatic in interpretative phenomenological research, some authors have argued that being explicit about one’s preconceptions and describing how it influenced data collection and analysis is part of the hermeneutic tradition. The ways that bracketing was used in both the patients and pharmacists’ interviews are discussed in the different chapters.

**Data collection**

Semi-structured interviewing was the primary method of data collection used in both the patients’ and pharmacists’ interviews. The choice of qualitative data collection method depends on the nature of the research questions, as well as on the philosophical assumptions adopted in the research. Data collection in phenomenological research seeks to understand how individuals describe the meaning of this ‘lived experience’ by obtaining a detailed account of the phenomena under investigation through interviewing. The use of interviewing provided the platform to explore the topic area in great detail from a small sample of participants and aimed to obtain personalised and narrow views rather than a broad and generalizable perspectives. Ethnographic methods such as observations as a method of data collection in qualitative studies, especially in health research, are very useful in collecting naturally occurring data and have the advantage of providing an understanding of the social actions and interactions that occur in a natural setting. However, observations were considered inappropriate in this study because the studies intended to engage the participants in critical thinking.
and reflection of how they perceive the phenomena, rather than examine how they act normally in
their natural setting. This means that the participants were required to express their thoughts and
perceptions through conversations, as opposed to being observed.

Interviewing in qualitative research can take place either one-to-one with study participants or as a
group interview, for example using focus group interviews.\(^{300}\) One-to-one interviewing was considered
the more applicable approach to this research as it provided the opportunity to capture rich and
detailed description and clarification of the phenomenon from the ‘insider perspective’ and in the
words and expressions the participant\(^{301, 303, 304}\) without the need to consider the effect of group
dynamics and interaction on the description of the phenomenon under investigation.\(^{305}\) Interviews
have been described as a “conversation with a purpose”\(^{306}\) with active listening, use of cues and
probes to stimulate and engage the participant in the interview and responding to any queries or
concerns promptly regarded as important in developing and establishing rapport and trust with the
participant.\(^{295}\) The semi-structured nature of the interviews meant that although there was a guide to
structure the interviews, there was still some flexibility to alter the order of the questions and adapt to
changes in circumstances during the interview.\(^{307, 308}\) While qualitative interviews could be carried out
via the internet or telephone\(^{309}\) the use of a face-to-face approach in this research study was
employed in order to build a trusting and personal relationship with the participants. Furthermore, it
helped overcome some practical challenges such as recording of the interview, convenience for both
the researcher and the participants and in obtaining verbal and written informed consent.\(^{307, 308}\) A
reflective diary was used by the researcher to take handwritten notes of any additional comments or
other relevant observations during and immediately after each interview to provide a holistic view of
the interview experience. All interviews were audio-recorded using a digital audio recorder and audio
files were stored digitally on a secure computer network drive.

**Study setting**

The two qualitative studies were set in the North West region of England (Greater Manchester) and in
four of the 32 council areas of Scotland (Glasgow, Dundee, Perth and Angus). Both England and
Scotland were recruited because of the key differences in the main LTCs services in the contractual
frameworks in both countries. These differences have been described section 1.4.3 in the
introduction chapter.

**Sampling**

Qualitative research by its nature does not aim to generate findings that are generalizable to the
whole population from which the sample was drawn from, but aims to provide a narrow and
personalised narrative of human experience from the perspective of a small group of subjects.
Purposive and convenience sampling are the most practical methods of recruitment in qualitative
research and phenomenological inquiry.\(^{304}\) Data collection and data analysis in qualitative research
are often undertaken concurrently and iteratively\(^{310, 311}\) and it is important in deciding when to stop
collecting data, i.e. when theoretical data saturation has been reached.\(^{312}\) Theoretical data saturation,
which refers to the “point at which no new information or themes are observed in the data”, has been
considered as a means of determining the sample size for interviews in qualitative research. \(^{313}\) However, the sample size in this research was predetermined following the recommendation of Guest et al., \(^{314}\) who argued that theoretical data saturation is a vague and diffuse way of determining the sample size in qualitative research. The sampling strategy employed in both research studies (patients’ and pharmacists’ interviews) was a stratified purposive sampling strategy, \(^{315}\) also referred to as the maximal variation sampling strategy. \(^{269, 313}\) This meant that the study participants were purposefully stratified and selected into the study to reflect the diverse and required range of characteristics in the different study populations.

**Data preparation and analysis**

The audio data from the interviews were transcribed verbatim and anonymised, and were managed and retrieved using the QSR NVIVO software (version 10). Some of the interview data were transcribed by the researcher using the Express Scribe transcription software and Microsoft office (Word) 2007/2010, while some other data were transcribed by professional transcription service (1st Class Secretarial – [www.1stclass.uk.com](http://www.1stclass.uk.com)). The help of the professional transcription service was to save valuable time for the researcher. Anonymization of identifiable personal data of participants was a continuous process that was undertaken after each interview was transcribed, during the analysis and during the interpretation and write up of findings. The method of data analysis chosen in a qualitative research is often guided by the philosophical and epistemological assumptions adopted by the researcher. \(^{310}\) Data analysis of patients’ interviews was undertaken using descriptive phenomenology (thematic) analysis strategy, \(^{316, 317}\) while pharmacists’ interviews undertaken using the interpretative phenomenological analysis approach. \(^{295, 318}\) A detailed description of the data analysis process and strategies adopted are discussed in the data analysis section of each chapter.

### 2.6.2.2 Quantitative methods: Pharmacists’ Survey

The sequential exploratory strategy of the mixed methods research of this programme of work meant that the quantitative method of the research was informed by the findings of the qualitative exploratory methods. The quantitative method that was developed to address the specific aims and objectives set for Work Stream Three (see section 5.2 of Chapter Five) was a cross-sectional (online) survey of community pharmacists. Survey and experimental research designs are the two most commonly used design in quantitative methods. \(^{271}\) The use of an experimental design in this programme of work was not considered as an option at the onset of the research design process because early insights from the literature review suggested a paucity of published literature on self-care support of LTCs in community pharmacy, i.e., there were no concepts or hypotheses that could be tested using an experimental design based on existing literature. \(^{269}\) Moreover, early insights from the data analysis of the pharmacists’ interviews in Work Stream Two indicated that the key themes that were emerging would be insufficient to develop into concepts or hypotheses about self-care support of LTCs that could be tested experimentally, hence, an experimental design (for example, an intervention) was decidedly ruled out. The evidence from the scoping review of the literature in combination with the
key themes and concepts that emerged from Work Stream Two (pharmacists’ interviews) informed the design and development of a cross-sectional survey in Work Stream Three.

Cross-sectional survey research designs are efficient approaches for collecting data and information about the characteristics, behaviours and attitudes from a sample of a defined population. The purpose of this cross-sectional survey was to build on, and expand on the interpretations of the findings from the pharmacists’ interviews, which led to the generation of an instrument. This would allow for the findings to be generalized and triangulated (i.e., to cross check qualitative and quantitative findings for similarities and differences) in addition to exploring relationships and establishing statistical associations between different respondent demographics and variables of self-care support, providing a better understanding of the phenomenon. Cross-sectional surveys allow data to be collected from a large, geographically dispersed sample population at one point in time. Further justifications and steps taken to minimise the limitations for the use of online surveys in this study are discussed in the methods section in Chapter Six. In addition, a more detailed description of the sampling, the survey instrument, participants and sampling, survey administration and data analysis are also presented in Chapter Six.

2.7 Reflexivity and rigour of methodology

Reflexivity in research relates to how the intentional or unintentional influence of a researcher affects the research process and findings. The aim of reflexivity is to improve the quality of research and should be incorporated into all stages of the research process in order to improve rigour. Reflexivity in qualitative research can be achieved by “detachment, internal dialogue and constant scrutiny of ‘what I know’ and ‘how I know it’”. Reflexivity and rigour was incorporated into this research programme of work via a continuous process of self-awareness and self-reflection, as well as the use of a reflection diary at all stages of this research. In addition, the researcher remained open to the data collected and did not allow his subjectivity, preconceptions and biases on what self-care support of LTCs is, or should be, affect his judgement and interpretation. The researcher also undertook extensive training in both qualitative data collection and data analysis as well as in the use of the software such as NVIVO®, SPSS® and Endnote®. In order to further promote rigour in this research, a proper documentation of the research process and a dairy of all key decisions taken in the research process were kept. Furthermore, regular debriefing meetings and discussions were scheduled and held with the supervisory team of the researcher and feedback were incorporated and documented.

2.8 Ethical approvals

NHS Research Ethics Committee (REC) approval and Research and Development (R&D) permission was required to conduct the qualitative studies because of the involvement of NHS patients in the
The research met the requirement for a proportionate review under category IV and was approved by the NRES Committee West Midlands – South Birmingham (ref 12/WM/0426) on the 12th of December 2012 (Appendix 1). R&D permission was obtained in England from NHS Salford ReGouP to conduct the study across primary care trusts (PCTs, now CCGs) in Greater Manchester (Appendix 2). In Scotland, R&D permission application was made to the NHS Research Scotland Permissions Coordinating Centre (NRSPCC) team. The permissions approval (Appendix 3) was obtained from the relevant health boards, i.e. NHS Greater Glasgow and Clyde, NHS Tayside and NHS Lothian. In addition, the study also received the University registration and authorisation, and confirmation of sponsorship and insurance as required from the University of Manchester research governance (Appendix 4). For Work Stream Three, a University of Manchester Research Ethics Committee (UREC) approval was required to conduct the cross-sectional survey research. The UREC approval (Appendix 5) for this study was received on the 4th of August, 2014 from the Research Ethics Committee 3 (ref 14252).

2.9 Summary
This chapter has provided the rationale (aim and objectives) and the methodological approach that was employed in this programme of work. The next four chapters (Chapters Three to Six) provide a more detailed description of the research process and how the key results obtained helped to address the overall aim and objectives of the programme of work.
3. Chapter Three: Scoping literature review

3.1 Introduction
This chapter presents the work that was carried out at the beginning of the PhD programme of work as part of a wider review and mapping of published literature and policy documents to understand the concept of self-care support in the management of long-term conditions (LTCs) in community pharmacy. Specifically, this chapter focuses on the findings from a scoping review of the literature that aimed to identify the core elements of self-care support of LTCs. The rationale and aim for undertaking this review and the approach taken to find relevant literature are initially presented. The findings from the review that led to the development of a theoretical framework of self-care support of LTCs are then discussed.

3.2 Rationale
At the commencement of this PhD programme of work in September 2011, a large proportion of time was spent searching, exploring and reading through published articles in the literature and in policy documents to gain a good grasp of the research area around self-care support of LTCs. A broad search strategy was used to locate and identify relevant published articles and policy papers from a number of electronic databases, journals and websites of governmental and voluntary sector organisations. A large body of published articles that provided descriptions, components and interventions on self-care support of LTCs were found. A closer examination of the published literature revealed a paucity of published articles within the pharmacy literature, with the majority of articles emanating from other disciplines, predominantly from medicine, nursing and health psychology. Similarly, a search through key UK government websites and policy documents, and the websites and publications of key health policy/LTC management ‘think-tanks’ which, although, found a significant amount of published papers on self-care support of LTCs, highlighted very limited references made to pharmacy and/or community pharmacy. Furthermore, the literature search also found significant inconsistencies and variations in the descriptions, definitions, interventions and components that provided a conceptual understanding of self-care support to the management of LTCs. It was found that there was no agreed framework that brought together the main components of self-care support of LTCs from interventions in primary care. This last point was very important to the development of this programme of work since two key objectives were to understand and examine what ‘self-care support’ meant to the management of LTCs in community pharmacy and to identify and examine the core components of self-care support in community pharmacy practice. It was considered that it would be challenging to draw out the core components of self-care support of LTCs in community pharmacy without an understanding and theoretical grounding of how these core components have been mapped in the wider literature.
3.3 Aim

This scoping review of the literature aimed to identify and describe the main components of self-care support of LTCs from the large body of published literature and policy documents for the purpose of guiding and focussing the development of this programme of work.

3.4 Methods - mapping of the literature

The mapping of the large body of literature on self-care support of LTCs was an iterative and dynamic process that continued all through the duration of this programme of work. The scoping review of the literature to identify the main components of self-care support of LTCs took place during the preliminary literature review early on in the research programme. The following electronic databases were searched to retrieve articles on these topics using a combination of keywords related to self-care support of LTCs.

- MEDLINE (1966-current)
- EMBASE (1980-current)
- CINAHL Plus (Cumulative Index to Nursing and Allied Health Literature 1937-current).
- ISI web of knowledge (1900-current)
- Cochrane Library (1999 – current)

The literature search used specific keywords and search terms in multiple fields (title and abstract search) and in a variety of combination in the different electronic databases. The main keywords and search terms combined terms related to self-care support ["self-care" “self-management”, “self-care support”, “self-management support"] with terms related to LTCs [“long-term condition*”, long-term illness*”, “long-term health condition*”, “chronic illness*” “chronic disease*” “non-communicable disease*”]. Boolean operators (such as AND; OR, NOT) and ‘wildcards’ and truncations were employed were appropriate in the literature search.

In addition to the electronic databases searched, articles relating to self-care support and/or the management of LTCs in policy documents and whitepapers were searched and retrieved from the websites and publications of the World Health Organisation (WHO) and the UK Government Department of Health (DH). The websites and publications of health policy ‘think-tanks’ such as the King’s Fund, Nuffield Trust, the Health foundation and the NHS confederation were also searched. Similarly, the websites and publications of charities and voluntary organisations dedicated to LTCs and self-care such as British Heart Foundation, Diabetes UK, Asthma UK, Self-Care Forum were also searched.
The literature search also extended to relevant textbooks and materials that were identified from The University of Manchester Library. ‘Snowballing’ which involved search and retrieving relevant articles from the references of other articles was also employed. No stringent exclusion criteria were applied. However, selection of the most suitable articles to examine and explore was undertaken by; restricting the literature search to ‘title search’ (a focus on articles with the relevant keywords in the title were favoured), checking the publication dates (more recent publication were favoured), checking the country of origin (where possible, papers and publications from the UK were favoured), types of articles (review articles, systematic reviews and Cochrane reviews were favoured).

In order to improve the rigour of the search process, advice was obtained from the University of Manchester Librarian looking after the Manchester Pharmacy School, the PhD supervisory team and other researchers and colleagues at the Pharmacy Practice Division, Manchester Pharmacy School. Relevant texts in conducting scoping reviews and literature search were also consulted. Additionally, the researcher maintained an ‘auto-alert’ system where the table of content, new citations and articles from saved searches from the electronic databases and journals were received by automated emails. This auto-alert system was also extended to applicable websites (mainly from the think-tank organisations) where information on new and updated contents were regularly received by emails. This provided a continuously, up-to-date content of relevant literature throughout the duration of the programme of work. The EndNote™ software was used to maintain and update the reference list from the literature search.

3.5 Findings from the scoping review

3.5.1 Synopsis of published literature on self-care support of LTCs

Self-care support of LTCs is a very topical research area with vast amounts of published literature uncovered; over 3,000 published articles and 150 review articles were retrieved from the search, 18 of which were from the Cochrane Database of Systematic reviews. A white paper published in 2012 that reviewed the evidence base for self-care programmes and interventions between 2005 and 2011 found 128 systematic reviews. However, review articles on self-care support have been published in the 1970s, 1980s and 1990s, although, the majority of review articles were published after 2000, presumably as a result of the seminal works of Lorig and her colleagues in the USA on the Chronic Disease Self-Management Programme (CDSMP) in the mid to late 1990s to the early 2000s. The literature on self-care support of LTCs varies significantly in terms of the targeted patient demography such as age (children, adolescents, and adults) and gender (women versus men), type of LTCs (disease-specific versus generic LTCs) and the type of interventions (lay-led/peer-based versus healthcare professional/primary care). The majority of published articles on self-care interventions focussed on disease-specific aspects of self-care support particularly those around
diabetes,

cardiovascular diseases,

chronic respiratory diseases (asthma/COPD),

arthritis and chronic pain,

mental health conditions and cancers. There were however some reviews that examined self-care support in diseases such as HIV/AIDS, cystic fibrosis, chronic kidney disease and Parkinson’s disease. There was also a wide variation in the country of publication of published articles although most of the review articles from the USA, UK, Australia and Canada. Relevant publications from the World Health Organisation, government Department of Health and health policy think-tanks such as the King’s Fund and the Health Foundation were also retrieved from the literature search.

3.5.2 Components of self-care support of LTCs

Self-care support of LTCs has been extensively examined and researched and the rapidly expanding evidence base indicates there is a growing interest in this field. Most of the published research articles have focussed on ‘programmes’ or ‘interventions’ of self-care support, although there are other published articles that have examined the ‘processes’, ‘initiatives’, ‘strategies’, ‘approaches’ and ‘outcomes’. One commonality among the published articles however, is that they identify certain ‘components’ of self-care support, which describe the focus of the programme or intervention under investigation. While there are differences and significant overlaps in the ways that these terms are used to describe self-care support in the published literature, there are inconsistencies and no widely agreed framework on what constitutes the main components of self-care support of LTCs. Following the successful trials of the CDSMP, Lorig and Holman (2003) identified three self-care tasks - medical management, role management and emotional management; as well as six self-care skills – problem-solving, decision-making, resource utilization, patient-healthcare professional partnership, action planning and self-tailoring. Self-care support programmes could be lay-led/peer-based, where the self-care support intervention is delivered by trained lay experts and/or experienced patients (‘expert’ patients) or healthcare professional-led. While many self-care support programmes from the published review articles and studies focus heavily on lay-led/peer-based interventions, evidence of healthcare professional-led self-care support interventions are still emerging although there are currently no systematic reviews that have examined this area.

3.5.2.1 Lay-led self-care support interventions

Barlow et al. (2002) undertook one of the early reviews of self-care support interventions after programmes such as the CDSMP gained wide acceptance. In this review, the authors identified some components of self-care support for people with LTCs that included; information; drug management; symptom management; management of psychological consequences; lifestyle (including exercises); social support; communication; and others such as action plans, care planning.
coping, problem solving, etc. In a more recent review article published by the Health Foundation in 2011 that examined the evidence considering whether it is worthwhile to support self-care, some components and strategies of self-care support of LTCs were conceptualised as being a continuum of strategies focusing on a range of different attributes (Figure 3.1). The attributes that the components of self-care support focussed on were a focus on self-efficacy, technical skills, behaviour change, and information provision.

**Figure 3.1: Continuum of strategies to support self-care (reproduced with permission from de Silver, 2011)**

In general, many studies and review articles described some components of self-care support delivered through patient education or self-care education programmes and interventions for people with LTCs, while some other articles described programmes and interventions that targeted specific aspects of self-care such as behaviour change and predictors of behaviour change, e.g. self-efficacy. Most self-care support programmes were multi-component in nature, consisting of comprehensive packages of interventions such as self-care/patient education and training, adherence/compliance, self-monitoring, action plans and technology-delivered interventions. Some self-care support programmes however targeted specific aspects such as adherence and use of medicines, self-monitoring, coping strategies and symptom management, care planning, social/support networks and technology. Newman et al. (2004) grouped the contents of self-care support interventions for diabetes, asthma and arthritis into three according to the theoretical approach taken by different studies; 1) social learning with components such as problem-solving and goal-setting to improve self-efficacy and behaviour change in areas such as exercise, diet and blood glucose monitoring; 2) a cognitive
behavioural model with components that target coping skills (e.g. pain in arthritis), eating behaviours, depression; and 3) an educational model that was information-based and instructional but that also incorporate components such as social support, exercise and practical tasks. In a review of UK self-care support initiatives for older people with LTCs, Berzins et al. (2009) identified patient education, promotion of exercise and improving patient self-efficacy as the main components of self-care support interventions. Schulman-Green et al. (2012) used a qualitative meta-synthesis technique to categorise the processes of self-care into three with specific tasks and skills associated with each – focus on illness needs (e.g. acquiring information, learning skills, changing behaviours); activating resources (e.g. individual and community support networks, use of health resources); and living with a chronic illness (e.g. processing emotions, adjusting, integrating illness into daily life, making meaning).

### 3.5.2.2 Healthcare professional-led self-care support interventions

There is a growing body of research evidence to promote programmes and interventions of self-care support of LTCs provided by healthcare professionals in clinical primary care practice, which is also an increasing area of interest by Governments and health policymakers. The evidence from healthcare professional-led self-care support programmes is dominated by published literature from medical and nursing. Self-care support of LTCs interventions by doctors and nurses in GP clinical practice has been well-explored with a broad range of components to help patients acquire self-management skills and maintain health and physical functioning through goal-setting, action planning, identifying barriers and problem-solving. Evidence of pharmacists-led self-care support interventions are also emerging but most currently focus on disease-specific interventions and medicines-related self-care support interventions such as medication adherence, medication management and medication reviews; although there are recent studies that have examined broader aspects of self-care such as provision of lifestyle support and goals-setting.

Self-care support provided by healthcare professionals in primary care is an essential part of the chronic care model (CCM) which emphasises patient engagement and empowerment by healthcare professionals in primary care consultations. Bodenheimer et al. (2002) conceptualised the partnership between the healthcare professional and patients with LTCs into two components – collaborative care and self-management education, the former described as a paradigm shift in the relationship and partnership between healthcare professionals and patients where both are involved in shared-decision making, while the latter is based on a realm of patient education that focuses on imparting patients with problem-solving skills. Barlow et al. (2002) described the components of self-care support in primary care to include patient education, medication management and adherence, symptom management, care-planning, psychosocial consequences, lifestyle changes and monitoring of conditions. Glasgow et al. (2003) suggested practical strategies for the implementation of self-care support of LTCs by healthcare professionals by outlining a framework.
(‘Five A’s’ – assess, advise, agree, assist, arrange) to help patients develop personal action plans for their LTCs.

Many self-care support programmes and interventions in primary care are multifaceted with research evidence suggesting that multilevel interventions such as those that target healthcare professionals, patients and organisational structures at the same time are more effective than those that target simple or single components.\(^{54, 469}\) Kennedy et al.\(^{54, 113-115, 470}\) developed a model that applied a whole systems perspective to self-care support of LTCs, the Whole system Informing Self-management Engagement, (WISE). The key components of the WISE approach consist of strategies to provide patients with accessible and relevant information relating to their LTCs; to change healthcare professional behaviours towards consultations with patients; and to make structural and organisational changes aimed at improving patients’ access to services. The WISE model consists of a comprehensive package of tools for use in primary care such as tools that help to assess patients support needs, guidebook on self-management and a web-based directory of local self-management resources.\(^{448}\) The WISE approach also targets determinants of patients self-care behaviours using psychological models such as social cognition models.\(^{471}\)

A consistent theme among the many different components of self-care support interventions led by healthcare professionals in primary care is the use of behaviour change techniques such as cognitive behavioural techniques (CBT)\(^{379}\) and motivational interviewing\(^{472}\) as a means of changing patient behaviour. While it has previously been thought that behavioural change techniques benefit more of mental health-related LTCs such as chronic depression and schizophrenia,\(^{119}\) these techniques are now becoming more commonly used across other LTCs.\(^{120-122}\) Behavioural change techniques in interventions and programmes for self-care support of LTCs aim to influence how patients with LTCs view their conditions and how their thinking can be changed to improve their self-care behaviours such as medication adherence and lifestyle changes.\(^{64}\)

Recent evidence emanating from primary care research indicates that self-care support and the use of behaviour change techniques is currently not embedded in the routine interactions between healthcare professionals (mainly doctors and nurses) and patients.\(^{446, 447}\) Self-care support was found to be infrequent during primary care consultations between patients and healthcare professionals (GPs and nurses) while behaviour change conversations were rare, with the healthcare professionals being resistant and deflective during such conversations.\(^{447}\) Similarly, a RCT that implemented an intervention for self-care support intervention of LTCs in routine primary care settings (GPs) found that the intervention did not add any noticeable value and recommended the need for a better understanding of the active components required for effective self-care support of LTCs.\(^{448}\)
3.5.3 Developing a framework of the core elements of self-care support of LTCs

The scoping review identified the wide range of components of self-care support that have been used in the literature around LTCs. For the purpose of this programme of work, a single framework that captured the main components of self-care support of LTCs was important to provide a theoretical basis to explore how self-care support of LTCs is conceptualised and operationalised in community pharmacy practice; as well as to identify and examine the important aspects of self-care support of LTCs in community pharmacy. Through a reflective and iterative process, a framework of the core elements of self-care support was developed by mapping the main components of self-care support programmes and interventions in published literature under five broad themes – collaborative care planning; self-care information and advice; self-care skills training and support; self-care support network; and self-care technology (Figure 3.2). These broad themes mirror a parallel to the four overarching areas outlined by the UK Department of Health as areas to support local health and social care organisations to develop effective strategies for providing self-care support of LTCs (information, skills and training, tools and devices and support networks). However, a crucial component – collaborative care planning, which encompasses key elements and concepts such as action-planning, personalised care planning, problem-solving, goal-setting and proactive follow-up, shared-decision making, active patient involvement, partnership, etc. was not captured in the Department of Health policy document.

Figure 3.2: Theoretical framework of the core elements of self-care support of long-term conditions (LTCs)
3.5.3.1 Collaborative care planning

Collaborative care planning refers to the collaborative interaction between patients and healthcare professionals, where the perspectives and expertise of both are shared and used to provide personalised care and support. Self-care support interventions that embed collaborative care planning utilise behaviour change techniques such as motivational interviewing and health coaching to target specific patient outcomes such as self-efficacy. Collaborative care planning is an anticipatory process that requires both healthcare professionals and patients to discuss, engage, negotiate and agree a written and/or verbal action plan in the management and care of LTCs that takes account of evidence and personal perspectives in order to achieve a desired health outcome. Care planning is on the UK government policy agenda; the Department of Health has an ambition to ensure that every NHS patient with LTCs in the NHS should have a personalised care plan, agreed by the patient and a named healthcare professional. Care-planning of LTCs is a well-researched area and most published evidence of the effectiveness of care planning relate to specific diseases such as diabetes, asthma and severe mental illness.

Although there is a plethora of literature on collaborative care plan of LTCs between patients and healthcare professionals, it remains a challenge to design and implement in routine clinical practice. The CAPITOL project, which aimed to provide a comprehensive evaluation of the implementation and outcomes of care plans and care planning in the NHS found evidence of benefits of many separate components of collaborative care planning but there is no strong evidence of impacts on effectiveness and cost-effectiveness. In addition, the report found that the term ‘care-planning’ was not a familiar term to patients with LTCs although most patients reported aspects of collaborative care planning in their interactions with healthcare professionals. Negotiated and written care plans as well as aspects of care plans such as action-planning and goals-setting were also found to be rare and there were wide variations in care planning across the UK. It however concluded that collaborative care planning has the potential to add value to self-care support of LTCs.

Collaborative care planning is the central element of the framework and reflects its central role in enhancing the effectiveness of the other elements of self-care support. Embedded in the concept of collaborative care planning are other key concepts that align with the principles of self-care support such as shared decision-making, patient engagement, involvement and partnership with healthcare professionals, patient-centred care and patient empowerment. Although these concepts have been used as distinct concepts from collaborative care planning in the management of LTCs, they all share the similar goal of establishing a central role for patients in their relationship and interactions with their healthcare professional where patients are placed at the centre of their care.
3.5.3.2 Self-care information and advice

Almost all self-care support interventions involve providing some form of information and advice to help to improve patients’ knowledge and understanding of living with their LTCs, and to enable them to engage in self-care. Self-care information and advice that is readily accessible to patients is crucial to empowering them to take responsibility for their LTCs and to make informed decisions to help them to engage in appropriate self-care behaviours. Self-care information and advice for patients with LTCs can be provided through a number of different formats such as; verbally through consultations with health and social care professionals or through lay-led experts/lectures for individual or patients groups, in written/audio-recorded formats such as through leaflets, websites, email, text messages, electronic forums, etc. Healthcare professionals have a key role in disseminating self-care information and advice to patients with as well as in encouraging and signposting them to other self-care resources. Self-care information and advice that patients receive from healthcare professionals can be divided into three types; 1) disease-specific information and advice such as information on understanding the LTC and disease process, prognosis, symptoms and signs of deterioration, warning signs, etc; 2) pharmacological-specific information and advice on managing LTCs such as type and indication of medicines, directions for medicines use, side-effects and interactions, etc; and 3) lifestyle-specific information and advice; such as dietary and weight management advice, smoking and healthy lifestyles, exercising, etc.

While provision of self-care information and advice is important in helping to develop and improve patients’ knowledge and understanding about living with their LTCs, there is clear evidence that this alone does not lead to improved self-care behaviours. Self-care information and advice can be provided through either the more traditional patient education approach or through the more tailored self-care education approach. The main distinction is that in self-care education, patients are provided with personalised and tailored information and advice based on individual needs (e.g. health literacy, health beliefs, etc.), while in the traditional approach, patients are provided with standardised, generic and sometimes unsolicited information and advice. Furthermore, most patient education programmes are underpinned by the theory that information and advice increases patients’ knowledge and understanding, which leads to behaviour change, whereas, self-care education programmes are underpinned by the theory of self-efficacy which surmises that increasing patients belief in their ability to accomplish specific behavioural tasks leads to improved outcomes. Provision of self-care information and advice to patients recognises individual patient circumstances, considering the patient's level of education and levels of health literacy. The use of behaviour change techniques therefore is an important part of self-care education interventions for LTCs.
3.5.3.3 Self-care skills training and support

Self-care skills training and support is closely linked to self-care education where, in addition to acquiring the knowledge about self-managing LTCs, patients are also trained and supported to develop specific skills to manage and live with their conditions. In the literature, self-care skills training and support focus mainly on disease-specific interventions and the types of self-care skills that have been described include self-monitoring skills and symptom management skills, coping skills to deal with, and respond to psychosocial aspects of LTC, self-administration of medicines such as inhalers for asthma/COPD and insulin for diabetes, adherence to medicines and treatment plans and ability to effectively use prescribed medicines.

Self-monitoring skills were the most prevalent types of self-care skills training and support provided in many interventions. Self-monitoring skills training and support has been predominantly explored in LTCs such as asthma, COPD, diabetes and cardiovascular diseases. Self-monitoring skills training and support in asthma and COPD are directed at helping patients to control the disease exacerbating, preventing worsening of symptoms of breathlessness and wheezing and improving health-related quality of life. Myers (2002) identified the key tools for self-monitoring training and support for patients with asthma to include written treatment plans for symptom monitoring and management, peak flow meters and metered-dose inhaler monitoring devices. Self-monitoring skills training and support for patients with diabetes include monitoring and self-testing of blood glucose levels, monitoring and changing dietary habits and lifestyle, management of symptoms and problem solving. Similarly, skills training and support in self-monitoring of cardiovascular diseases such as hypertension and heart failure involved monitoring and self-testing of blood pressure, dietary monitoring and modifications (e.g. salt intake).

Coping skills to deal with the psychosocial and emotional aspects of LTCs were described mainly in self-care support interventions for patients with diabetes. This requires an understanding and use of behavioural change interventions to motivate people with diabetes to improve their self-care behaviours. Training and support in coping skills also involve the use of interventions that use empowerment techniques or that promoted relaxation or patient self-efficacy. Skills training and support in symptom management also featured across many self-care support interventions. For example with symptom management in patients with chronic heart failure, some self-care skills training and support provided include making changes in “physical activity levels, breathing assistance measures, position changes, temperature alterations, medication management, equipment or devices, adherence to a sodium-restricted diet, self-monitoring, distraction techniques, family support, and positive self-talk.”
3.5.3.4 Self-care technology

Self-care support of LTCs programmes and interventions driven by technology in primary care is a growing area of research in published literature. A wide range of technologies to improve self-care of LTCs are emerging and healthcare professionals are now being encouraged to play a key role in supporting patients to engage in these technologies. Some of these emerging technologies include information and communication technologies, mobile applications (‘apps’), web-based tools, and assistive, ‘smart’ home technologies. These self-care support technologies are now being incorporated into many self-care support interventions that support people with LTCs at home. Studies that have examined the use of these technologies in routine primary care practice are limited but evidence is emerging. In 2005, the Department of Health published a report that reviewed existing diagnostic, monitoring and assistive tools, devices technologies and equipment to support self-care. The key messages from the report were that, while there were a myriad of self-care technologies, technologies that provide continuous monitoring of LTCs were the most promising although these were complex and expensive with little evidence of collaborative research, most of which were small scale pilot studies. A recent systematic review that examined the efficacy of mobile phone interventions to improve medication adherence found that the use of text-messaging improved medicines adherence although it was noted that there is a need for more robust and rigorous studies in this area.

3.5.3.5 Self-care support networks

Patients with LTCs come in contact with a number of support networks or groups which are outside the formal healthcare settings which implicitly or explicitly influence their self-care behaviours. Woolacott et al. (2006) described self-care support networks as groups that provide education, training and practical support and help to patients with LTCs with limited involvement of healthcare professionals. The authors however differentiated these support networks/groups from professionally conducted group interventions and the more general social support provided by patients’ natural social networks such as family/carers and friends. Rogers et al. (2011) however conceptually grouped self-care support networks for patients with LTCs (social networks and systems of support) broadly into three; 1) personal communities that includes spouse/partner, children, grandchildren, parents, siblings, other relatives, friends, pets, neighbours, colleagues, classmates, acquaintances; family/carers, friends, peers; 2) non-health professionals, including health trainers, social prescribers, community wardens, traditional healers, faith healers, spiritualists, herbalists, social workers religious or spiritual leaders, managers, teaches; and 3) voluntary and community groups that includes support groups, lunch/tea clubs, internet-based discussion groups, religious groups, sports groups, other social groups.
Compared to other elements of self-care support, research on interventions that use support networks in the care of patients with LTCs are limited, although research on related concepts such as ‘social support’ is well-established. For example, a systematic review of intervention studies on social support in diabetes delineated ‘social support’ from ‘social/support networks’ and reported a limited number of intervention studies on social support interventions. The majority of published articles have focused on peer-led group interventions with ‘mutual support’ and skills training the most common interventions. These peer-led group interventions are either generic self-help support groups such as the CDSMP and the Expert Patient Programme, or disease specific groups such as the Dose Adjustment For Normal Eating (DAFNE) programme for patients with type 1 diabetes and the Diabetes Education and Self-Management for Ongoing and Newly Diagnosed (DESMOND) programme for type 2 diabetes. While there have been many advocates for healthcare professionals to refer and signpost patients to these peer-led self-care support networks, good quality research evidence to support this is sparse. In general however, recent published articles by Kennedy and her colleagues suggest that the involvement of a wide variety of patients support networks can produce substantial benefits and this should be harnessed to improve cost effective outcomes in the management of LTCs.

3.6 Summary

The vast amount of published literature that were identified from this review is indicative of the interest and attention given to self-care support in the management of LTCs. Self-care support of LTCs consists of multidimensional components that require a change of orientation and culture by both patients and healthcare professionals. This review was undertaken to identify and describe the main components of self-care support of LTCs from the large body of published literature and policy documents to guide and provide a focus to the research programme of work. While different components and strategies for self-care support of LTCs exist in the literature, there is currently no agreement to what constitutes the core elements of self-care support. The theoretical framework that consists of five core elements of self-care support developed and adapted from existing frameworks provided a theoretical basis to explore the nature of self-care support of LTCs in community pharmacy practice. It thus provided a theoretical grounding for the subsequent research work undertaken in this programme of work which are described in the next three chapters (Chapters Four – Six).
4. Chapter Four: Work Stream One – Patients’ interviews

4.1 Introduction
This chapter details the qualitative study undertaken with people living with LTCs (patients). The study involved semi-structured interviewing patients with LTCs in England and Scotland, conducted between May 2013 and June 2014. Patients with LTCs are regular users of community pharmacy whose views and perspectives are crucial in understanding the current and potential roles that community pharmacy could play in the management of LTCs through the concept of self-care support. While research literature existed that had qualitatively explored the views and perspectives of patients the use of healthcare services for self-care of LTCs, there was limited research on patients’ perspectives of how they viewed and utilised community pharmacy for self-care support of their LTCs. This study was therefore undertaken to address this gap.

4.2 Aim and Objectives
The overall aim of this research programme of work was to explore the place and contributions of community pharmacy in providing self-care support to people with LTCs. This study had three main objectives:

1. To examine and understand how patients with LTCs engage in self-care behaviours and activities
2. To explore the views of patients on whether and how they utilised community pharmacy for self-care support
3. To identify the unmet needs of patients in self-care and whether and how community pharmacy could support this

4.3 Methods
The methods presented here complements the methodology described in chapter 2 (programme of work) where the methodological justification and decisions of the qualitative design undertaken is provided. This section describes the procedure of the methods and key decisions employed in this study.
4.3.1 Study design

This study employed a qualitative research design to address the objectives of the study. The design of this study is underpinned by descriptive phenomenology\(^{317}\) which focusses on understanding the ‘lived experience’ of people from a first person point-of-view through the interaction of the researcher and the participants.\(^{291}\) This was undertaken using semi-structured interviews, where participants provided a detailed account of their views guided by an interview schedule.\(^{291}\)

4.3.2 Study participants

Participants in this study were people (‘patients’) with long-term conditions (LTCs) in England and Scotland. Participants included were people that had at least one of diabetes mellitus (type 1 and 2), chronic respiratory diseases (asthma; COPD) and cardiovascular diseases (hypertension; hypercholesterolemia; heart conditions). These LTCs were included in the study because they are the most common LTCs in primary care, accounting for about 80% of all GP consultations.\(^{27}\)

4.3.3 Sampling and recruitment

Participants were recruited into the study between May 2013 and June 2014. Participants were sampled conveniently and purposively to allow for maximal variation\(^{512}\) in the type of LTCs and demographic characteristics (age, gender, ethnicity, deprivation, education). Recruitment and interviewing commenced in England before Scotland and this impacted on the recruitment strategies employed in both countries. The initial recruitment strategy was to identify and recruit patients directly from their general medical practitioner (GP) practices. This meant that a number of GP practices had to be approached to agree and allow access to the patients registered within their practices. However, poor/slow rate of recruitment of GP practices into the study led to a change of recruitment strategy in both England and Scotland.

In England, a total of twenty-five GP practices in the Greater Manchester area were identified and approached to take part in the study. Twenty-three of these GP practices were randomly identified from the NHS choices website while two GP practices were recommended by contacts known to researchers in the Manchester Pharmacy School. Each GP practice was approached via an introductory letter (Appendix 6) sent by post and/or email addressed to the lead GP or GP practice manager. Also included with the introductory letter was the ‘patient recruitment pack’ consisting of; a letter of invitation to patients (Appendix 7), a participant information sheet for patients (Appendix 8); a reply slip (Appendix 9); and a freepost return envelope. Follow-up telephone calls and/or emails were made after 1 week of contacting each GP practice. Only one GP practice, one of the two recommended by contacts, agreed to take part in the study. The practice allowed the researcher to
attend its diabetic and asthma clinics, where patients were approached and provided with the recruitment pack as well as with verbal explanation of what they study entailed. In addition, patients that consented provided their contact details to the researcher in order to be followed up and answer any queries after going through the recruitment pack. Because of the difficulties of gaining access to GP practices, a minor amendment was made to, and granted by the Research Ethics Committee to allow a change recruitment strategy, where patients could also be recruited from community pharmacies. This amendment was approved by the NHS REC Committee (Appendix 10). Hence, community pharmacist participants that took part in Work Stream Two study (Chapter Five) as well as other community pharmacists known to the researchers were approached to help in identifying potential patients to participate in the study. Ten community pharmacists agreed to help in identifying and recruiting patients into the study.

In Scotland, the problematic experience of recruiting GP practices in England and the lessons learned allowed for better recruitment of patients via community pharmacists in Scotland. Pharmacists working at the Pharmacy Prescribing Support Unit (PPSU) at the Victoria Infirmary in Glasgow and community pharmacists working in NHS Tayside agreed to help with patient recruitment. In Glasgow, patients were identified and approached when the researcher attended both pharmacist-led clinics in GP practices and a home visit medication review service. Potential patient participants were approached and provided with the recruitment pack as well as with verbal explanation of what the study entailed. In addition, patients that consented provided their contact details to the researcher in order to be followed up and answer any queries after going through the recruitment pack. In Tayside, a community pharmacist helped to identify patients in collaboration with a GP practice who also agreed to help with patient recruitment. The community pharmacist was provided with very specific inclusion criteria that targeted specific LTCs and patient demographics (based on purposive sampling and maximal variation). The contact details of potential participants that were approached and agreed to take part in the study by the community pharmacist and GP practice were provided to the researcher. Potential participants were then contacted by telephone and/or email to discuss the study and were then sent the recruitment pack by post and/or email.

In England, a total of 44 potential patient participants were approached; 29 via GP practice and fifteen via community pharmacists. Eight of the 29 participants approached via the GP practice and seven of the 15 approached via community pharmacists were successfully included and interviewed in the study. In Scotland, ten potential patient participants were approached in Glasgow with four successfully recruited, while in Tayside, 11 were approached with five successfully recruited and included in the study. Most participants returned the reply slip prior to the interview, although a few participants did not complete and/or return the reply slips. Participants that were successfully recruited were contacted by telephone and/or email to arrange a suitable date, time and location for the interviews to take place.
4.3.4 Data collection

4.3.4.1 Semi-structured interviews
This study used semi-structured interviewing undertaken one-on-one with participants as its primary method for data collection. A pre-interview questionnaire collecting demographic and other data (Appendix 11) was completed by participants before the interviewing commenced. Hand written notes were taken during each interview to record any important observations and after the interviews to record any additional statements as well as the researcher’s reflection of the interview. Interviews in England took place between May 2013 and June 2014 while interviews in Scotland took place in September 2013. The interviews were conducted face-to-face with participants at their homes although two interviews were conducted at an agreed location (coffee shop/café). Interviews lasted between 15 and 40 minutes. All interviews were audio-recorded using a digital recorder following written/signed (Appendix 12) and verbal consent and were transferred and stored on a secure and encrypted computer network drive at the University of Manchester.

4.3.4.2 The interview topic guide
The interview topic guide (Appendix 13) was developed from the literature and the topics covered included; participants’ background of their LTCs (diagnosis and early management strategy); coping and living with LTCs; engaging in self-care behaviours and activities; support received for self-care from health professionals and non-healthcare professional sources; role of community pharmacy in supporting self-care; and other uses of community pharmacy for managing their LTCs. The theoretical framework of the core components of self-care support that was developed in Chapter Three was used to guide discussions around engaging in self-care and the roles of community pharmacy and other healthcare professionals in providing self-care support. During the development of the topic guide, questions and prompts that appeared to be leading and suggestive of the researcher’s own preconceptions were excluded (‘bracketed’) in order to ensure that the ideas and perceptions obtained were predominantly those of the participants.294 Although the interview topic guide was not piloted with patients with LTCs, it evolved iteratively as interviews progressed and relevant changes were made including adapting a more flexible questioning style. The initial content of the interview topic guide were discussed and agreed at the researcher’s supervisory team meetings and during debriefing meetings after each interview.

4.3.5 Data analysis
Data analysis in this study was done thematically513 underpinned by the philosophical stance of descriptive phenomenology.291 Data analysis using descriptive phenomenology is characterised by a
reflection of an experience by the researcher based on the descriptions provided by participants. The researcher gathered concrete descriptions of specific experience from participants, adopted the attitude of ‘phenomenological reduction’ to understand the experience and sought to capture the ‘essential structure’ of the experience within the context of the participants. The process of phenomenological reduction and capturing of the essential structure of the interviews undertaken in this study followed the 5 steps described by Todres (2005).

**Step 1 - obtaining a sense of each protocol as a whole:** Each transcribed interview was read to gain an understanding of the individual experience of each participants. The attitude of phenomenological reduction adopted at this stage involved the process of being “present not to the words in themselves, but to the meaning of the narratives” (Todres, 2005, pp111). The researcher immersed himself into the data, remaining open to participants’ narrative and avoiding his own preconception (by not letting his background/feelings as a pharmacist influence his attitude towards patients’ narratives) to influence his perceptions of each individual narrative.

**Step 2 - Discrimination of meaning units:** The contextual understanding of participants’ perspectives gained by reading and rereading the interviews led to the identification of discrete themes which were refined iteratively as the analysis progressed. The themes and subthemes that emerged were structured under the three broad categories from the interview guide – living with LTCs; engaging in self-care; and the role of community pharmacy.

**Step 3 - Formulation of transformed meaning units:** This step involved reading through the emerging themes and subthemes and trying to understand the meaning of the words and language used by participants to express their perspectives. This was undertaken by keeping the following questions (adapted from Todres, 2005, pp112) in mind while reading the interviews and themes; “within the total context of these interviews, what does this theme or subtheme tell me about patients’ experience of living with LTCs, engaging in self-care and the role of community pharmacy and other healthcare professions?; How can I express the specific qualities of each theme in a more general and transferable way (e.g. identifying an appropriate quote from one participant that reflects a general view)?

**Step 4 - Formulation of essential general structure or structures:** As the data analysis progressed, the researcher kept going back and forth from each theme and subthemes to the broad categories, which led to rearranging and reorganising the themes and subthemes in a consistent manner to reflect general meanings and experiences of participants as a whole. The researcher intuitively and iteratively amended the themes and subthemes to reflect the general views and experiences provided by participants in an insightful and integrated manner, until an essential structure emerged. This structure was then evidenced by using quotes to express the descriptive views and meanings provided by participants in each theme/subtheme to achieve ‘descriptive adequacy’.
Step 5 - Indicating the value of the essential structure/s for understanding the variations of lived experience: This step required the researcher to go over the essential structure and compare it with individual interviews to understand, understand and describe the variations in participants’ lived experiences. For example, one of the themes that emerged from the essential structure was that patients with LTCs engaged in different lifestyle behaviours to manage their LTCs, but there were variations in how this was done. Hence, some patients decide to change their lifestyles positively to improve their LTCs, some decided not to do anything, while some others decided to continue engaging in negative lifestyles (e.g. smoking) despite knowing the consequences.

4.4 Results
Steps one and two of the data analysis process indicated that views of participants in England and Scotland were very similar. Therefore, the findings of participants in both countries are presented together. The first part of the results section presents and describes the characteristics of participants. The main results follow, presented as a descriptive narrative of participants’ views and perspectives. The findings are structured under the three broad categories of the interview topic guide that was used to generate the essential structures of themes and subthemes that emerged (see step 2 of data analysis).

- Living with LTCs. This focused on the ‘lived experience’ of patients with LTCs and their views on how they developed the knowledge and understanding about living and care for their LTCs.

- Engaging in self-care. – Theoretical framework of the five core elements of self-care support was used to structure this theme. It presents participants’ views on if, and how, they developed and engaged in self-care and the support they received if any, from community pharmacy and other healthcare professionals.

- Role of community pharmacy. Participants’ views of how they used community pharmacy for the management and self-care support of their LTCs, as well as for any other purposes.

4.4.1 Participants
In total, 15 participants in England and nine in Scotland were interviewed. More females (n=15) took part in the study and the mean age of participants was 61.6 years (SD=20.1, Range=24-92years). Participants’ ethnicity was predominantly White (n=19), although Black (n=3), Asian (n=1) and other ethnic groups (Mixed race, n=1) were also represented. Just above half of participants (n=13) were educated up to high school level, while the rest (n=11) had at least a degree or higher education. The majority of participants were retired (n=17) or unemployed (n=2), while the rest were either in full time (n=4) or part time work.
While most participants (n=20) had multiple LTCs, asthma/COPD (n=11), cardiovascular diseases (n=7) and diabetes (n=6) were the primary LTCs. The primary LTC refers to the condition through which participants were approached and recruited, for example, from asthma or diabetes clinics (see sampling and recruitment in section 4.3.3). Most participants were taking multiple medications to manage their LTCs with some taking as little as two tablets and some others taking as many as 17 different medications. All participants indicated that they had regular and scheduled visits to their GPs, ranging from once-a-year to once-a-month. Some participants indicated that they had made emergency visits to the emergency department and/or had been admitted to the hospital within the previous 12 month. The characteristics of each individual participant are summarised in table 4.1 below.

Throughout this thesis, ‘EP’ refers to English participants while ‘SP’ refers to Scottish participants. Interviews were conducted with most participants present alone, although there were a few (n=4) interviews where participants had a family member/carer present. In the quotes used, ‘I’ refers to the interviewer (researcher) while ‘R’ refers to the participants. For those interviews with participants and a family member/carer present, ‘R1’ is used to refer to the participant’s statement while ‘R2’ refers to the family member/carer statements.
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<th>Gender</th>
<th>Ethnicity</th>
<th>Highest level of Education</th>
<th>Employment status</th>
<th>Primary LTC</th>
<th>Multiple/Comorbidity</th>
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<tr>
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</tr>
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<td>Retired</td>
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<td>Yes – CVD, arthritis</td>
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<tr>
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4.4.2 Living with LTCs

Each interview commenced with participants asked to provide the background of their primary and other named LTC(s) (how, when and where it/they was diagnosed); its impact on their way of living (socials, work); other comorbid conditions (if any); and the general approach to its management (e.g. medications or other treatment type e.g. surgery). Interviews then progressed with participants discussing the ongoing management of their LTCs, their knowledge and understanding of the treatments and medications, making lifestyle changes and the roles and support that they received from different sources. During these discussions, participants were probed about their source(s) of information and support about their LTCs during and the early stage of being diagnosed as well as during its ongoing management when they became more stable. Participants were also probed further about the contributions, if any, of community pharmacy and other healthcare professionals.

4.4.2.1 The ‘lived experience’ of LTCs

The ‘lived experience’ of LTCs described by participants is discussed in this subsection. Participants in this study provided a narrative of their experience of being diagnosed and coming to terms with their LTCs. Many participants discussed how their LTCs were diagnosed, their beliefs about the causes and triggers of their LTCs and how these shaped their experiences and behaviours. Most participants indicated that they experienced some signs and symptoms in their health that led them to seek the help of their GPs where they got the diagnosis for their LTCs. A few participants however also indicated that their LTCs was asymptomatic and were diagnosed only when they went for a routine health check-up with their doctors. Almost all participants provided insights into their beliefs about the causes or triggers for their LTCs and how these influenced the self-care behaviours and activities that they engaged in. Most participants, particularly the older ones believed that their LTCs was part of the ageing process although many offered some ideas as to what could have triggered it. Some participants believed that their LTCs were hereditary while some others believed that theirs was triggered by their behaviours and habits that they had been exposed to in the past such as smoking or unhealthy diets. A few participants indicated that their LTCs were caused by exposure to environmental factors such as pollution and workload/stress, and went on to indicate that they engaged in self-care behaviours that minimised exposure to the perceived risk factors. Participants here indicated self-care behaviours that related to making significant changes to their lives, such as giving up work and engaging in relaxation activities.

Participants that were younger and that had their LTCs diagnosed as children described how their experiences and behaviours changed over time, from when they were dependent on their parents/carers to when they became independent and had to adopt new skills and behaviours to adapt their LTCs into their lifestyles. Similarly, younger participants that had their LTCs diagnosed as young adults described their experience of coming to terms and accepting that they had lifelong
conditions that had an impact on how they lived their lives and the challenges they encountered. Despite the different personal stories provided by participants, one commonality was that they all say themselves as ‘persons’ with LTCs, rather than as ‘patients’, and sought to attain normalcy in their everyday lives despite their LTCs. Participants were prompted to describe how their different perspectives shaped their behaviours, how they engaged in self-care and the roles played by healthcare professionals, family/carers, friends and other sources of support.

4.4.2.2 Knowledge and awareness of LTCs

While participants provided insights into their beliefs about the diagnosis, progression and trajectory of their LTCs, the data presented here focuses on how they made sense and acquired the knowledge and understanding about their LTCs. In general, analysis indicated that participants’ level of knowledge and understanding of their LTCs were diverse. However, most participants appeared to have the basic knowledge and understanding of their LTCs such as the definition/description of the LTC(s), awareness of the general signs and symptoms and the possible complications, progression and consequences if not well managed. Only a few participants had more in-depth understanding of the disease process such as the detailed pathophysiology and biochemical changes that occurred in the body as a result of their LTC. In one particular case however, one participant in the quote below, who was born with a congenital heart condition, had a really detailed understanding of his LTC and was able to describe this using the appropriate medical and scientific terms and vocabulary. He indicated he developed this knowledge through very regular interactions with his specialist healthcare professionals, as well as being able to undertake his own research.

From the age of 18 months I had a shunt, a BT shunt, and then at six years old I had a classical Fontan procedure, which was basically a bypass, and that was it for the heart side to date….. I was originally put on heparin injections by [named hospital] and for seven years I injected subcutaneously heparin, but they decided to stop the heparin as it has a side-effect of osteoporosis and my bones were getting brittle, so they started me on budesonide….I think I’m quite lucky because it was something I was born with, every step of the way doctors, consultants, have always explained everything to me and I’ve always been biologically minded anyway, so I really find it all fascinating.

EP6

Most participants indicated that they were provided with very basic information about their LTCs after they were diagnosed and during their subsequent early interactions with healthcare professionals. Most participants indicated that the healthcare professional involved in diagnosing their LTCs, mainly the doctors at the GP surgeries, provided them with the initial information about their LTC. Some participants went on to state that after they were diagnosed, they undertook their own individual research, such as checking online and asking friends and family for information, and they combined these with the basic information they received from their healthcare professional to gain more knowledge and understanding about their LTC(s).
Yeah, I understand that obviously my pancreas isn’t making the insulin, that sort of stuff; so yeah, I think I pieced together bits of information; I probably did look online a little bit and then GPs and nurses and just got combined information…

EP4

However, after being diagnosed and with ongoing interaction with healthcare professionals, some participants indicated that their knowledge and understanding of their LTC(s) improved during their interaction with their healthcare professionals, particularly within the GP practices. In particular, many participants pointed out that they got more information about their LTC from their interactions with GP practice nurses, rather than from the doctors in their GP surgeries during their regular visits to the GP surgery.

Well, actually the nurse in the practice gave me more information, when I went to the blood test, he explained more to me what was happening.

SP8

There was a consensus among participants that their healthcare professionals rarely proactively provided relevant information about their LTCs, not unless they made a request for more information. Many participants felt they needed more information than was being provided to them by healthcare professionals, and suggested that they had to rely on other sources to actively seek out more information from non-healthcare professional sources such as family members and friends, or from the internet.

Despite that all the GPs were individual diabetic specialists, they…I went to see one doctor and I said, I’m having a bit of trouble controlling my diabetes and I was having a bit of trouble and it was quite high and she was, like, okay, I’m going to put you on these tablets, so she put me on the type two tablets, which is a different thing and it annoyed me, so I didn’t take them…she didn’t even explain to me why she’d done it, I assumed that she thought, like, there’s something wrong with my insulin receptors as well that was producing the insulin and there was no explanation behind it, so I didn’t take them…so it’s the inconsistency that bothered me.

EP13

Some participants also indicated that they went on to buy books or check the websites of self-help groups to seek more information about their LTC. The quote below illustrates an example of this perspective provided by a participant who indicated that she got a lot of information from a friend from another country where she thought her healthcare professional was more helpful.

R: Well, yeah, the education I got wasn’t that fantastic, to be honest, …I mean I think the doctor at the hospital should have given me more information, I was just sort of given a bag of insulin pads and just told to go away…so I wasn’t given any education at all. So I sort of had to just learn it on my own what worked and what didn’t work really… I think the GPs, and then the GPs [provide] the basics, you know, you don’t produce any insulin, but anything more in depth I would never go to the doctor, I would look it up on line and read about it on line.

I: Online? Okay.
But also actually a lot of stuff that I found out was from another diabetic person, like, one of my friends that I met, like, he was very helpful and very informative… he’s from Italy and I feel like they get more information in Italy, because he’s constantly emailing his GP and getting feedback, and things like that, and it just seems that he had a lot more interaction with his GP.

When asked about community pharmacy’s involvement in helping to develop their knowledge and understanding about their LTCs, either, after being diagnosed or during their ongoing management, no participant mentioned them as a source of information. Even when participants were probed further about whether they had received any supporting information and advice to help them know more about their LTCs from community pharmacy, there was a consensus that either they could not remember if this had happened, or that they had not been provided with any information. Additionally, participants were probed further on their thought of getting information about their LTC from the community pharmacy. The response from participants was that although, they believed the community pharmacy could provide them with information and advice if they made a request, they would not readily consult them. The quote below illustrates the view of a participant on getting information about her LTC from the community pharmacy. The quote shows the general pattern of response from most participants about getting information from community pharmacy. While there was some awareness that community pharmacy was able to provide them with necessary information, it was clear that most did not readily make use of it.

So apart from the doctors and the nurses in the surgery where else do you get information about your COPD or diabetes?

Well, there’s nowhere else really.

And who do you think would provide you with this information?

The doctors are too busy, aren’t they?

So apart from the doctors where else do you think you can get it?

The chemist probably, yeah.

And have you ever requested any information from the chemist before?

No.

So how do you know that the chemist can provide you with information?

Well, I don’t, do I [laughs]? I don’t really know, I don’t really know about that [laughs].

4.4.3 Engaging in self-care

This subsection examines the self-care behaviours and activities that participants said they engaged in, how they gained the knowledge and skills to engage in these behaviours and activities, and the sources of support that they received. The interviews focussed on each of the five core elements of the theoretical framework of self-care support that was developed in Chapter Three, where
participants were probed about what kind of support, if any, they accessed to engage in these elements in the management of their LTCs. During these discussions, participants were probed about if and what support they received from two different sources; from community pharmacists and other healthcare professionals such as doctors, nurses, dieticians, etc.; and from non-healthcare professionals such as family/carers, friends, self-help groups, work support, online sources, etc. Participants’ views about the current and potential support roles that community pharmacy played or could play were also drawn out. In addition, the views of participants on the self-care behaviours and activities that they perceived as most important and relevant to them are also highlighted.

4.4.3.1 Self-care information and advice

Participants were asked to describe their current level of knowledge and understanding about the things that they did to maintain normalcy in living with and caring for their LTCs, and how they acquired the knowledge and understanding. Participants also discussed; their need for more self-care information and advice about living with their LTCs; beliefs about what information and advice were most important to them; and the support that they received from both healthcare professional and non-healthcare professional sources. Two key subthemes that emerged from this analysis are; 1) knowledge and understanding of the medical management (about the use of medicines), and 2) knowledge and understanding about lifestyle management of LTCs. These are discussed below.

Knowledge and understanding of medicines and medicines-use

All participants in this study indicated that their LTCs were being managed with prescribed medications, although some participants had also said that they had undergone some medical procedures. In general, almost all participants knew the names of each of their medicines and the different indications for which they were taking them, as well as having a broad understanding of how the medications worked to improve their LTCs. A few participants had more detailed knowledge and understanding of their medicines such as the mechanism(s) of action and the pharmacokinetic profile of their medicines. When participants were probed about how they came to know and understand their medicines, most participants said that their prescribing healthcare professional was their primary source of information, particularly when they were prescribed a new medication.

Yes, the Warfarin I've been on all my life, so that's been explained to me a long, long time ago, and every time I was put on a new medication, the doctors did tell me what it did and what it was for, and if they didn't, I always made the point of asking.

EP6

Additionally, some participants indicated that they also took the effort to read through the patient information leaflets that accompanied the medicines in order to gain more knowledge about the medicine. The participants suggested that they used these information leaflets as an adjunct to the
information already provided by the prescribing healthcare professional. A few participants also suggested that the information leaflets were useful as refreshers/reminders to know more about the medicines since they typically received the information from their prescribing healthcare professional only when it was newly prescribed, and were usually not provided with further information about it on their subsequent contact with the healthcare professional.

*I always read the instructions with them, and I keep them there, because it tells you...But they probably told me up at the hospital. But that was two and a half years ago...*

SP7

Interestingly, no participant readily mentioned the role or involvement of community pharmacy as a source of information about their medicines. Even when participants were probed to talk about any other sources that they accessed for information about their medicines apart from the doctors and nurses, many participants still did not mention community pharmacy. Some went on to indicate that they would refer to either their medicines information leaflets or that they would check elsewhere (e.g. the internet, or a friend/family member).

*I: How did you get to know about that, who explained that to you?*

*R: There again my daughter explained it to me. The only thing I wasn’t sure about was the beta-blockers, I think the beta-blockers are to do with blood pressure*

EP12

When probed further and specifically about community pharmacy's roles in providing them with information about their medicines, many participants indicated that they recognised community pharmacy's roles as provider of information about medicines, although it appeared as though many did not utilise them for that purpose. Participants maintained that they would not ask the community pharmacy about their medicines but that they preferred to read the medicines information leaflets if they needed more information. A few participants inferred that they did not think community pharmacy as a source of information about their medicines, or that they would have the necessary knowledge and expertise about medicines. The quote below illustrates the perspective of a participant pondering whether community pharmacy would have known about an interaction between two of her medicines.

*R: Well, the thing is I read the leaflets myself and that’s...In the leaflet, I would read the leaflet, and then I know if...One of the doctors gave me something that I wasn’t allowed to take, this diclofenac, and I wasn’t allowed to take that, but when I read the leaflet, and because I was on Warfarin, and I said to the nurse at the clinic, and she says you were quite right not to take that.*

*I: But what about the pharmacist in the chemist?*

*R: Well, the pharmacist, would they have known, would they have known that I shouldn’t have taken it?*

SP8
Knowledge and understanding of the lifestyle management of LTCs

After discussing the use of medicines for the management of their LTCs, participants were asked to discuss if, and what other activities and behaviours they engaged in, which they perceived were beneficial to improving their LTCs, as well as their general health and wellbeing. Participants were also asked about the support that they received from healthcare professional and non-healthcare professional sources that encouraged them to engage in these behaviours and activities. The discussions with participants here focused predominantly on lifestyle behaviours and activities. There were diverse views from participants on the lifestyle behaviours and activities that they engaged in, with views varying according to each participant's individual and personal needs. Participants discussed different lifestyle behaviours and activities such as quitting smoking, eating healthily, maintaining a healthy body weight, exercising and reducing/monitoring their alcohol consumption. Almost all participants however agreed that they understood the importance of making lifestyle changes to improve their LTCs as well as their overall health and wellbeing. While some participants indicated that they were already engaged in healthy lifestyle activities, others suggested that they were intentionally not concerned about making the necessary lifestyle changes, even though they knew that they should be doing so. Participants generally recognised that making any lifestyle changes required it was their choice and willpower.

Well, um, I think that when, I mean I have dieted in the past and you have to do it for such a long time…Um, but you have to have the mental attitude to want to do it.

EP3

Participants were probed about if and what type of support they had received to help them make the necessary lifestyle changes. Participants provided diverse views with regards to their sources of information, advice and support, with many mentioning both professional and non-professional sources. Many participants acknowledged that the main professional source of information and advice on lifestyle was from the doctors and nurses in GP surgeries and hospitals. There was however a general consensus that it was mainly the specialist nurses that provided them with lifestyle information and advice.

I: where do you get your advice from?...
R: from the doctors, I mean, our doctors, we have um, an annual check, blood tests, urine tests, and um, blood pressure tests. That’s yea, and the nurse who usually does it, we always discuss things about how much you drink… [laughs].

EP1

While many participants agreed that they had been offered some lifestyle information and advice from healthcare professionals, there was a suggestion that healthcare professionals generally did not proactively support them in making the necessary changes. Participants indicated that healthcare professionals in GP surgeries or hospitals often mentioned the need for them to adopt healthy lifestyles (or drop unhealthy ones) during their usual visits to them. Most participants however
indicated that they were often left on their own to develop the knowledge about making the necessary lifestyle changes

Well, yeah, the education I got wasn’t that fantastic, to be honest, so I thought that there were certain foods that I couldn’t have whatsoever at all, and it’s only now that I’ve realised that there are certain foods I can have, but I just have to make sure that I’m monitoring my insulin properly. So yeah, there wasn’t really anything….well, I mean I think the doctor at the hospital should have given me more information, so I sort of had to just learn it on my own what worked and what didn’t work really.

EP4

However, some participants provided instances of when their healthcare professionals provided information and advice about making specific lifestyles, which they felt was of benefit to them. In the quote below, the participant discussed the help she got from her diabetic nurse in monitoring her diabetes while still being able to consume alcohol as she would normally want to.

I drink a lot of alcohol I’d say, yeah, like, so once a week I go out on Friday after work and I’ve cut down now, but, yeah, so what I do is I monitor my blood sugar through the night, …my GP [nurse], she was, like, all she said was, just make sure you test it every hour, test your blood, just keep an eye on it, you know, basically she said, I know you’re quite young, you want to go out drinking, she said, drink as much as you want, within reason, just make sure that you monitor it, yeah, that’s my diabetic nurse that I see now and she’s very good, she says, basically, do whatever you want, just monitor it, just be sensible.

EP2

When participants were asked if they had received any information, advice and support on making lifestyle changes from the community pharmacy, there was a general consensus that they had not.

I: All right, okay. But do you get this kind of information [lifestyle] from the pharmacy then?
R: No. This is from the asthma nurse. I suppose because we’ve got an asthma nurse they think they don’t need to get involved…

EP10

Some participants appeared to lack awareness that they could get information, advice or support about making lifestyle changes from the community pharmacy. They indicated that they received lifestyle information from other healthcare professionals but were not aware that they could get support from the community pharmacy.

I: So have you got any information about having health advice from anybody?
R: Well, probably from the nurse at the surgery. Because at one time I was a lot heavier than I am now and I needed to lose weight.

I: Are you aware that the pharmacy can help you with that as well? Is this something you’re aware of?
R: No, I didn’t know that, no, I didn’t.

SP4
However, some other participants stated that they were aware that community pharmacy could provide them with information and support about making lifestyle changes. When asked about why they had not utilised community pharmacy for lifestyle support, they suggested that it just did not occur to them to seek lifestyle information and support from the community pharmacy.

I don’t know, it’s just my perception. I’ve always just gone to the doctor’s for advice and never the pharmacist, and it’s just the way that it’s always been for me; I’ve never really thought to question it with them; I don’t really know why, to be honest.

SP1

Only one participant indicated that he had been actively supported to make a lifestyle change in the community pharmacy by attending a service. The participant described his experience with a community pharmacy stop smoking service where he expressed his appreciation for the support he provided by community pharmacy that helped him to quit smoking and suggested that he was happy with it. He however admitted that it was also the willpower from his own part that led to the success he achieved.

Well, they helped me to stop smoking. I’ve got a good… I had good enough will power anyway with that, you know, but I told them that I was going to stop smoking, and they helped me with that, by the way…. What was it they gave me? They gave dummy cigarettes, you know. But they were rotten; that was absolutely rotten. They just put you off having a smoke, you know. But I think there was something else – what is it? Nicotine patches…. They were a hundred per cent… you know, the chemists, they were a hundred per cent, they helped me stopping smoking. Right, brilliant, you know…. To tell you the truth, I’m glad I stopped smoking because I feel a lot better for it, but the boys from […] the chemist, they backed me to the hilt on this, by the way. I dare say they’ve had quite a few in, but they definitely did back me right to the hilt, you know. I was quite chuffed with them, you know.

SP7

4.4.3.2 Self-care skills (training and support)

Participants discussed a number of self-care skills they had developed after being diagnosed with their LTCs. The skills discussed by participants varied according to their individual needs and personal circumstances, but included; the use of self-testing tools and devices to monitor their LTCs, such as blood pressure monitors and blood sugar testing kits; symptom monitoring and management; self-administration of their own medicines; and adherence to their medicines regimen. The findings from these subthemes are discussed below.

Self-monitoring and self-testing

Participants, particularly those with diabetes and cardiovascular diseases, were asked if they engaged in any forms of self-testing and self-monitoring their LTCs and what support they received from both professional and non-professional sources. Participants were also probed further about if
and what roles their community pharmacy played in supporting them to self-monitor their LTCs. Most participants were generally aware of the availability of self-testing tools and devices for self-monitoring their LTCs. Some participants however indicated that self-monitoring was not something that they engaged in because they felt that the annual/regular checks that they had at the GP surgery was sufficient for their needs. They suggested that self-testing could lead to unnecessary anxiety and worries and would prefer not to engage in it.

R: never done that, no….I've always felt that if um the GP felt that that would be helpful, then they'd tell me to do it you know. Um, it's not something that I would want to do, I don't take my own blood pressure or anything like that, no.

I: do you think it might be helpful if you sort of knew how to do that?

R: um, I think it's a bit like reading um, medical symptoms book you know. Um, you got to sort out and you end up thinking oh my God [laughs -inaudible], I've got to have in my left leg [inaudible], am not, I don't read things like that in self-help books like that.

I: it can get you a bit worried as well..

P: yes, yes, you get that, it could trouble you.

EP3

Some other participants however indicated that they were currently or had previously used self-testing tools and devices in self-monitoring their LTCs. Many of these participants indicated that it was from the hospital or from their GP that they got advised to buy and use their self-test tools and devices. Participants went on to indicate after buying the self-test kits the GP continued to play a role in helping them to interpret the readings of their self-test results.

The doctor at [named GP surgery] suggested that I buy a blood pressure monitor and keep a check of [named partner] blood pressure, it was basically for him. And, we bought the monitor and used it for about six to twelve months. And, I had to send the readings in to the pharmacy every month for their records, not the pharmacy, to the doctors, every month for him to check what was happening…

EP8

When asked about where they got their self-test kits, many participants indicated that they bought them from the community pharmacy, although there was no indication of whether or not they got them from the same pharmacy that supplied their prescription medicines. Some participants said that they could get some self-test kits and accessories on prescription but most indicated that they bought them off the shelf like they would normally buy other products.

I: And, sort of, the glucose monitor for using checking your blood, where do you get that from, is it pharmacy as well?

R: No, I actually got my most recent one, I just bought it, yeah, from the pharmacy, from the store, but you can get them on prescription, but it was just quicker to buy it, because my old one was really old and in terms of the strips, you get those on prescription or sometimes I buy them, because I haven't taken my prescription in, but it's okay….Yeah, so if I buy, like, the blood testing strips is a good example, they run out first, so sometimes if I forget to put my repeat in I just buy them, you can just buy them off the shelf…

EP2
On being probed further about if the community pharmacist or other pharmacy staff actively got involved in supporting them with the use of their self-test kits, such as helping to explain the readings and implications, the general consensus was that they did not. Participants here suggested that they were left on their own to read and learn about how their self-test kits worked although a few did mention that they went back to their GPs or other healthcare professional that recommended the kit to them for help.

I: I suppose you bought it from the pharmacy?
R1: I bought it from the pharmacy…. they went through the different types with me, that they start about £25 and finish up at £60. They gave me great support, they talked me into the £60 one, but [laugh]…
I: [Laugh]. But, with regards to actually using it and monitoring your blood pressure, did you get any support with that from the pharmacy?
R1: No, I mean, the instructions are quite straightforward on the thing, so as I said, I had no problems with it.

Self-monitoring and self-management of LTCs signs and symptoms

In order to gain insights into if and how participants developed the skills of self-monitoring the deteriorating or warning signs and symptoms of their LTCs, they were asked if they had had any previous experience of their LTCs worsening that they perceived did not warrant an emergency call, what actions they took and how they developed the knowledge to take those actions. The affirmative responses to this question were mostly from participants with asthma or COPD. Participants here provided detailed discussions of their experience with their LTC deteriorating. The quote below illustrates how a participant described the support she received from healthcare professionals in self-monitoring the deteriorating signs of her asthma. The participant suggested that she gained the skill of doing this from different healthcare professionals that she had encountered in the course of living with, and managing her LTCs, and later went on to talk about how beneficial this was to her.

I: What about things like warning signs? Knowing how to identify those warning signs like maybe monitor symptoms?
R1: One of the doctors at A&E was really good. He was trying to explain to me the difference between the panic attack and the asthma attack. He was explaining that two of the signs overlap which I’d read on one of the websites as well, but you can’t really be sure of which is which. I’ve done a lot with the panic and the anxiety as well before I had asthma, because that’s not something I wanted to experience again. I think I’m fairly good at understanding which is which, but things like, I wanted to see the doctor today because my throat’s been feeling really tight and I don’t know if that’s allergy or asthma. He explained to me that you can get…you know, it goes all the way from your [pause] to your [pause] areas. So I just wanted to have a look at it, because I know that I can get thrush quite easily from the massive dose of inhalers that I’m on, so I wanted her to have a look. I can’t see any white spots or anything, but it’s worth asking.
I: How do you know you can get thrush?
R1: That was one thing the asthma nurse did explain. She was like, always brush your teeth after, because with this massive dose you could quite easily get thrush….  
EP7
Many participants also suggested that their family members and/or friends were instrumental to them in developing how to self-monitor the deteriorating and warning signs and symptoms of their LTCs as well as the actions to take to resolve it.

R: I think I just read a lot and I think I remember speaking to somebody, an acquaintance and she said, do you get hypos and I said, no.
I: What's that [laugh]?
R: And she told me how it affected her, so when I was in the supermarket and I was feeling horrible [14:54].
I: What did you do then? Are you aware of what you might need to do?
R: I bought one of those little orange juices. I wouldn't normally because it does shake your blood sugar up, but I drank some of that and the pure juice, of course it shoots your blood sugar up.
I: After that you went to see the doctor about that?
R: It was happening quite a lot, but I think I'd been walking quite a lot and maybe not eating enough and it was quite low.

**Taking and adhering to medicine regimens**

Establishing a system of taking, self-administering and adhering to medicines as recommended by healthcare professionals to achieve the desired therapeutic outcome has been described as a skill that all patients with LTCs should develop. Almost all participants indicated that they were very familiar with how to take (or use) their medicines as they had developed a routine for taking them. There was a general agreement among participants that they did not have any problems with adhering to their medicines, although some participants noted that they may have missed taking them on a few occasions.

I take it every day, it’s simply, I have a routine. When I wake up in the morning with my cup of tea, I have my, yea.

**EP1**

Some participants indicated that they got their medicines from their pharmacy in ‘dosette’ boxes (medication compliance aids) which further helped them to take them regularly.

I get the medication from the chemist who put them in the boxes for each day.

**EP12**

When asked about whether they had received any support in the past with regards to using and adhering to their medicines, participants indicated that they had previously received information and advice about this from their healthcare professionals. However, most participants indicated that they did not require any support as taking their medicines had become part of their daily routine.
Taking your medications, well, that just comes automatic now. Once you've been taking it for years it's habit now, it's habit and you know exactly what you're doing. I don't think I've ever forgotten a day or anything like that. So touch wood…

SP4

Participants were probed further about any problems they had encountered with their medicines and how it was resolved. Some participants shared the experiences that they had with the side effects of their medicines and indicated that their GPs were usually their first point of call. In the quote below, the participant suggested that her problems with side effects of a medicine was resolved with a change of dose or frequency, or with a change to alternative/new medicines which more tolerable.

I had um, simvastatin for some years, but it gave me bizarre dreams. I didn't have the nightmares some people have, but I have very restless sleep and bizarre dreams, and after, eventually, I said oh you know, I keep meaning to say I want to change, so this one am on [rosuvastatin] doesn't cross the brain in the same way. And it is much much better, it suits me now….

EP3

With regards to the role or involvement of community pharmacy in resolving any medicines-related problems encountered, there was a general consensus from most participants that they did not play any significant role. Some participants went on to indicate that they did not think that the community pharmacist could offer them much in relation to solving their medicines/prescription related problems. In the quote below, the participant described a situation where she tried to resolve the side effects that she was experiencing after the dose and frequency of her metformin had been increased.

R: Well, when I went to the doctors last week to see the diabetic doctor, as he calls himself,....I went about that actually because I'd been trying to take it [metformin] for a few months at lunch time and I couldn’t, I was just sick and diarrhoea and I felt terrible with it. It was alright for a couple of days and then it kicked in. There was probably no need to take that at lunch time then, no.....I could have kicked him [laughs], I could have done, so I don’t take that at lunch time.

I: And when you had the issue why did you go back to the doctor, did you think about going to the chemist rather than going to the doctor’s?

R: No, I didn't actually, no, because I didn't think a chemist...well, I just didn't think, but maybe a chemist couldn’t mess with my prescription, I would have to go to the doctor’s, wouldn’t I?

EP12

4.4.3.3 Self-care support networks

Self-care support networks were discussed with participants by asking participants to describe the roles and involvement of people or resources that were important to them in living with, and caring for their LTCs. Participants were directed to think about other people or resources who were not healthcare professionals, but who may have had direct or indirect impacts in the ways that they interacted with healthcare services. Participants were also probed about the sources where they obtained information, advice and support with any aspect, or in order to meet any specific needs for
their LTCs. Two main types of support networks emerged from these discussions; personal communities (family/carers/friends) and voluntary and community groups (self-help support groups).

**Personal communities - family/carers and friends**

Almost all participants identified family members, carers and/or friends as a crucial network that provide important support and advice with their LTCs, although the roles and involvement that these personal communities differed from one participant to the other. There was a general sense of belief that the roles played by personal communities, particularly family members, were a part of their natural duties and responsibilities, rather than active support role for the LTCs.

*There’s just myself and my wife at home now, all the children are all away. Not really, we just try to keep a reasonably good diet, that’s the main thing. We don’t go silly; just help each other as normal.*

*SP4*

In addition, many participants indicated that personal communities played a key role in helping and encouraging them to make lifestyle choices such as exercising and dieting. Again this role was viewed as a normal part of living with family. Participants here referred to their spouses/partners and/or friends as the key source of support.

*He’s [partner] quite good at pushing me a bit more, which isn’t always good, like making me go for a walk in the park.*

*EP7*

Most participants made suggestions that family members, particularly spouses/partners also played a key role in providing support for their emotional and psychosocial health and wellbeing. While this opinion was not expressed explicitly by many participants, they made inferences about this while describing strategies to cope with the emotional stress of their LTCs.

*My wife is actually a trained counsellor [laughs]. But I know you shouldn’t counsel people that you know, but I mean, you know, there are set strategies, and yea. And I learnt you know, to fight it, use a mantra…*

*EP1*

In general, most participants described family members as providing practical support with their LTCs, particularly around the collection of prescriptions and dispensed medicines. Some other participants also indicated that their family members were sometimes present with them during their interactions and consultation with their healthcare professionals. However, a few participants indicated that they did not bother their families with any responsibilities relating to the care of their LTCs, although they were there to help with household chores and other daily activities.

*Well, my son, he lives upstairs, so he helps me with shopping or putting the rubbish out or the bins out and things like that…. I don’t really bother him about taking me to the surgery or reminding me of appointments*

*SP8*
Friends and peers were also viewed as important self-care support networks by some participants, particular the younger participants. Participants indicated that friends, particularly those that had similar LTCs with them, provided a support system of sharing information and ideas about different aspects of living and caring for LTCs.

_We do, like, one of my best friends has just got diabetes and now we’re little diabetes buddies, but a different, very different experience, because he got it when he was 24, so it’s quite different getting it when you’re that age, I think it’s a drastic change in lifestyle, but he seems to be coping with it, I think he found it difficult to begin with. I think it’s different, sort of, different now, because I know he wants a pump and I would never have a pump and that makes me think that maybe he sees the injections as, kind of, an inconvenience, where I just see it as part of…_

**EP2**

**Self-help groups**

There was a general lack of involvement of voluntary and community groups as a network for support for most patients. While patients were generally aware of the large, national LTC-specific groups such as the British Heart Foundation, Diabetes UK and Asthma UK, most patients indicated that they did not find the need to use any of these groups for self-care support, apart from checking their websites for information occasionally.

_Well, diabetes UK is quite reliable. Um, but I just, every now and then, I’ll troll round._

**EP13**

However, a few participants appeared surprised that these groups could offer them any help for their LTCs apart from the donations that they requested for.

_The only thing we do, we support a lot of these groups, these charities because we…send money to them, cancer and heart and all that, we’re involved in supporting it money-wise. But I’m not very aware of what goes on behind the scenes. I’ve never needed to._

**SP4**

Most participants were prompted with examples in many cases, about their awareness and use of any local voluntary or community groups to care for their LTCs asides going to websites of charities for information. There were indications from most participants that they did not feel the need to receive any form of support from any community organisations or self-help groups. It also appeared that they did not really know about these groups and had not been informed about whether, and what support they could get by their healthcare professionals. However, two of the 24 participants had previously attended a structured self-management patient education programme shared their views and experiences of the support they got from the self-help groups. Both participants indicated that they were referred and encouraged by their healthcare professional (nurses) to attend this programme. In the quote below, one of the participants described his experience of a programme he attended to help him develop self-care knowledge and skills for his diabetes. The programme mentioned by the participant is the Dose Adjustment For Normal Eating (DAFNE), which is an adult programme for
managing type 1 diabetes that provides the information and skills to estimate the types of food intake vis-à-vis injecting the right dose of insulin. The participant described how he found the programme really beneficial.

R: Yeah, when I was first diagnosed I pretty much stopped drinking completely because I was kind of misinformed really; but now I started drinking a lot more, and I just monitor it. The DAFNE course helps, but I still knew how to monitor it and to just constantly check. ...to be fair they [healthcare professionals] gave me the website of Diabetes UK, and early on they mentioned that there was a course called DAFNE that I could go on, which I've now since been on and since then I know a lot more.

I: Why did you go on the course? What sort of inspired you to go on the course?

R: It had a lot of good recommendations, my diabetic doctor recommended it and the nurses, and they said it can change people's lives that go on it, so that was the reason why really. I mean I guess I know more about the diabetes because I've been on the DAFNE course...It was going into more detail, like the types of food to eat, more of the side effects, just little tips really. The person who was running it was also diabetic and they were showing us like pumps and the different types of insulin, the different companies of insulin. So it was really, really useful....

EP4

Overall, while only some participants indicated that they had engaged with self-help groups with few indicating that they had been signposted by a healthcare professional. Similarly no participant mentioned that they had been signposted or had received any information about any voluntary or community self-help groups from community pharmacy, even after being prompted about it.

4.4.3.4 Self-care technology

There was a general lack of awareness and use of technology for self-care of LTCs among participants in this study. Participants could not readily identify with any technologies when asked and most had to be prompted with examples of any tools or devices that they had previously or currently used to monitor and care for their LTCs. The few participants that had previously talked about self-monitoring their LTCs with self-testing kits referred back to the tools and devices that they used for self-testing referred back to these tools as the technology they used to manage their LTCs (section 4.7.5.1). On further prompting about the use of other forms of technologies such as tele-health and mobile technologies, there was a general consensus from most participants that they did not know much about such technologies. Even among the younger participants who appeared conversant with the use of smart phones and mobile applications, there was a general lack of awareness and use of any mobile or internet technology to support their LTCs. They however agreed that although, they had not looked into the use of any mobile applications (‘apps’) for their LTCs, there should be some apps available for self-monitoring.

I don't know any, but they probably have an app to follow your blood sugar nowadays. I mean, now you can buy the blood testing kits, you can buy ones that plug into your computer and they'll plot your blood sugar. But I don't, no….I think it’s very useful for some people though, but, yeah, one thing I probably don't do, which I should, is monitor my trends over a longer period of time.

EP2
However, one participant indicated that she had previously used a mobile app to self-monitor her asthma as part of a clinical study. In the quote below, the participant described the use of an app to check for risk/triggering factors in the environment that may worsen her asthma symptoms. She indicated that the app was produced by a pharmaceutical company that was undertaking a clinical study.

I have an app to track the pollen count and stuff, but it’s always when it shows it’s low that it’s worse so I don’t think it’s pollen, I think it’s something to do with the grass. there’s loads of articles on it and then I’ve got this app as well which is really good. I’ll show you. It says [named pharmaceutical company] on it and you can track it and it’ll print off where you’ve got happy faces and upset faces, so you can put in what your asthma is

EP7

4.4.3.5 Collaborating in care-planning with healthcare professionals

Participants were asked and probed about their relationship with healthcare professionals and the nature of the interactions they had either in a consultation room. In particular, insights into this topic area was gained during participants’ discussion of the contact and interaction that they had with GP surgeries (particularly doctors and nurses) when they visited for a regular (mostly annual) appointment for their LTCs or for any other appointment relating to their LTCs or any other acute health condition. Participants also discussed their relationship and the nature of the interaction that they had with the community pharmacy staff in the community pharmacy that they used to collect their prescribed medicines. Additionally, participants were also probed about their relationship, if any, with the other healthcare professionals that they encountered in the course of managing their LTCs. There was an overwhelming consensus from participants that community pharmacists played very limited roles in working collaboratively with them to manage their LTCs. As such, the rest of the findings provided by participants in this subsection is in relation to working collaboratively with GPs and nurses. The findings below are discussed under two different subthemes that emerged from this analysis; written and/or agreed care-planning; and involvement and partnership with healthcare professionals.

Written and/or agreed care planning

Participants were asked about their knowledge or awareness of a care-plan for managing their LTCs with their GPs or any other healthcare professionals. Almost all participants initially indicated that they were either not aware of what a care-plan was, or/and they were unsure if they had one in place with their healthcare professionals. There was a general sense that some participants did not understand what a care-plan was, with some thinking that it was about plans for living in a care home. Most participants had to be provided with an explanation that a care-plan was a written or verbal agreement that they had with their healthcare professionals (which was recorded in their records) about the actions that they were required to take to care for and monitor their LTCs when they were at home. The conversation in the quote below illustrates this point.
I: So are you aware of having a care plan with the doctor or the nurses?
R: No, I've not got a care plan [pause]
I: I'm asking if you are aware of having one, because everyone should have one.
R: No. No. I have got one, did you say a plan for care in a hospice when you become invalid…What kind of care [plan] do you mean?
I: No, no, okay, so the care plan is usually like a written agreement where they tell you things you need to do, so you both sit down and draw the care plan for yourself, so you set goals, say in the next one year we want your blood pressure to have been controlled from this level to this level, and things like that. So care plans are very important for everybody to have. So the nurses or doctors have never discussed this with you?
R: No, never, that's never happened.

While many participants shared this view about not knowing what a care-plan was and/or that they did not have a care-plan in place, a few participants indicated that they were aware of what a care-plan was but had not had discussions about it with their LTCs. This view shared by a few participants is illustrated in the conversation in the quote below. The participant made the suggestion that she thought the care planning process was the job of the nurse and not the doctor and went on to suggest that the nurses were reluctant to undertake the care-planning process with her.

I: Are you aware of having a care plan? Do you know…?
R1: Yes, all over the asthma website it says you should have an action plan and your nurse should sit down and write it with you. They never do it. None of them ever did it. I was going to print one off and take it in, but I thought, I'm not sitting there for an extra bit of time with [named nurse] because I don't like her [laugh]. I've, sort of, figured it out myself which is, if it's bad take the inhaler [laugh]. Take your medication every day, which I do. I don't know. Yes, they've never written anything down.
I: Have you ever brought it up with them?
R1: I think I've mentioned it once or twice and they just get sort of a glazed eye look and I think they think, oh, no, please don't make me do that. No, they've never really done that. I wouldn't see that really as my doctor's job, more the asthma nurse and yes, she doesn't like me [laugh]. Like I ask her loads of questions and quite often she just makes up stuff, I think. We don't like her.

Some participants indicated that they generally had a chat with their healthcare professionals and received advice about managing their LTCs rather than having a written care plan. In the quote below, while the participant admitted that she was aware that she had a care plan, she seemed to suggest that she did not need the plan was unnecessary since her LTC was well-managed. She also suggested that she had limited involvement in the care-planning process.

I: With your diabetic nurse are you aware that you have a care plan?
R: Yes.
I: Do you get to see the care plan?
R: No.
I: Do you get to make any input into it?
R: No.
I: [Laugh]. Have you spoken with the diabetic nurse about that, about getting involved or has she spoken to you about it?

R: No.... Probably when I go to see her she tells me. This time when I went which was maybe not so long ago, she said, this is marvellous, everything's wonderful. Whatever you've been doing, keep doing it. She said everything was fine. but the only thing she didn't tell me was, usually they tell you what your overall blood sugar is. Normally it's about seven and she didn't tell me this time and I keep thinking I should have asked that [laugh].

SP2

However, some participants also suggested that they had previously discussed and had verbally agreed plans to manage specific aspects of their LTCs. In the quote below, the participant described having a 'loose care plan' with her GP nurses; which consisted of clear goals being set and active plans to follow-up. The quote also illustrates the ways that participants described the nature of their interaction with their healthcare professionals, particularly with nurses and doctors.

R: I'd say I have a loose care plan with my new nurse, because I went and annoyingly my cholesterol was a bit high for a diabetic, I'd like to point this out for your interview, but diabetics have a lower cholesterol threshold, so she said I'm not going to put you on any medication yet, but that your aim is to eat more fish, she told me exactly what to do, she said eat more fish, she said, try and, like...I eat out a bit more than I should, she said, just try and get your diet under control and we'll test your cholesterol in six months and if it's still high I'll put you on medication, but she was very nice about it, she said, this is your aim. So, yeah, things like that...Yeah, so she does, yeah, she does give me some nice aims.

I: Okay. And what happened with the cholesterol?

R: They took the cholesterol reading, I only went recently, so I haven't got the results, but hopefully...even if she says it's high, then I'll beg her to give me another six months, because I don't particularly want to go on the medication.

EP2

While it appeared that most participants were not aware or did not clearly understand what care planning was, one participant showed that he had a clear knowledge of the care planning process. This participant suggested that a self-help programme for his LTC that he had previously undertaken was instrumental in helping him understand the benefit of care planning and being actively involved with his healthcare professionals in managing and monitoring his LTC. He also indicated that this knowledge also helped to gain the trust and confidence of his healthcare professional in managing and monitoring his LTC.

I: Okay. Do you have a care plan with your diabetic doctor or your diabetic nurse, where you set goals?

R: Yeah, I do now, the relation with my diabetic doctor changed when I went on the DAFNE course because he sort of...not to say that he didn't trust what I was saying before but because he knows I know more he trusts me with a lot more, like we talk a lot about HbA1C, which I barely knew anything about before, and I explain to him what my levels are like through my HbA1C rather than through a piece of paper that shows all my levels every day. And he was showing me my HbA1C and he was showing me how it's coming down and it's coming to a regular level. So I think he can see that that's happening and he knows that I'm doing the right things, because of that week. He knows that I'm being honest with him when I say my diabetes is okay, sort of thing.

EP4
Involvement and partnership with healthcare professionals

Whilst discussing care-plans with participants, they were probed about whether they felt they were involved and ‘active partners’ during discussions about managing their LTCs in consultations with healthcare professionals. Most patients provided illustrations of a one-way paternalistic interaction with LTCs, where they essentially just listened to what their healthcare professionals told them to do during a consultation. Some participants went on to indicate that they did not bother to question what their healthcare professional told them about managing their LTCs. In the quote below, the participant suggested that the reason for not asking questions and getting involved with her healthcare professional was because of the frequent changes in the doctors within her GP surgery, which did not allow for relationships to develop.

I: That’s fine. So just generally do you think you are involved, well involved, whenever you talk to the doctors and the nurses? Do you think they carry you along and tell you about the decisions you are taking and everything, and do you feel like you are in control whenever you speak …?

R: Well, to be fair, I don’t really ask them that much but I think I will start doing and see how involved that they become. But the trouble with what we’re having at the moment at our surgery are a lot of the doctors are leaving and we’ve got a lot of new ones, so I’ve never really talked to them.

I: It takes time, yeah, it takes some getting used to.

R: Yeah, two have left recently that I really could talk to one of them, really talk to him and he’s left.

EP12

Most participants suggested that the areas of the LTCs that they mainly got involved in with healthcare professionals were in making lifestyle changes and monitoring with their LTCs, rather than in the decisions about the use of medicines and other forms of medical management of LTCs. This inference was made as most participants did not talk about discussing or questioning healthcare professionals, for example when a new medicine was being deliberated, suggesting that they believed that this was a specialist area of their LTC management which only the healthcare professionals could decide and take actions.

Um, well, because it hasn’t been a concern, because blood pressure and um, the sugars haven’t been, um, the HBA1C, haven’t been too concerning, then at the moment everything is ok, nothing is too drastic. For instance this last blip it was higher than normal. And so it was 50 in the new scale and 6.9 or something, which it’s never been before. Um, but [named doctor] and I both agreed that it was a, you know, it was a lack of movement…

EP3

A few participants however also indicated that they had previously been involved in shared-decision making with their healthcare professional about a change or adjustment in the treatment of their LTCs. In the quote below, the participant described how she actively got involved and got her healthcare professional to agree in adjusting the dose of her medicines after a review had been undertaken.

At that time I was on 40mg [of omeprazole] a day and they were going to reduce it to ten. And I hotfooted down to the surgery and spoke to the doctor, because I thought that that was a bit drastic. And at that time I really needed more than that. And she agreed and we decided between us really that we would try me on 20 a day, because it was beginning to
work out okay. And I’ve been on 20 ever since then. But she agreed, she said this review was off the cuff and didn’t really work. …because I thought that was a bit drastic. But I mean I was happy to reduce the dose if I could….

SP5

On the whole, it appeared that many participants were not active partners and involved in the consultation process with healthcare professionals. A few participants went on to criticize their healthcare professional for not proactively allowing them to contribute to their care process during a consultation. For example in the quote below, the participant indicated that the staff in her GP surgery did not proactively engage with them when monitoring their LTC, even when they requested for information regarding their LTC.

R: I mean when they take your blood pressure at the doctor’s they don’t even tell you what it is even if you ask, they don’t have a machine facing you, they’ll be facing away from you and I say; what, is it high, what is it? And they say; oh, it’s too high at the minute.
I: And they don’t tell you what it is even when you ask?
R: Yeah, even when I’ve asked, they seem to skip over that, I shall have to be more forceful.

EP12

4.4.4 Role of community pharmacy in LTCs management

This section examines the views of participants on the roles and involvement of community pharmacy in the care and management of their LTCs. Insight into roles and involvement of community pharmacy featured all through the interviews, where probes and cues were used to elicit more information during discussion about how and where participants developed and engaged in self-care. Extensive prompts were used while participants talked about the medical management of their LTCs (mainly with medicines); during discussions about if and what support they received while engaging in any self-care activity; and if and how they self-managed other conditions (minor ailments) unrelated to their LTCs. In addition, participants were also asked about the nature of their visits to the community pharmacy, their interactions and relationships with community pharmacists and pharmacy staff and their knowledge, awareness and use of community pharmacy services that support their LTCs.

4.4.4.1 Use of community pharmacy

Almost all participants agreed that their primary purpose of using or interacting with community pharmacy was for collecting their prescribed medicines for their LTCs, although some participants indicated that they also visited for other purposes, such as for buying over-the-counter (OTC) medicines and other household goods. It appeared that many participants did not view community pharmacy as a healthcare resource for the management of their LTCs. Rather, the general
consensus was that community pharmacy was there to serve a supply function for their prescribed medicines. This view was shared by almost all participants, and some participants even went further to indicate that they did not view community pharmacy as a healthcare professional that should be involved in the ongoing management of their LTCs. The conversation with a participant in the quote below illustrates this view. The participant had described the care pathway that he used to manage his LTC (cardiovascular disease) and did not mention community pharmacy, even though his medicines were supplied from them.

I: Ok, now, apart from the doctors [GP surgery], do you see any other health professional? You talked about the nurses that do the annual checks. Do you see any other health professional, like the pharmacist for example?
R: No.
I: so you don’t see the pharmacist at all? So how do you get your medications then?
R: um, apart from going to the doctor’s on that period of time, I will, I just reorder online, you know...we reorder it online and then go and pick it up during the next couple of days later, at the chemist next door to the GP, yea.
EP1

Most participants indicated that they made use of just one community pharmacy location for collecting their prescription medicines, but that they would often visit other pharmacies, particularly those located in supermarkets and shopping areas on the high street to buy OTC medicines or other products. Many participants indicated that they made use of community pharmacies that were located within, or in close proximity to their GP surgeries because of the convenience of picking up their prescribed medicines after a visit to the GP. A few others indicated that they used community pharmacies that were close to their homes. On the whole, all participants indicated that they had an established routine of collecting their prescribed medicines from the community pharmacy. Some participants indicated that they collected their medicines in person while some others indicated that a family member or carer collected them on their behalf; only a few indicated that they made use of the prescription collection and home delivery service.

I get them from the pharmacy…I pick it up myself. I’ve made a standing order. ...
SP7

Many participants mentioned that they were satisfied and happy with the service for collecting their medicines in their community pharmacy. A few participants however went on to indicate that they encountered problems a few problems, such as with the repeat prescription service particularly when there was a change in their medications, in which case they had to go into the pharmacy to ensure that they were not supplied with the wrong medicines.

I have a repeat prescription going at [named pharmacy] and I visit them once a month to get that but if there is ever a change in medication I do have to go and clear it with them and just make sure.....to make sure that everything is right because sometimes, especially with it being a repeat prescription you can end up with the wrong, the old medication.
EP6
While almost all participants in this study were on established and regular prescription medicines for their LTCs, many participants also shared insights into instances where they were prescribed new medicines, or had a change in the dose of their medicines. When probed further about the nature of their interaction with community pharmacy when collecting their regularly prescribed medicines, the general consensus among participants was that there was very little interaction with the pharmacist or any of the pharmacy staff. Most participants suggested that their medicines were simply handed over to them, although a few noted that they sometimes had a word with any staff that they were familiar with.

I just hand it over to the girl at the till. She takes it through to the pharmacy and then they tell me to come back for it or wait for it if I want to …

SP2

Although most participants mentioned that they used just one community pharmacy, for the collection of their prescribed medicines, a few participants indicated that they used different community pharmacies depending based on convenience. According to participants who used different community pharmacies, it appeared that their interaction with the pharmacy staff when collecting their medicines was varied according to the type and location of the pharmacy. They suggested that they were less likely to interact with community pharmacies based within the health centre of their GP practices.

In the [named multiple community pharmacy], in the [named health centre], they just hand it over, but if I go to [another named multiple pharmacy] in the high street, they seem to explain to me, if I've maybe got cream, they'll say to me not to use it for any more than a few days, and if I needed it to go back to the doctor, whereas the one at the [named health centre], he'll just hand it over and that's it.

SP9

Another participant echoed this point when she indicated that she had better interactions with her local pharmacy in her a home (a neighbourhood pharmacy in a small town), compared to the pharmacy in a shopping centre that she currently used.

I mean, when I lived at home, our local pharmacy, we knew the person that worked there, so I think that was a different interaction, because they would ask me how I was doing, they would ask me did I know what I was doing with the insulin and they offered any…like, I never took the offer, but they offered to give me advice, but I think that's because they knew me, it's, kind of a different…

EP2

4.4.4.2 Using community pharmacy LTC services – MURs, NMS, CMS

Participants were then probed further about whether their community pharmacy had ever invited them in for a service for their LTCs, to discuss the use of their medicines or for any other purpose relating
to managing their LTCs. The services mentioned and discussed with participants were the MUR and NMS in England and the CMS in Scotland. Almost all participants indicated that they were either unaware of, or had not previously attended a consultation of one of the community pharmacy established service for LTCs. A keyword/phrase search for the use of any of these terms by participants during the interviews was undertaken it was found that only one participant mentioned the MUR in all the interview transcripts. While it seemed that most participants were unaware of these LTCs services in community pharmacy, it appeared that many may have previously attended a consultation but did not know that it was called a MUR, NMS or CMS. This inference was made because many participants indicated they had previously had a ‘chat’ or discussion about their medicines with the community pharmacist in the consultation room. However, most of the participants suggested that their previous consultation with the community pharmacist was one of a ‘tick-box’ interaction, rather than a patient-centred one.

R: Once, just once, oh a couple of years ago, they invited us to go into the back office and discuss our medications.
I: Yeah, and did you find that helpful?
R: No, because I told her what we were on and she ticked things and that was it….We had a bit of a laugh about things, you know.
EP10

Even with the one participant in England who mentioned that he had previously received a MUR service, there was a suggestion that the MUR consultation was merely a formality, rather one where there was an active focus on identifying and solving a problem. The view of the participant corroborated the views of other participants about their LTCs consultation with the community pharmacist. The participant indicated that the MUR consultation simply involved the pharmacist providing information that was not required.

I've had a MUR once, over my Warfarin which I thought was quite funny. He was trying to tell me how to take Warfarin after me taking it for 20 years, but, you know, I don't mind. They've got to do what they've got to do….I don't get frustrated with it at all, so I just said, yes, sure, and we went into a private room, he asked me had I been on it, and I said yes, for 20 years. He talked me through the side-effects and he talked me through what some people feel. I've never really felt any of that so I just told him what he needed to hear and left it at that.
EP6

Participants in Scotland also shared a similar view with those in England about their experience with the community pharmacy LTC service, the chronic medication service (CMS). Participants indicated that they were not generally aware of what the CMS was about, although many of them indicated that they had previously had a conversation about their medicines with the pharmacist during a consultation. A few indicated that they were aware that they could have a consultation about their medicines with the pharmacist but had not been invited for one before. One participant indicated that she knew about the CMS through her daughter, who is a pharmacist, but had not been invited to take
part in the service by her community pharmacy. She went on to offer her thoughts on why the uptake of the CMS was low suggesting that it was due to lack of funding for it.

I: Okay then, has the pharmacist ever called you to sit with him in the consultation to do like a medication review?
R: No.
I: Are you aware that they can do that?
R: I’m not aware, well [pause] I’ll say it like this, I am aware of it [CMS] but only because my daughter went on a course about it, but then she said it’s not, well, it’s not widely used. It’s not widely used because there is no money. Because, I mean, she went on a course to do that and then she says she has never practised it.

SP6

4.4.4.3 Interaction with the community pharmacy team members

Although, it appeared that a few participants were aware of the differences in the roles of the different community pharmacy staff (the pharmacist and other staff), most participants simply referred to all of them as the ‘chemist’. Hence, when participants made reference to community pharmacy in the interviews, they did not differentiate whether they were referring to the pharmacist or other members of the team, unless there was a specific reference made about a particular member of the team. When asked specifically about the support roles the community pharmacist had played in the management of their LTCs, many participants found it hard to recollect any previous interaction that they had had with a pharmacist.

I: So the pharmacist that works in the chemist, do you have any interactions with the pharmacist?
R: No, no.
I: Do you know who they are, do you have a chat with them?
R: I don’t know who they are, no, no, I don’t.

EP12

A few participants even went further to suggest that they did not think that the pharmacist had any roles to play in the management of their LTCs. These participants suggested that they believed that other healthcare professionals, particularly their specialist nurses were sufficient, and that there was no need for community pharmacy to get involved. They indicated that the community pharmacy was there simply to supply them with their medicines.

R: I mean, do you mean pharmacists, by literally the people at the counter, behind…?
I: Well, yeah, the pharmacists...
R: Yeah, to be fair, they haven’t played a very large role in my diabetes, because any questions, I’d always ask my diabetic nurse and the only thing I can think of specifically is, like, you know they have this repeat service where you can get, like, repeat…

EP2
On the whole, most participants suggested that they had very minimal interactions with any member of the community pharmacy team when collecting their medicines because they were on long-term regular medications for which they felt did not require any support. Some participants however mentioned that they sometimes had social conversations with some members of the community pharmacy team who they knew because they were regular customers, or where members of their community whom they interacted with outside the community pharmacy.

I: but do you see, the pharmacist in the chemist, do they talk to you about the medications? Or do they offer you any sort of services?
R: hmmm, not really no. you know, if I’ve ever had been there for any other tablets, which I may have done, then they might have said if you have any effects with these, will you come back here. But seeing, it’s long-term I’ve been picking, always, because of the convenience, which I pick it up…I mean, they know me actually. Um, you know, a couple of the girls that work in there know me, from my work, you know, so….
EP1

In addition, almost all participants indicated that they readily recognised some of the staff working in the community pharmacy when they went in for their prescriptions. Some participants however suggested that they more readily recognised and regularly interacted with team members other than the pharmacists.

R: Yeah, I mean I recognise the people at the pharmacy, I just go to the same one, so it’s just really the same people that hand it to me behind the counter.
I: So do you meet with the pharmacist face to face then?
R: I meet with them in the sense that I just give the prescription and they give me the stuff.
I: I’m talking about, like the pharmacist himself, not the counter staff.
R: Oh, right. No, it’s just literally the counter staff pretty much.
EP14

A few participants suggested that the reason why they were less familiar and acquainted with the pharmacists, and more with other members of the pharmacy team, was because the pharmacists changed more frequently whereas the other staff were more regular.

Well, I find they’re not always the same staff on either, so maybe if you did go to the same chemist or pharmacy constantly, they would get to know you and be able to tell you more, whereas if it’s somebody else the one time and then it’s changed the next, they don’t really get to know you, do they?
SP8

While it appeared that most participants did not give favourable accounts of their interaction with the community pharmacist in the management of their LTCs, a few participants that had experience of specifically targeted interventions led by the pharmacist provided positive comments about this
intervention and the role of the pharmacist. For example, some participants in Scotland who were involved in an ongoing heart failure scheme led by a pharmacist discussed the benefits of this intervention to the management of their LTCs. The quote below is a conversation with a participant about how the intervention of the pharmacist in the heart failure scheme helped to significantly improve his quality of life. The participant indicated that he had previously had a side effect problem with a newly prescribed medication and it took the intervention of the pharmacist, who acted by modifying the dose of one of his medicines, to solve the problem. It should however be noted that the intervention was part of a service where the pharmacist provided consultations in a GP surgery as opposed to the community pharmacy.

I: So after you had the heart problem..., were any of the tablets changed? Did your doctor change any of the tablets?
R: The hospital gave me an extra one, bisoprolol.
I: And you've been using that ever since then?
R: Yes.
I: Okay, and have you had any problems with that?
R: No, at first I did. I was very tired and felt as though I couldn't do anything, but funnily enough, since the pharmacist, he doubled the dose of the other one, candesartan, he doubled the dose of that, and I seem to have more kind of go, and that's only in the last couple of weeks, because I couldn't really do much.
I: But did he tell you why he doubled the dose?
R: Well, he said to maybe make me feel a bit better, and be not so tired and things.
I: And it seems to have worked then?
R: It seems to be, for some reason, because when I was walking up hills or coming up the stairs, I was having to stop, and carrying shopping, but now I've kind of started from here walking down the town, which I used to do all the time, so I'm trying to give myself some more energy.

SP8

While most participants suggested that they had limited use of the community pharmacy for managing their LTCs, a few participants described specific situations where the community pharmacy had played a helpful emergency supply or advisory role that they found beneficial. In the quote below, the participant provide an example of an instance where she got an advice from the pharmacist of a potential food-medicine interaction.

I probably, I mean, yes, I would ask the pharmacist if I....oh yes, I did, once, um, on the simvastatin, there was a warning about grapefruit, and um, I asked him on one occasion what that was, so I now understand how grapefruit can interact with certain drugs. Um, not in a negative way, but it can actually accelerate the dosages. And um, I don't eat a lot of grapefruit, but, I've avoided when I've gone out for a meal, if there is a starter with grapefruit as part of the starter, I avoided it. And he said, you know, he explained to me, once now and then is not an issue, it's if you were eating up regularly, or drinking grapefruit juice which I never do anyway. So, yes, I did have that interaction with him.

EP3
4.4.4.4 Awareness and use of other community pharmacy's LTCs support roles

After the discussion with participants about their use of community pharmacy for collecting their prescribed medicines, participants were asked further to discuss any other reasons when they made use of, or interacted with their community pharmacy for managing their LTCs. Most participants struggled to come up with anything and none of them mentioned any of the medicines-related services (MURs, NMS, CMS) or lifestyle interventions that most community pharmacies offered. As indicated previously, almost all participants had to be probed and prompted about these services as none of them readily mentioned these services as part of their community pharmacy functions. Participants were probed further on their awareness and use of any other LTCs-related services or interventions in the community pharmacy. Again, many participants struggled to think of or remember any services relating to their LTCs. Only a few participants were able to identify some other community pharmacy services, although most of them went on to indicate that they did not feel the need to use them. Some further suggested that their other healthcare professionals (in GP surgeries) sufficiently fulfilled these roles and there was no need for them to use the community pharmacy. As indicated in the quote below, participants generally shared the view that even though they were aware that community pharmacy could offer them with some beneficial services, their first point of call would be their GPs. The participant later went on to suggest (in other parts of the interview) that she felt that she could have taken advantage of the community pharmacy services for LTCs if the benefits were more ‘visible’ to her and if they were better advertised.

*I mean, I know the pharmacy offers a lot of services, in terms of, like, free checks for this, checks for that and checks for this, I’ve never felt the need to go in and see them, like, one of them is a free check for your diabetes risk, which I feel is a bit unnecessary and, yeah, I know they do offer advice on prescriptions, but I’ve never felt the urge to take advantage. So I know that they do offer a lot, but, for me, my first port of call would be my doctor.*

EP13

On the whole, it appeared as though the perception that the community pharmacy was all about supplying their medicines made participants less aware of other services or resources that they may benefit from. The quote below about a participant who had earlier indicated that he was a smoker that was trying to stop smoking illustrates this perspective.

*I’m trying to think of all the signs that are around me in the waiting room. You know, you’re staring at them so constantly and you can never remember them….Yes, the smoking service, I should have thought of that one first, shouldn’t I? Yes, I am aware of the smoking one, I’ve seen the signs. The weight management one, I know that they have scales but I didn’t know that’s what it was for.*

EP6

Participants were probed further about how they felt community pharmacy could support them better with managing their LTCs. Participants were initially asked to discuss any situations when they had
chosen to visit the pharmacy for anything relating to their LTCs and the use of their medicines, instead of going to their GPs. Most participants struggled to think of a situation like that and went on to indicate that they always sought the help of their GP if they had any concerns about their medicines or their LTCs. They suggested that they would not readily consider seeking help from community pharmacy unless they had run out of all other options. When asked for the reason for this, most participants could not come up with a clear reason, but indicated that it could be because they only ever viewed community pharmacy wholly as a medicines supplier.

I: And then with the diabetes what sort of situation would want you to go to the pharmacy and ask to see the pharmacist?

R: I suppose I would go there if, say, there was a big waiting list at my doctor’s, I couldn’t easily get to my diabetic doctor; they [community pharmacy] would probably be like my third or fourth choice of someone to ask….. Yeah. I honestly, I don’t know why, but I never really thought of using them, I’d just seen them as the people who give me my medication, and I don’t really think of them as anything more than that really and I don’t really know why I never have, it’s just the way it’s always been.

EP4

Furthermore, some participants were presented with a hypothetical scenario of when community pharmacy could be considered as a source of help for their LTC, such as when they had no access to the GP practice for example, during weekends or on bank holidays. Even with this scenario, the view of participants was similar to that of above, where they indicated that they did not recognise community pharmacy as an immediate option when they were in need of self-care support. Some participants further admitted that while they were aware that community pharmacists were suitably qualified to help them, they felt the community pharmacists did not appear visible enough for them to be approached for help. Again, they suggested that their worldview of community pharmacy was as a medicines supplier.

R: ohhhh, um, no I think I'll probably use the NHS direct, no, I'd use the out-of-hours at our surgery I think, rather than the pharmacist, yea.

I: do you have any reasons why…is it about trust?

R: No, no, I know they are qualified; it’s just that it’s not your immediate thought, and it’s wrong, it should be you know. We should be seeing them, as um, as an equal professional to um, the GP. But for some reason, I don’t know, the pharmacist um, you just forget that the pharmacist is actually there [laughs]. You know, because you go into the pharmacy and there are lots and lots of, mainly women, um, who are making up medications and so on, according to prescriptions, and you tend to forget that the pharmacy and not a dispenser, you know, yea.

EP3
4.5 Discussion

4.5.1 Study strengths and limitations

This study used qualitative interviews to explore the perspectives of patients with LTCs to understand firstly, how they engaged in self-care of LTCs, and then, how they viewed and utilised community pharmacy for self-care support as well as for other general purposes. The perspectives of patients with LTCs have been largely underexplored in the self-care support research literature,239, 241, 264 although the patients’ general ‘lived experience’ of LTCs have been described in other literature that have examined beliefs, attitude, motivation and experiences of living with, and managing LTCs.383, 515

This study contributes to the knowledge base in the self-care support literature by providing in-depth insights into how patients with LTCs engage in self-care and how they utilise community pharmacy, other healthcare professional and non-healthcare professional sources to meet their self-care needs.

Furthermore, most studies on patients’ perspectives of LTCs management in community pharmacy have focussed on patients’ views, experiences and satisfaction with specific services and interventions, rather than on the holistic perspective of how patients use community pharmacy in their everyday lives. Hence, the patient-focused exploratory approach taken in this study is considered novel as it provided insights into the often ‘unheard’ voice of patients in the pharmacy research literature on LTCs. The findings from this study contribute to the evidence base of how patients view and utilise community pharmacy in relation to the routine care of their LTCs. In addition, the findings from this study combined with community pharmacists’ perspectives (next chapter) provides a holistic and balanced insight into the typical interactions that takes place between patients with LTCs and community pharmacists.

Qualitative study design by its nature, often involves small sample sizes which may limit the generalizability of its findings to the wider population. This study explored the views of 24 participants in England and Scotland; hence caution should be taken when interpreting and translating the findings to the general population. The maximal variation sampling strategy employed however was an attempt to target patients with a wide range of characteristics as would be found in the general population. However, the demographic profile in this study is an acknowledged limitation; younger participants were overrepresented in England when compared to Scotland, while there was ethnic diversity among participants in Scotland. These differences resulted from the differences in the sampling and recruitment method used in both countries, where the recruitment strategy used in Scotland did not provide enough flexibility to target a more diverse population. In England participants were recruited from both GPs and community pharmacies, whereas in Scotland, patients were recruited mainly by community pharmacists.

Furthermore, the study did not include participants that were living in care homes or that were house-bound, although an argument for excluding this group of patients could be that their self-care needs
will be different since these patients are likely to be significantly dependent on carers. Another limitation of this study was that a single coder was used in the coding and interpretation process of the data analysis and respondent validation of the final coding framework was not undertaken. However, validation of the data coding and interpretation was enhanced via regular review and agreement of the data analysis process by the coder’s supervisory team with acknowledged experience and expertise in qualitative data analysis.

The interview topic guide used in this study was not piloted with study participants (patients with LTCs) which is an acknowledged weakness in the interview design. This could have led to potential consequences that could have led to inconsistencies of participants’ responses to different types of interview questions and the questioning style of the researcher. An attempt to minimise this weakness was by adopting a flexible and adaptive approach during the interviews where the questions in the topic guide evolved iteratively after each interview, which allowed any flaws to be identified, and relevant refinement made to improve the questions and questioning style. Moreover, data analysis was undertaken concurrently during the interviews which allowed emerging themes of interest to be probed and explored further in subsequent interviews. This iterative process was considered important to this study as it helped to refine and improve the interview topic guide and also helped the researcher to improve his questioning and interviewing skills. However, the researcher's limited experience and skills of interviewing patients with LTCs is an acknowledged limitation, which may have resulted in the lack of depth and richness of participants’ perspective.

### 4.5.2 Summary of main findings

This study used semi-structured interviews to explore the perspectives of 24 patients with LTCs in England and Scotland. The theoretical framework of the five core elements of self-care support of LTCs was an integral part of the data collection and analysis around how patients engaged in self-care. This provided deeper insight into understanding the roles of community pharmacists and other healthcare professionals in providing self-care support in relation to each element, from patients’ perspectives, highlighting gaps and potential areas for improvement. The summary of main findings from this study is provided here, with some connection made with what is already known in the literature. However, a more detailed discussion of the wider implications of the findings in context of the other work streams of this programme of work and the existing literature is provided in the general discussion chapter (Chapter 7).

#### 4.5.2.1 Living with LTCs

A key focus of this study was not to duplicate previous research that have examined patients’ lived experience of LTCs. Rather, this study aimed to explore and understand how patients developed
their beliefs, knowledge, understanding and skills to engage in self-care, with a focus on identifying the type and nature of relational support provided by community pharmacy. The literature suggests that while healthcare professionals’ perspectives about problems that patients encounter in their everyday lives are well-evidenced, patients’ perspectives of the care that they receive from healthcare professionals have not been given much attention. This study took a patient perspective as a starting point, to understand their expressed views of how they live with their LTCs and engage in self-care to meet their needs. This approach is important to avoid a mismatch between healthcare professionals’ perceptions of problems faced by patients and the actual needs and expectations of patients.

Patients’ experience of living with LTCs is very personal and diverse; it varies according to factors such as access to healthcare services, individual patient characteristics (e.g. age, socio-economic background, education) and disease characteristics (e.g. nature and type of LTC, single vs multi-morbidity, onset/stage of LTC, etc.). One commonality however is that patients with LTCs engage in different behaviours and activities with the aim of achieving normality of their everyday living, maintaining their social relationships, engaging in activities that are meaningful to them, and having the opportunities for being involved and participating in their own treatment.

This study focused on patients developed the knowledge and understanding to manage their LTCs and found that, regardless of the professional care that is provided by healthcare professionals, patients with LTCs essentially make daily decisions and take actions (or inactions) which they perceive as helpful to them to achieving a good quality of life according to their own personal experiences and circumstances.

This study found that while the healthcare professionals involved in diagnosing the LTCs provided patients with basic information about the LTC, many patients still had to undertake their own journey of making sense of what their LTCs meant to them and finding meanings to help them come to terms with living with their illness. Patients indicated that they were often left to explore other sources of information to better understand their LTCs such talking to family, friends and peers, reading books and searching through the internet and online resources. However, patients identified the healthcare professionals that they encountered in GP surgeries (doctors and nurses) as an important source of information that helped them to know more about their LTCs, although there was also a suggestion that these information was not often provided proactively unless they made specific requests. Community pharmacy did not feature as a healthcare professional that patients utilised as a source of information to help them develop their knowledge and understanding about their LTCs. There was no mention of community pharmacy by any of the participants when discussing how they developed their knowledge and understanding of their LTCs. However when probed further about whether they thought they could get such information from community pharmacy, many participants believed that they could, but went on to state that they would not readily consult community pharmacy. Participants viewed community pharmacy’s roles in their lived experience with LTCs from a service provision perspective rather than from patient-centred perspective. Indeed, most research studies about what patients want from community pharmacy have focused less on patient education about LTCs and more on patient views, experiences and satisfaction with specific interventions and services such as
the MURs, other medicines management services, adherence-improving interventions and general lifestyle and public health interventions.

4.5.2.2 Engaging in self-care

This study used the theoretical framework of the five core elements of self-care support to explore patients’ perspectives of how they were supported to engage in self-care of LTCs. This novel approach provided detailed insight into an under-researched area and allowed patients’ perspectives of the complex and multidimensional concept of self-care to be broken down and explored extensively. It also helped to provide an understanding of the current ways that patients viewed and used community pharmacy for each of the core elements of self-care support. While patients’ perspectives on how they engaged in self-care were explored extensively in this study, their perspectives of the roles of healthcare professionals and community pharmacy in each of the core elements are discussed below.

Self-care information and advice

Patients in this study extensively discussed how they accessed information and advice that enabled them to engage in self-care. For the purpose of simplicity, self-care information and advice were grouped into two types; medicines and medicines-use information and advice and lifestyle information and advice. This study found that most patients had the basic knowledge and awareness of their LTCs prescribed medicines; this information was provided by the prescribing healthcare professional(s), mainly the doctors at the GP surgery or at the hospitals, when they were newly diagnosed, or when there was a change in the condition. Patients also acquired this information by reading through the medicines’ patient information leaflet, which was particularly useful as a refresher for those that had been on stable prescription medications for a considerable period of time. Surprisingly, it was found that patients did not view community pharmacy as a helpful source of information about understanding their medicines. Patients suggested that the information that the community pharmacy mostly provided to them was about the directions for use and instructions of how to take the medicines, particularly with newly prescribed medicines. Patients on stable, regular medicines established that they rarely spoke with anyone in the community pharmacy about their medicines. Patients that had received information and advice about new medicines from community pharmacy indicated that these were limited to information about how to use the medicines, rather than information about the medicine itself. Similarly, most participants did not view or use community pharmacy as a place for getting support with making lifestyle changes. While some participants acknowledged that they were aware that they could get support from community pharmacy, only a few indicated that they had made use of a lifestyle intervention such as the smoking cessation service. These findings suggests that there may be a general lack of awareness of the roles that
community pharmacy could play in supporting lifestyle change, despite the availability of a wide range of lifestyle services in community pharmacy.

**Self-care skills training and support**

This study explored a number of self-care skills with patients and sought to understand the training and support, if any that they received to develop these skills. The self-care skills that patients in this study discussed were self-monitoring and self-testing skills, LTCs symptom monitoring and management, and self-administration and adherence to prescribed medicines. This study found that healthcare professionals in hospitals and GP surgeries played the key role in self-care skills training and support, although it appeared that patients also relied on advice and tips from family members/carers and friends. Community pharmacists were not viewed as a healthcare professional that patients used for support in developing self-care skills. Even with regards to supporting and promoting adherence and self-administration of medicines, participants indicated that community pharmacy played limited roles. There was a general indication from patients that self-administration of, and adherence to their prescribed medicines regimen was a skill that they required the least support from healthcare professionals with, since they already had an established routine for administering their medicines as it had become part of their daily rituals. Hence most patients with LTCs indicated that they did not require the support of community pharmacy, which is an important finding since the most common interventions for people with LTCs in community pharmacy, including the main LTC services (MURs, NMS, CMS) are those that focus on helping patients to adhere to their medicines. However, this finding may be due to the small sample of participants in this study, but there is a need for community pharmacy to be aware that some patients may not require support with adherence and should focus on providing targeted interventions to meet individual patients’ needs. Furthermore, patients generally indicated that the GPs, rather than the community pharmacy would be their first point of call if they encountered any problems with their prescribed medicines. These findings that community pharmacy played limited support roles with the use of medicines indicate that patients’ perspectives of the support roles of community pharmacy was very narrow, and even though most admitted that they were aware of the expertise and potential benefits of utilising the community pharmacy, they did not readily think of them when they needed support with their medicines.

**Self-care support networks**

In recent times, the research literature has recognised and focussed on the roles of patient support networks outside the formal healthcare setting in supporting self-care of LTCs, although some authors have indicated that research evidence is still limited. It is however clearly recognised that patients’ support networks play hugely important roles in helping patients to engage in self-care.
This study found that patients relied heavily and to a large extent on their personal communities; family/carers, friends and peers, for practical support such as collection or prescribed medicines or supporting lifestyle change, as well as emotional support such as having a listening ear, improving their confidence and alleviating their anxieties and fears. While some patients implicitly suggested that their family members/carers got directly involved with their healthcare professionals, for example by attending the healthcare professional consultation or by collecting prescriptions and medicines on their behalf, there was a general acceptance that healthcare professionals did not proactively involve or discuss the roles of these personal communities with patients. In addition to family members/carers, friends and peers, a few patients also discussed how some self-help groups had been a useful source of validating information and advice they got from healthcare professionals and other source. The few patients that had engaged with voluntary and community groups described the significant impact that these groups had in helping to them to improve their self-care knowledge, understanding and behaviours. These patients indicated that healthcare professionals, particularly the specialist practice nurses in their GP surgeries played the important role of signposting and encouraging them to get involved with these self-help groups. Community pharmacy has however not mentioned by patients as having played any support role in involving patients’ personal communities in their care, or in signposting them to any non-healthcare professional support or community/voluntary self-help groups.

**Self-care technology**

The use of tele-health, mobile and internet-based technologies to support people with LTCs has been gaining increasing recognition and acceptance in the literature.\textsuperscript{156, 502, 504} There was however not much awareness and use of these types of self-care technologies to manage and to engage in self-care of LTCs among the patients that participated in this study. While a few patients were aware of, and had tried using some ‘apps’ that could be used to monitor and gain important information about their LTCs, most patients indicated that they had not received any information or support to use these technologies by their healthcare professionals, including community pharmacy.

**Collaborative care planning**

This study explored participants’ views of whether and how they collaborated, were involved and worked in partnership with their healthcare professionals during their interactions or consultations with them. Two aspects of collaborative care planning discussed with participants were the use of written/agreed care plans and involvement and partnership with their healthcare professionals and community pharmacy. This study found a low awareness and use of written/agreed care plans with healthcare professionals, although a few participants had discussed plans of action with specialist practice nurses in GP surgeries. Most participants however, lacked a clear knowledge and
understanding of what a care-plan was and were not proactively supported by their healthcare professionals to develop this knowledge and understanding. With regards to involvement and forming partnerships with healthcare professionals, participants suggested that their interaction with healthcare professionals during consultation was uni-directional and paternalistic; healthcare professionals mainly instructed and told them what to do during the consultation, with little opportunities for the patient to contribute or be involved in shared decision-making. On the whole, the findings suggest that healthcare professionals do not actively involve and collaborate with patients in the management of their LTCs, except when patients made proactive requests for more information and to be more involved. Patients views of being involved in collaborative care planning with community pharmacy was even less evident as almost all patients could not think of a situation where they had, or could be involved in making decisions with community pharmacy in the management of their LTCs.

### 4.5.2.3 Role of community pharmacy in LTCs management

This study extensively explored participants’ perspectives of the roles of community pharmacy, broadly in the management of LTCs, and more specifically in self-care support of LTCs. In the preceding subsection (‘engaging in self-care’), participants in this study suggested that community pharmacy played limited roles in how they engaged in self-care of their LTCs. However, this study probed participants further on how they viewed and used community pharmacy for the ongoing management of their LTCs, their awareness and use of established LTC services in community pharmacy, their interactions and relationship with community pharmacists and other team members and their awareness and use of community pharmacy’s other support roles. The key finding from participants’ views and use of community pharmacy for LTCs management was that the supply of prescribed medicines was the main reason why participants’ interacted with community pharmacy. Some participants indicated they did not even have any direct contact with the community pharmacy since they ordered their prescribed medicines online, or where delivered their medicines at home. A closer examination of the medicines supply process found that most participants, particularly those on stable prescriptions had established a routine system with community pharmacy for collecting their medicines, and most generally expressed satisfaction with this system. Interaction with community pharmacy team members during the medicines collection process was rare except for the occasional social conversations and banters with counter staff that some participants indicated that they were familiar with. However, a few participants indicated the pharmacists would occasionally come out of the dispensary to have a word with them if there was a change in their medicines or if there was any concerns raised by them.

Community pharmacy currently offer a number of extended services that target people with LTCs to help improve their knowledge, understanding and adherence to their medicines (such as the MUR, NMS, CMS) and also to help them monitor their LTCs (e.g. health check) and to help to support
lifestyle change (e.g. stop smoking, weight management services). Community pharmacy is also available to offer advice to patients who need help and to signpost them to other support services where they could get help. This study found that many patients were either unaware of, or had not made use of the LTCs-specific services available in community pharmacy. While some patients indicated that they had previously been invited to have ‘a chat’ with the community pharmacy (suggesting that they may have attended these services but did not know what it was called), the overall impression from patients was that these services were simply just a formality and a ‘tick-box’ affair, where they were asked prepared and standardised questions, rather than a focus on identifying and addressing any problems or concerns that they may have with their LTCs.

Furthermore, insights from patients’ views of their interactions with community pharmacists and other community pharmacy team members showed that apart from supplying prescribed medicines, community pharmacy was viewed as playing very limited role in helping to improve the ways that they engaged in self-care. However, many patients admitted that they had a good relationship with their community pharmacy and often had social discussions and interactions with some community pharmacy team members who were a part of their local communities. These conversations and interactions were most often with counter staff and dispensers in the community pharmacy who had worked regularly in the community pharmacy over a long period of time, whereas, interactions with community pharmacists was said to be limited unless they were invited to discuss their medicines. Some patients suggested that this may be due to the transient nature of the pharmacy workforce, where many community pharmacists worked in different locations, making it difficult for relationships and rapport to be developed.

Community pharmacy’s unique location at the heart of most communities, their extended and mostly convenient opening hours, the need for no prior appointments, and their ability to serve ‘hard-to-reach’ populations, are some unique features which make them the most accessible primary care and public health professionals. In spite of the somewhat negative expressions by participants in this study, of community pharmacy’s limited contributions to self-care of their LTCs, some participants acknowledged and provided examples of how they had been supported to resolve issues relating to the emergency supply of medicines, advice on the use of medicines and support with making lifestyle changes such as stop smoking. However, it appeared that these positive perceptions and examples of community pharmacy’s contributions were mostly one-off, opportunistic/reactive activities rather than active and ongoing provision of care and support for self-care of LTCs. The majority of participants were however quick to point out that they were aware of community pharmacy’s expertise in providing quality health information and advice as well as the availability of a wide range of services that may potentially benefit them. Despite this, many still indicated that they did not readily consider community pharmacy when they felt the need to seek help and support for their LTCs. Many participants were hard-pressed to come up with a reason for this and could only come up with statements suggesting that community pharmacists were “invisible” to them. Additionally, some participants recognized the support that community pharmacy provided to them such as with minor
ailments and some public health services (e.g. stop smoking), but most appeared reluctant to acknowledge that community pharmacists have a role to play in supporting their LTCs needs, and engaging them in self-care. These findings suggest that community pharmacy and community pharmacists still present an image of a ‘shop’ and ‘shop-keepers’ respectively to patients, rather than as a clinical healthcare profession that patients can readily and confidently access for support.
5. Chapter Five: Work Stream Two: Pharmacists’ Interviews

5.1 Introduction
This chapter presents the Work Stream two research study of this programme of work, which involved qualitative interviewing of 24 community pharmacists in England and Scotland, conducted between January and July 2013. The preceding chapter described the study that explored the perspectives of patients with LTCs to provide an understanding of how they engaged in self-care, and how they viewed and used community pharmacy for self-care support of LTCs. This study provides the perspectives of community pharmacists. It was designed and developed to address the limited knowledge in the literature of how community pharmacists view and perceive self-care support as a concept in the management of LTCs in community pharmacy. The preliminary scoping review undertaken in Chapter Three helped to identify the core elements of self-care support of long-term conditions (LTCs) which was then used as a theoretical framework in this study to explore how community pharmacists conceptually understand and operationalise self-care support.

5.2 Aim and objectives
This study aimed to explore the views and perspectives of community pharmacists on self-care support as a concept in the management of long-term conditions (LTCs). In order to address this aim, the following four objectives were set:

1. To examine how community pharmacists currently support people with LTCs in the wider context of self-care support
2. To understand how self-care support of LTCs is conceptually understood by community pharmacists
3. To explore how community pharmacists perceive and operationalise the core elements of self-care support of LTCs
4. To identify the barriers and enablers to providing self-care support by community pharmacists

5.3 Methods
Chapter 2 (programme of work) provided the methodological description and justification of the qualitative approach employed as part of the overall mixed-methods design of the programme of work. This section describes the methodological procedure undertaken and a justification of key decisions taken during the research process.
5.3.1 Study design

A qualitative study design using semi-structured interviews was employed to address the aim and objectives of this study. The study design is underpinned by interpretative phenomenology (hermeneutics), which acknowledges that a researcher's subjectivity cannot be separated from the phenomena he is investigating, but is a part of the research process. Interpretive phenomenology, described as the ‘science of interpretation of texts’ and focuses on how individuals (study participants) describe their experience of a phenomena, as well as on how the researcher interprets these accounts during data collection and analysis.

5.3.2 Study participants and sampling

Participants included in this study were practicing community pharmacists who were domiciled in England and Scotland. Participants were sampled conveniently and purposefully allowing for maximal variation in participant demography (age, gender, ethnicity), pharmacy type (independents, multiples), pharmacy location (high street, health centre, shopping centres/supermarkets) and geographical area (affluent, mixed, deprived) of the pharmacy.

5.3.3 Recruitment strategy

Recruitment of participants into this study took place between January and July 2013. A predetermined number of participants - twelve in England and twelve in Scotland, were targeted and recruited into the study according to the recommendation of Guest et al. (2006) (See section 2.5.2.1 in Chapter 2). Participants were recruited conveniently to achieve maximal variation by specifically targeting potential participants that were under-represented in the population that had been interviewed. For example, female participants from the white ethnic groups working in deprived areas were specifically targeted during recruitment in England.

In England, community pharmacists were recruited by approaching them through Local Pharmaceutical Committees (LPCs) that represented all community pharmacists within each of the 10 primary care trusts (PCTs) (now clinical commissioning groups) area in Greater Manchester. An introductory email (Appendix 14) attached with the study’s recruitment pack containing a letter of invitation (Appendix 15) and participant information sheet (Appendix 16) was sent to the coordinator/secretary of each LPC to forward to its members. Four LPCs responded to indicate that they had forwarded the study’s recruitment pack to their members by email and/or newsletters. Recruitment via this means resulted in poor responses (only 2 community pharmacists responded). Participants were then further identified and recruited by randomly searching the NHS direct website.
for the contact details (email and telephone) of community pharmacies located within each of the four LPCs that responded. This produced a better response rate as potential participants that indicated that they had received the email and/or read the newsletter from their LPCs were more willing to discuss their participation in the study. Potential participants that responded were sent the study's recruitment packs by email and/or post and then followed-up by telephone. Snowballing, which involved one participating pharmacist referring another pharmacist friend or colleague to participate was also employed in some cases to identify other potential participants. A total of 55 potential community pharmacists' participants were identified and approached; 29 declined to take part in the study; 14 were purposefully excluded in order to achieve maximal variation; 12 were successfully recruited and interviewed.

In Scotland, community pharmacists were recruited via contacts in the pharmacy departments at the Health Boards of NHS Tayside, NHS Greater Glasgow and Clyde, and NHS Lothian. The contacts were provided, via email, with the study's recruitment pack, which was then used to invite potential participants into the study. The names and contact details of 18 community pharmacists that indicated that they were interested in taking part in the study were forwarded directly to the research team by the contacts that helped in identifying and recruiting them. Of the 18 potential participants, 12 were successfully recruited and included in the study; arrangement to interview three of the participants was not possible while the remaining three were purposefully excluded to achieve maximal variation. The higher rate of success of recruitment in Scotland compared to England was due to the fact that potential participants in Scotland had already indicated their interest in taking part in the study before being contacted by the researcher. Snowballing was employed to recruit the remaining four participants. Similarly to England, some potential participants were purposefully excluded from taking part in the interviews in order to achieve maximal variation.

5.3.4 Data collection

5.3.4.1 The semi-structured interviews

Semi-structured interviewing conducted face-to-face was the primary method of data collection used in the study. Interviews were conducted face-to-face either in a consultation room at participants’ places of work or other agreed location (e.g. coffee shops). Participants in England were interviewed between January and July 2013 while participants in Scotland were interviewed in April 2013. Interviews lasted between 40 and 70 minutes and were audio-recorded using a digital recorder following written and signed consent (Appendix 12). Hand written notes were taken during each interview to record any important observations and after the interviews to record any additional statements as well as the researcher's reflection of the interview. The audio-recorded data were transferred from the digital recorder after each interview and stored on an encrypted computer network in the University of Manchester.
5.3.4.2 The Interview topic guide

The interview topic guide (Appendix 17) used for the interviews was developed from the literature and evolved iteratively as the interviews progressed. The topic guide provided a structure to cover five broad topic areas with each participant that included; background in community pharmacy practice; current approach to managing and supporting LTCs; knowledge and understanding of the concepts of ‘self-care’ and ‘self-care support’; operationalization of self-care support using the theoretical framework of the five core elements of self-care support of LTCs; and the barriers and enabling factors influencing how LTCs is managed and supported. Each broad section comprised of a primary and secondary topic area, although most of these focussed on the broad section of operationalization of self-care support. The topic guide made use of mostly open-ended questions to elicit the participant’s response and engagement with the topics in a non-directive manner\textsuperscript{523} prompts and cues as well as specific examples to illustrate some concepts were used extensively during the interviews, particularly during discussions around the operationalisation of the core elements of self-care support. This is described further under the relevant subsections of the results section. The topic guide was piloted with research colleagues who were also practising community pharmacists and the feedback obtained was incorporated into the final topic guide. Most of the changes recommended during the piloting related to how some of the questions were phrased, particularly in the sections on knowledge and understanding of self-care and self-care support.

5.3.5 Data analysis

Data analysis of interview transcripts from this study was done thematically\textsuperscript{513} using the interpretative phenomenological analysis (IPA) technique.\textsuperscript{318} The key feature of the IPA technique used in thematic data analysis is the acknowledgement of the researcher’s own influence and conceptions in interpreting how study participants make sense of their experiences and understanding of a phenomenon.\textsuperscript{524} Unlike standard thematic analysis, IPA is not simply about categorisation of data, but it requires a close interaction between the researcher/analyst and the data, a concept which has been termed ‘double hermeneutics’.\textsuperscript{523} IPA as an analytic procedure has been developed predominantly in health psychology research through the extensive works of Smith and colleagues.\textsuperscript{277, 318, 525, 526} According to Smith (2004),\textsuperscript{525} there is no formulaic procedure for undertaking IPA, although there are some basic guidelines such as moving from the descriptive to the interpretative, which should be dynamic, flexible and adaptable. However, Smith identified three key characteristics of IPA; IPA is idiographic – analysis should start on a case-by-case basis (e.g., reading through individual participants’ interview transcript) before conducting cross-case analysis to identify themes; 2) IPA is inductive – analysis should be flexible enough to allow unanticipated themes to emerge during the analysis; and 3) IPA is interrogative – analysis should engage in a critical and constructive
dialogue with participants’ narratives in relation to the extant literature. With this background in mind, the thematic data analysis using the IPA technique in this study involved a cyclical and iterative process that involved the following six steps:  

1) **Familiarisation with the data:** The researcher immersed himself in the data by thoroughly reading through each individual participant’s interview transcripts to search for meanings and patterns and to generate ideas for an initial coding structure. While reading through these transcripts, notes and marking of sections of each transcript were made to identify interesting themes, as well as themes that appeared nonconforming (commencement of the interpretative step by the researcher). This was the most time-consuming step as detailed attention was given to each interview transcript which at times required the researcher to go over the audio data to clarify some parts of the interview conversations.  

2) **Generating initial codes:** This stage was undertaken by reading through the notes and marked section of the interview transcripts and grouping similar ideas together. A preliminary coding structure based on the five broad sections of the topic guide was used to breakdown the interview transcripts into smaller chunks (background in community pharmacy practice; current approach to managing and supporting LTCs; knowledge and understanding of the concepts of ‘self-care’ and ‘self-care support’; operationalization of self-care support using the theoretical framework of the five core elements of self-care support of LTCs; and the barriers and enabling factors influencing how self-care support is provided). The initial codes generated were organised under these broad sections which simplified the process of searching for themes and subthemes. The codes were generated by a theory-driven approach which involved a focus on coding sections of transcripts that provided answers to specific questions (e.g. how is self-care defined?) related to the research objectives.  

3) **Searching for themes and subthemes:** Step 2 above produced a vast amount of codes under the five broad sections of the interview topic guide. A read through and review of the codes was undertaken to sort and group similar codes into overarching themes and subthemes. The relationships between different themes and subthemes were established and the main themes related to the key research questions were grouped together; other themes that appeared not directly relevant to the research questions were grouped under a ‘miscellaneous theme’ and reviewed later on. This step also involved a continuous revision and connection of the emerging themes and subthemes by shifting back and forth from the different broad sections of the topic guide.  

4) **Reviewing themes:** The main themes that emerged were reviewed and refined individually to produce a coherent pattern and ‘story’. Miscellaneous themes were reviewed and reread in the context of the individual transcripts and were either evolved as new themes or subthemes, combined with existing themes or subthemes, or discarded. At this stage, the emergent themes and subthemes were reviewed regularly and agreed by the researcher’s supervisory team.
5) **Defining and naming themes:** The main themes that were to be included in the final analysis and report were identified, reviewed and modified where necessary. A summary structure of the main themes and subthemes produced from step 4 above was decided. The summary structure maintained the grouping of the analysis based on the five broad sections from the topic guide, although some of these were renamed to reflect a more concise and coherent story about community pharmacists perception of self-care support of LTCs. This was undertaken by reading the main themes alongside individual transcripts and no major refinements were undertaken at this stage.

6) **Producing the report:** A report that presented the main findings from the analysis was produced and appropriate quotes were selected to evidence the main themes and subthemes. This report went through a number of iterations with the supervisory team and was written as an analytic narrative story of community pharmacists’ views and perspectives on self-care support as a concept in the management of LTCs.

### 5.4 Results

This section presents the findings from the IPA of interviews undertaken with community pharmacists in England and Scotland. Early insights from the IPA analytic procedure – familiarisation and generation of initial codes, suggested that the views of participants in England and Scotland were similar, although there were slight differences in a number of themes. Hence, for practical purposes the findings from participants’ views in both countries are presented together and the differences relating to specific themes are highlighted. Following a description of participants’ demography and characteristics, the main findings are presented under the four broad sections that represent the summary structure of the main themes and subthemes that emerged from step five of the IPA process described in section 5.3.5 above: These include:

- managing and supporting LTCs in community pharmacy;
- conceptualization of self-care support in community pharmacy;
- operationalization of the core elements of self-care support;
- factors influencing how LTCs are managed and supported in community pharmacy.

The findings from the data analysis are presented in the form of a narrative of participants’ views and perspectives with illustrative quotes used to support the emergent themes and subthemes. Interpretation of the findings in the themes and subthemes is also provided where necessary. For each quotation used, participants are given a unique identification number, with English community pharmacists coded as ‘ECP’ and Scottish as ‘SCP’. In addition, the interviewer is identified as ‘I’ in quotes presented. People with LTCs are generally referred to as ‘patients’ unless when it is specified, for example patients with minor ailments or patients with cardiovascular diseases.
### 5.4.1 Participants

In total, 24 community pharmacists’ participants; 12 in England and 12 in Scotland, were interviewed in the study. Table 5.1 below summarises the demographic characteristics of study participants according to country. On the whole, there was a diverse mix of participant characteristics across the study population. Participants in Scotland were on the average older (mean = 42 years) than participants in England (mean = 34 years) and also predominantly white. The gender distribution was similar in both countries although there were more men in the study than women. The study did not set out to obtain to representative sample of the wider population but to obtain the views of a wide range variation of participants (maximal variation sampling strategy – see section 2.5.2.1 in Chapter Two).

#### Table 5.1: Participants’ demography

<table>
<thead>
<tr>
<th>Variable</th>
<th>England (n = 12)</th>
<th>Scotland (n = 12)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean age</td>
<td>34.4 years, SD = 7.7</td>
<td>41.6 years, SD = 8.1</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
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<td></td>
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<tr>
<td>Male</td>
<td>58%</td>
<td>Male</td>
</tr>
<tr>
<td>Female</td>
<td>42%</td>
<td>Female</td>
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<tr>
<td><strong>Ethnicity</strong></td>
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<tr>
<td>White</td>
<td>33%</td>
<td>White</td>
</tr>
<tr>
<td>Asian</td>
<td>25%</td>
<td>Asian</td>
</tr>
<tr>
<td>Black</td>
<td>42%</td>
<td>Black</td>
</tr>
<tr>
<td><strong>Pharmacy Type</strong></td>
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<td></td>
</tr>
<tr>
<td>Multiples</td>
<td>67%</td>
<td>Multiples</td>
</tr>
<tr>
<td>Independents</td>
<td>33%</td>
<td>Independents</td>
</tr>
<tr>
<td><strong>Pharmacist Role</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pharmacy Owner</td>
<td>8%</td>
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</tr>
<tr>
<td>Pharmacy Manager</td>
<td>75%</td>
<td>Pharmacy Manager</td>
</tr>
<tr>
<td>Locum Pharmacist</td>
<td>17%</td>
<td>Locum Pharmacist</td>
</tr>
</tbody>
</table>

Tables 5.2 summarises the individual participants’ characteristics. Participants worked in a wide range of community pharmacy locations; in rural to urban areas; in deprived and affluent areas; as well as on the high street, residential neighbourhoods, close proximity to health-centres (GP practices) and shopping centres (supermarkets). Most participants in England worked in community pharmacies located around town and city centres, whereas participants in Scotland (apart from Glasgow) worked in community pharmacies located mostly in villages/rural and suburban areas. All participants in England provided both the MUR and NMS and all but one participant (SCP019) in Scotland provided the CMS. The one participant in Scotland who did not provide the CMS stated that her community pharmacy was in the process of undertaking the required training in order to commence the service.
<table>
<thead>
<tr>
<th>Identifier</th>
<th>Age</th>
<th>Sex</th>
<th>Ethnicity</th>
<th>Pharmacy Type</th>
<th>Role in Pharmacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECP001</td>
<td>50+</td>
<td>Female</td>
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<td>Multiple</td>
<td>Pharmacy Manager</td>
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<tr>
<td>ECP002</td>
<td>30</td>
<td>Male</td>
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<td>Independent</td>
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<tr>
<td>ECP003</td>
<td>41</td>
<td>Male</td>
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<td>Multiple</td>
<td>Pharmacy Manager</td>
</tr>
<tr>
<td>ECP004</td>
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<tr>
<td>ECP005</td>
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<tr>
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</tr>
<tr>
<td>ECP007</td>
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<tr>
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<tr>
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<td>Locum</td>
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<tr>
<td>ECP011</td>
<td>43</td>
<td>Male</td>
<td>Asian</td>
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<td>Locum</td>
</tr>
<tr>
<td>SCP012</td>
<td>30</td>
<td>Female</td>
<td>White</td>
<td>Multiple (Supermarket)</td>
<td>Pharmacy Manager</td>
</tr>
<tr>
<td>SCP013</td>
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<td>Independent</td>
<td>Pharmacy Owner</td>
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<tr>
<td>SCP014</td>
<td>30</td>
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<td>Multiple</td>
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</tr>
<tr>
<td>SCP015</td>
<td>32</td>
<td>Male</td>
<td>White</td>
<td>Multiple (Supermarket)</td>
<td>Pharmacy manager</td>
</tr>
<tr>
<td>SCP016</td>
<td>39</td>
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<td>Asian</td>
<td>Multiple</td>
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<tr>
<td>SCP017</td>
<td>42</td>
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<td>Pharmacist</td>
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<tr>
<td>SCP018</td>
<td>45</td>
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<tr>
<td>SCP019</td>
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<tr>
<td>SCP020</td>
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<tr>
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<td>SCP022</td>
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<tr>
<td>SCP024</td>
<td>41</td>
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<td>Pharmacy Owner</td>
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</tbody>
</table>

### 5.4.2 Managing and supporting LTCs in community pharmacy

This section examines how participants described the ways they managed and supported patients with LTCs in community pharmacy. In the interviews, participants were asked to describe the types of LTCs that they encountered most frequently in their day-to-day practice. Participants discussed the most common types of LTCs, the proportion of their patients with single or multiple LTC morbidity and the broad demographic characteristics of their patients with LTCs. Participants then went on to discuss the opportunities and approaches that they took to support their patients. The term ‘support’/‘supporting’ was used interchangeably with other terms such as ‘manage’/‘managing’ and ‘care’/‘caring’, where they all referred to the ways that they interacted with patients with LTCs. In addition, where the term ‘consultation’ was used during the interviews, this refers to the interactions that participants said that they had with their patients either in a consultation room or while talking with them over the counter.
5.4.2.1 LTCs encountered in community pharmacy

Almost all participants said that they frequently encountered a wide range of LTCs in community pharmacy but the most common ones were diabetes (type 1 and 2), cardiovascular diseases (high blood pressure, heart diseases, hypercholesterolemia), respiratory diseases (asthma, chronic obstructive pulmonary disease – COPD), arthritis and chronic pain. Some participants also stated that they had frequent encounters with patients who had cancers. Although most participants agreed that they most commonly encountered patients with multiple morbidities, it appeared that many were unsure of the proportion of patients with single or multiple LTC. Some participants suggested that they would have to go through their patient medical (prescription) records that were available in the community pharmacy to get this information. Many participants were however able to describe the demographic characteristics of their patients with LTCs. Most indicated that majority of their patients were elderly people, although some others also stated that they had a mix of ‘working-class’ and younger patients particularly patients that had asthma/COPD.

5.4.2.2 Supply of prescribed medicines

After describing the characteristics of the LTC population that they encountered in their community pharmacy, participants were asked to discuss the general ways that they managed and supported patients with LTCs. Almost all participants mentioned the traditional medicines supply function of community pharmacy to patients via dispensing and repeat/serial dispensing activities. In addition to supplying patients with their medicines, almost all participants indicated that they also counselled patients on the use of their medicines when appropriate, for example, they indicated that they counselled patients on newly prescribed medicines while they simply dispensed medicines to patients that were on stable medications. Many participants however also went on to indicate that they also provided LTC services to patients in accordance with their obligations as set in the community pharmacy contractual framework.

> In practice, there’s a lot of repeat dispensing. So, obviously, we have the same patients that come in every month for their medication, medications that is stable, um, and it’s just a case of dispensing them. So if there’s anything new, then I’ll just counsel them accordingly, but, a lot of times, you are over here sitting down with them to do an MUR, possibly once a year. Um, unless it’s a new medication, do the new medicines service (NMS)...

ECP003

5.4.2.3 Contractual services for LTCs

Other than dispensing and supplying prescribed medicines, almost all participants indicated that the LTC services that they provided were sometimes the only contact that they had with patients with LTCs. The main LTC services discussed by participants were the Medicines Use Review (MUR) and the New Medicine Service (NMS) in England and the Chronic Medications Service (CMS) in Scotland.
Despite the differences in the ways that these services are organised and delivered, the views of participants in both countries were very similar. However, the findings from this section are presented according to country to highlight the differences in the main LTC services as described by participants.

**MUR and NMS in England**

All participants in England indicated that they provided either the MUR or NMS (or both) in their community pharmacies. Most participants suggested that these services provided the main opportunities for them to interact with, and manage and support patients with LTCs, as there were no other structured programmes of interacting with people with LTCs. Some participants indicated that the MUR and the NMS essentially provided them with a more formal and organized way of interacting with, and supporting their patients with LTCs. They suggested that before these services were introduced, they were already supporting their patients with the use of their prescribed medicines as well as by providing them with the relevant information and advice about managing their LTCs.

*Let’s say, the fact that we have MURs now, is a standardised or a formal way. Previously, we just used to look [inaudible], kind of, either they ask us questions, [or] we proactively ask them. But now, it’s more structured, what we do… If I take diabetes for instance, you get diabetes patients, you remind them about the complications, if they understand, and then, do they have the regular checks, the annual eye checks, the foot check, the blood pressure, um, and then what are the other things… Ok, if when you are talking to people (with LTCs) with high blood pressure, and discuss the side effects [of the medication]), yes, and other long-term condition], like patients who are on anti-platelets. And you talk to them, if something like warfarin, you mention the interactions with some OTC medications, and therefore that they should always ask for the pharmacist’s advice when they are buying them. So, those are the sort of things that we do.…*

*ECP001*

When probed about MUR and NMS, most participants indicated that the services were predominantly focused on supporting patients with the use of their prescribed medicines, while other issues that emerged such as adopting positive lifestyles, may also discussed when the opportunity arose. Participants indicated that during the MUR or NMS consultations, they provided patients with information and advice such as helping patients to comply better with their prescribed medicines, to know more about how to take their prescribed medicines, to know how to deal with potential side effects and other relevant information such as potential drug-drug or drug-food interactions.

*How I support the people is via um, having a [MUR] consultation with them. So I would generally sort a fewer patients per day, I would ask you how you are getting on with your medications, is everything fine, is there any issues you would like to report, um, so you know you just check for compliance and um, just general probing questions, yea….mainly about medications.*

*ECP011*

The MUR and NMS were viewed by some participants as an opportunity for community pharmacy to make a difference to the management of LTCs and to patient care. Many participants appeared optimistic about the positive impact that these services could make to helping patients to better use
their medicines as well as resolve other issues beyond medicines.

* MURs are the real way pharmacy makes a difference and it’s on very rare one-to-one time with patients. And, other issues that come up, um, beyond medicines, they come up in MURs and we treat them back to the doctors.  
  
  ECP012

On the other hand, some other participants viewed the financial incentives of providing these services as a main priority for them as the services were mostly target-driven hence their incomes were tied to the number of services that they provided. While participants here did not explicitly state that this incentive influenced the ways that they provided care and support to patients when providing these services, they also did not acknowledge the impact of these services on patient outcomes.

  * I mean, its [MURs] target driven. Um, Am telling you from the point of view of an independent pharmacy. There’s, every quarter is almost like, a downward cut and payment. You are working the same amount of hours which could be more work. So, I think, generally, everyone tries to just maximise their income from the MUR. …  
  
  ECP003

**CMS in Scotland**

Similarly to the views of participants in England, participants in Scotland indicated that the CMS now provided them with the main opportunities to interact with and support patients with LTCs in community pharmacy. Participants indicated that the introduction of the CMS in Scotland basically formalised and put a structure to the conversations and interactions that they were already having with their patients with LTCs. Some participants suggested that the CMS consultation was there to guide them through their conversations with patients to ensure that they had ticked all the boxes and asked all the relevant questions.

  * I suppose not so much changed too much since CMS came in because it’s similar, you’ll be getting to patients in similar conversations that you are having. Um, I don’t think having the CMS has changed my relationship and the nature of discussions with the patient. I suppose through CMS and, um, certain high-risk medicine questions, it’s became a wee bit more structured, yea, and formal, and I suppose it makes you really be covered in all bases as opposed to having that…yes, it’s definitely more structured. That’s probably why you know you are definitely being balanced…  
  
  SCP014

From the ways that participants described the CMS consultations, it appeared that it was more about the pharmacist asking the patient predefined, structured questions, rather than engaging patients in active, personalised discussions about their LTCs.

  * But I do find the CMS, I think, what it’s done is its given us a structure to kinda work through, because you walk through one part and you go and you kinda go through those questions. So it is good to kinda make sure that you’ve done all, I think its questions that we’ve always asked…  
  
  SCP024
Participants were probed further to describe the process of the CMS and how it worked in practice. One of the first comments that many participants made was that the CMS was a relatively new service and that they were still gradually adapting it into their practices.

_Yea um, the main one is obviously the CMS which you’ve probably heard a lot of people talk about. Um, so that’s, coz it’s still relatively new, um, its mainly like our regular patients that we try and get in with that._” SCP014

A few participants suggested that because of the relative newness of the CMS, it was going through some teething problems affecting its implementation in many practices. They went on to state that there was an ongoing national strategy that aimed to enforce the implementation of the CMS by linking it directly to their payments.

_Um, CMS service at the moment is pretty ad hoc in Scotland, um, it was rolled out some 2 years ago initially, um, but it’s still not completely come to fruition yea. I think now, obviously, the health executive in Scotland are definitely looking at enforcing it through, because they’ve now linked you know, payments and our sort of monthly payment from the PSD to CMS involvement._

SCP017

### 5.4.2.4 Other activities to support LTCs

After describing the main contractual services for LTCs, participants in England and Scotland were asked to discuss other ways and opportunities that they took to interact with, and support people with LTCs in community pharmacy. The key themes that emerged from these discussions are described below.

**Lifestyle support**

While discussing the MUR, NMS and CMS, many participants had to be prompted and probed about other ways and opportunities that they took to support LTCs. In particular, many participants had to be probed about when and how they provided lifestyle support to their patients. While some participants indicated that they provided general lifestyle information and advice to patients during a LTC service consultation, it appeared that this was done opportunistically rather than proactively. Many participants suggested this by indicating that the primary purpose of the LTC services was to help patients with the use of their medicines while other issues such as the need for a lifestyle change was a secondary objective.

_Mainly about medications but also there can be secondary things which are affecting them, so if someone is um, has CV problems, then you can discuss things like diet, you can discuss things like exercising, you can discuss things like lifestyle, alcohol, smoking, all these other things complement the medication._

ECP010
Additionally, some participants indicated that they generally did not offer any lifestyle support to patients when handing out their prescribed medicines unless the patients requested for a product or service such as stop smoking or weight management service.

_The only time though you may have to do lifestyle counselling or intervention is when um, a patient requests for a product for example like quit smoking. So, at that point, that's an opportunity for you to um, chip-in some lifestyle advice or counselling really at that point. Um, but other than that, you don't, if you are handing out scripts, as long as you know you have established that the patient knows what he/she is doing with the medication, you don't offer any lifestyle advice._

ECP007

While many participants indicated that they offered different types of lifestyle support services and interventions such as stop smoking, weight management and public health services (e.g. blood pressure monitoring) in their community pharmacies, it appeared that these services were completely separate and unconnected to the main LTC services. This inference was made because participants indicated that most of the LTC services were delivered by trained community pharmacy support staff rather than by the pharmacist themselves. In addition, the lifestyle support services offered in community pharmacy were mostly targeted at the general public rather than specifically at people with LTCs.

_We do a weight management clinic here. Um and the patients can get referred from their GP to come and do that. One of the dispensers runs that clinic for us._

SCP018

Most participants generally agreed that the lifestyle services and interventions that they provided was an opportunity for them to support lifestyle change for patients with LTCs. Only a few participants however indicated that they would sometimes link the lifestyle support services or interventions with the main LTC services such as the NMS.

_Yes, am qualified stop smoking provider, so, I um, again, during those stop-smoking consultations, that's usually an opportunity....yea, we do have separate consultations for stop smoking. But I would tie it in with um, MURs and things like that so…_

ECP008

On the whole, many participants indicated that the lifestyle support interventions were useful in helping to identify any issues in the management of a patient’s LTC and for providing the necessary information and support to them.

_Yes I suppose I, we do, do a blood pressure service, that you know, anyone can come in, get that measured.... um, and just you know, I suppose just being available for their questions and that, you know, we do try and keep an eye on how often they are repeating things. Um, if I noticed you know somebody was using loads of ventolin, that would kind of flag off in the system and that would be kind of like you know, maybe it's worth getting an asthma review at some point._

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**Prescription collection and home delivery services**

Many participants recognised the prescription collection and home delivery service that was offered in their pharmacies as an important LTC support intervention provided by community pharmacy. Almost all participants indicated that they provided this service in their pharmacies and many recognised that this was increasingly becoming a big part of community pharmacy practice. Many participants recognised the benefit of accessibility and convenience of this service to patients.

*We have a delivery service. We've just increased that actually. It used to be just in the afternoons, but, there is a bigger demand, for the elderly definitely. It's not about making them lazy, it's about making things accessible for them. Um, and we always had collected from the 2 Surgeries close by, but now we collect from all the Surgeries in [named location]....*

**ECP012**

However, some participants also acknowledged and suggested that the increase in the uptake of the prescription collection and home delivery service was now changing their interactions with patients with LTCs. Participants here indicated that the increasing in home delivery services for example meant that they were in less contact with an increasing number of patients with LTCs, with their delivery drivers becoming the interface of interaction between the community pharmacy and such patients.

*The reason is because you have patients that, like I said, you don’t see them. But they are at home, you do their blister pack....and the driver delivers them. So, on the average, you may do 30 (prescriptions) today, but in actual fact, the driver sends out more, probably 40 or 45.....because, many of them, like I said, are delivery patients. And so, they hardly ever come to the pharmacy. Yes, and only a few people actually come in here. And the way the multiples are going, and a lot of people would find that their trips to the pharmacy will be reduced. Because, we are asking, we are ringing them up, asking what they want, asking what they [inaudible], we take it to the surgery, we bring it back and they come to pick it up or they may send a member of the family to pick it up. So, our interaction with them is getting less and less.*

**ECP001**

**Signposting**

Although signposting is listed as an essential service to be delivered as part of the NHS community pharmacy contractual framework, many participants did not explicitly mention this as part of the ways in which they supported their patients. Only one participant recognised and mentioned signposting patients to other places where they could get more help as an approach taken to support patients with LTCs. However, most participants mentioned signposting when discussing self-care support networks.

*Yea, basically, you know it’s contractual obligation to sign-post, that’s one of the main things that community pharmacy does. So, we signpost them, on a lot of health issues, I was just writing a few here. Whether it’s for their illness, to get support with their illness, whether for self-help groups, whether for voluntary organisations, walk-in centres, um,*
Some participants also indirectly indicated that there were information and (possibly signposting information) materials available and advertised to patients in the pharmacy in the form of leaflets, posters and/or electronic displays as part of their health promotion activities.

R: So when I give out prescription, I sometimes put in a leaflet if I do think they are eligible or think they might be suitable for that particular treatment.

I: ok, and you don’t do that for all patients?

R: no, not all patients, it’s just discretion, so if I feel as that patient, if I see someone is overweight, maybe put in a leaflet....um, I would discuss with, occasionally, I would, yea, I would mention that this is a leaflet just for general things, yea..

5.4.3 Conceptualising self-care support of LTCs

In order to unpack how participants’ conceptualized self-care support of LTCs, participants were asked to describe their understanding of the term ‘self-care’ before going on to describe if and how they supported patients to engage in self-care and the opportunities that they took to provide support. This allowed for insights to be gained into participants’ conceptual understanding of self-care support and provided the baseline for further exploration of how self-care support was operationalised in practice using the core elements as a framework. This section required extensive use of prompts, cues and examples.

5.4.3.1 Understanding of self-care

Participants were asked to describe what they understood by the term ‘self-care’ in relation to people with LTCs. Almost all participants recognised that self-care by patients with LTCs was about them taking care of themselves and being more responsible for their own health. This was reflected in the ways that most participants talked about self-care where they described it as the actions and decisions that patients took that directly affected their health and LTCs. Some other participants also referred to self-care as when patients took charge and responsibility for their healthcare, living independently at home and making health-related decisions such as seeking professional help from the pharmacy or GPs.

Self-care, I think is, my understanding of it, um, is, a patient, sort of independently making a decision, to sort of, um, get treatment of some kind. So, whether that’s going into a pharmacy and seeking help. Um, they sort of managing their own conditions themselves, using whatever, you know, access to general healthcare.

ECP003
Many participants also described self-care as activities that patients got involved in for themselves, to improve their knowledge, understanding and confidence of living with and managing their LTCs themselves, rather than being reliant on healthcare professionals and healthcare resources. There was a general consensus that patients undertaking proper self-care required them to take the lead in taking the necessary positive actions, making informed decisions and getting actively involved with their healthcare professional in how their health is managed. Many participants recognised that self-care was about patients gaining the knowledge and understanding and becoming confident to make decisions such as properly using their medicines and making the lifestyle changes to improve their LTCs.

Um, self-care would be to the point where the patient obviously get enough knowledge about their condition, and about medications, that they are on to the point that they are quite confident and be able to effectively manage the condition through lifestyle, through taking their medicines…
SCP014

Almost all participants indicated that the use of medicines was a key self-care activity for patients, where they become knowledgeable on the importance of safely and appropriately taking their medicines. Some participants also went on to suggest that self-care was about patients gaining the knowledge and skills to use their prescribed medicines independently of healthcare professionals.

To me, um, self-care is well, is for patients to be able to know, or to be able to administer certain medications themselves, safely really, without recourse to the pharmacist or without recourse to the GP.
ECP007

The majority of participants used medicines-related examples to illustrate and describe what they understood as patients undertaking self-care. For example, some participants described self-care activities as patients knowing how to properly and safely administer and manage their medicines while at home, while some others suggested that self-care was when patients were able to adhere to their medicine regimen and deal with any problems they encountered with them in order to achieve the desired therapeutic outcomes.

Well I suppose basically I would describe it as a patient taking responsibility to manage their condition themselves. So it's, I suppose the basic one is using their prescribed medication and they support that prescribed medication by taking it properly. That might be a basic level of self-care, right?
SCP013
5.4.3.2 Engaging in self-care support

Participants allowed further insights into how they conceptualised self-care support by discussing if and how they supported their patients with LTCs to engage in self-care. Almost all participants indicated that they were, in some ways, already engaged in providing self-care support. They suggested that they did this by providing patients with the necessary information and advice to enable them to undertake self-care. Self-care support of LTCs, according to most participants was about making patients more knowledgeable.

"Um, I suppose it’s just making them more knowledgeable isn’t it, just kinda giving patients the information to be able to self-care I think, um, yea, ...So I suppose it’s just, I think it’s may be just about education, yea...."

SCP020

Furthermore, most participants referred to providing information as a way of support self-care of LTCs. They suggested that information provided in self-care support included information about the use of medicines, lifestyle support and signposting to other sources of information.

"Um, to, obviously make sure they’ve got that education about, if it may be in their medicine, it need be highlighted. um, lifestyle guidance, um, particularly with new diagnosed diabetics and things like that. To make sure that they’ve got all the information that they need going forward. Um, in order to do that, we’ve obviously, we have access to, like I find patient UK quite a good website to use, it puts a lot things in layman’s terms.” ...

SCP014

Similarly to their description of self-care, most participants indicated that the primary focus of self-care support was to educate patients to make the best use of their medicines, although some participants added that they also took the opportunity to address non-medication-related issues and/or offered other relevant information and advice to patients. They indicated that they supported self-care during their consultations with patients (mostly during a MUR, NMS or CMS), where they checked that patients were using their medicines correctly and provided them with relevant information on medicines use. A few participants however recognised that self-care support went beyond promoting the appropriate use of medicines. In particular, they talked about moving towards a more patient-focussed approach (inadvertently suggesting that their current approaches were not sufficiently patient-focussed), where they addressed patients’ overall health needs rather than just concentrating on the use of their medicines.

"Ok. What also, um, having mentioned that, it’s not just medications that we deal with, we also deal with lifestyle advice. So if you got a patient sort of, seem to be like diabetic patients, you sort of conducting the test, blood glucose, quite high, oh you need to recommend, oh you know, cut your blood sugar down, you know, and have more vegetables and all that, lose your weight. You know, doing that test and also um, you know advising the patient, they change their lifestyles quite dramatically. So I think you know, [we] moving towards self-care and also um, patient focussed approach. Yea, so, you know those patients needs to be addressed"

ECP006
In addition to this, a few participants also indicated that their primary focus when supporting self-care was on medicines although some also said that they provided lifestyle advice. However they acknowledged that providing lifestyle advice to patients was important when supporting self-care, but that was not being given as much priority as it should be given.

“So I think, self-care, is generally about medicines and taking medicines right, to lead a healthy life. It’s also about health advice, you know, we advise people about smoking cessation....Yea, we do that a lot. I suppose, because we do a lot of talking, we don’t always push it high up. Because we do it all the time, we don’t really think of it as, we don’t realise how important it is.

ECP002

Despite the focus of the discussions being on self-care support in relation to LTCs, many participants talked about their roles in providing self-care support as being about how they managed minor ailments (or symptoms) for patients and helped them in choosing appropriate over-the-counter products (OTCs). This view of self-care support was discussed even though participants were talking about patients with LTCs. This may be a reflection of a sort of default mind-set of the participants that self-care support related more to the management of minor ailments which most of them indicated that they offered in their practice.

Self-care, um, what I would say is um, you know, if there is a possibility for the patient to come into the pharmacy and ask the pharmacist for advice on particular condition, that would be considered self-care. Ok, so if the patient for example, I mean, cut the finger or you know, there is some kind of infection goes on, on the hand or on the body. They can come into the pharmacy and ask for the pharmacists advice and the pharmacist can recommend some treatment, or so, that will be sort of [inaudible], or they can buy over the counter you know, self-selection. Probably that will be considered as self-care.

ECP012

Many participants believed that self-care support was already being provided to patients by other healthcare professionals (particularly primary care nurses) hence, their own self-care support roles were to reinforce what patients should already know.

Um if it’s a LTC, you would have thought that all the other professionals would have provided relevant information at every stage, so when you come to speak to them, you are just reinforcing what knowledge they already have...

ECP004

On the whole, most participants readily recognised the importance of self-care in helping people with LTCs to better manage their health. Some participants went further to discuss the benefits of self-care support to both patients and to them as healthcare professionals. The participants indicated that supporting self-care support was important in; improving patients’ health outcomes; reducing waste in the NHS; and relieving pressure on community pharmacists and other health professionals.

I think that self-care is probably the most important thing in managing LTCs. I mean, the healthcare workers can only try to help the patient. But the patient is the one that has the
After providing insights into their conceptual understanding of self-care support of LTCs, participants went on to discuss the opportunities they took to provide self-care support in their community pharmacies. Most participants indicated that the majority of their LTC patients were on regular medicines and they simply dispensed these to them, unless they were due for their scheduled review or consultation (usually yearly), or if there was a change in medication, where they would fulfil their contractual obligations by providing the appropriate consultation service. While some participants indicated that they occasionally had interactions with patients over the counter when handing out prescription medicines, most participants admitted that the LTC services that they provided were sometimes the only contact that they had with patients with LTCs. Many participants suggested that when these services were introduced, they formalised and provided a contractual structure and to the activities that they were already doing in practice.

But I do find the CMS, I think, what it’s done is it’s given us a structure to kinda work through, because you walk through one part and you go and you kinda go through those questions. So it is good to kinda make sure that you’ve done all, I think it’s questions that we’ve always asked…

SCP024

5.4.4 Operationalising the core elements of self-care support of LTCs

This section explores how participants described the ways that they operationalised the 5 core elements of self-care support when interacting with their patients with LTCs. Although there were significant overlaps in participants’ description of how they used the different parts of these elements, they were discussed separately in order to gain in-depth insights and highlight differences in how they were applied in practice. Nearly all participants agreed that community pharmacy already delivered aspects of these components, but the analysis presented here highlights the key issues of how they said they approached these elements to provide self-care support.

5.4.4.1 Self-care information and advice

Having indicated that their self-care support roles were primarily about providing patients with information and advice through patient education, participants were then probed further about how they provided and delivered these information and advice. Most participants recognised that they were an important source of information to patients with LTCs although a few participants suggested that this was still a potential that had not yet been fully harnessed. It appeared that self-care information and advice was delivered to patients via the traditional patient education approach where
they provided generic, structured information and advice, rather than by the self-care education approach which takes a tailored, personalised approach to identifying the barriers that may exist for patients to put the information into practice. Participants suggested this by indicating that they provided patients with as much information and advice as they deemed necessary since they were usually very busy to spend the time to identify and assess the information needs of patients.

So, yea, you can have a little chitchat, but in general if you want to get to the nitty-gritty, then, you have to be very direct and give as much information as possible, explain to them as much as possible. But like I said in pharmacy practice, if you are working in a busy store, you are never really going to get the chance to fully go through the ins and outs of patients' medicines.

ECP010

Most participants indicated that they provided information to patients verbally during a consultation, mostly face-to-face, but sometimes over the telephone. In addition, some participants indicated that they would also go on to provide patients with written information (on leaflets) and/or use graphical illustrations to help explain things for them.

Ok. If the patient doesn't understand the information that I've given to him about the medication, I invite him for an appointment to the pharmacy to explain it myself, clearly. Um, because even on the phone, it might not be as easy to understand. Perhaps even showing pictures sometimes helps. Particularly with the um, insulin devices. I’ve got a lot of pictures, you know, different types of devices and how it’s to be used and things like that. and how it needs to be stored as well.

ECP006

In addition to providing information and advice about medicines, some participants had to be prompted to discuss if, and what other types of information and advice that they provided, particularly with supporting lifestyle change. Some participants went on to indicate that they provided lifestyle support services such as stop smoking schemes, weight management programmes, NHS health checks, screening services such as blood pressure and cholesterol testing, and health lifestyle promotion through the display of leaflets.

I advise them on what it should be, um, but, you know it’s the follow up, that’s it, that’s the hardest thing, following up…. We do, like free blood pressure monitoring, we do um, we check their weights, check their BMI, things like that….um, we do blood glucose monitoring for free. So, if anything is highlighted from there, then obviously, you advise them accordingly, so um, if your blood pressure if high, you say ok, moderate exercise, diet. Maybe advise them on what proportion of, you know, um, meat they should have in their diet, and what proportion of you know, carbs and etcetera. If they are really overweight, then, we do like a lipotrim diet. I might recommend them to go on that.

ECP003

However, it appeared that lifestyle support was mostly undertaken opportunistically during interactions with patients with LTCs as many participants indicated that they would only normally offer lifestyle
information and advice when the opportunity came up during their conversation, or when a patient requested a related service or product (e.g. smoking products).

The only time though you may have to do lifestyle counselling or intervention is when um, a patient requests for a product for example like quit smoking. So, at that point, that’s an opportunity for you to um, chip-in some lifestyle advice or counselling really at that point. Um, but other than that, you don’t, if you are handing out scripts, as long as you know you have established that the patient knows what he/she is doing with the medication, you don’t offer any lifestyle advice.

ECP007

Many participants however acknowledged the difficulties of following up patients with LTCs routinely in community pharmacy practice. Participants suggested that they would not normally proactively get involved in following up patients with LTCs, unless they were providing a service that required them to do so.

CP: As I’ve said, it’s more of providing the information really. Once you provide the information, they make the choice really. Ok, so they are welcome to come back as often as they want. Yea...for services that we provide, because they fill a consent form, yea, we have a follow-up form as well. Ok, so we give them a ring from time to time, find out how they are doing. Some people do come back personally to say things have improved.

ECP008

A few participants however identified not being able to routinely follow-up patients after their interactions with them as a current weakness of community pharmacy.

Oh, um, and again that’s probably one of the weaknesses where in pharmacy we don’t really support the change of somebody who comes down. Um, what I can do sometimes is to say, look if you are struggling, come back and see me....

SCP024

Participants had different views on how they thought patients used the self-care information they provided to them. While some participants indicated that they had a duty to ensure that the information they provided made patients more knowledgeable to make informed decisions, some other participants suggested that their responsibilities ended with providing the information and patients would ultimately decide on what they did with the information. Some participants indicated that they believed that the information that they provided to patients would help to improve their knowledge and understanding to make informed decisions and change behaviours.

And then, in terms of living healthy, um, and then, obviously, not just living healthy, but all the information that comes with it as well because if you are equipped with the information, you can make the right choices really...

ECP009
Some other participants on the other hand inferred that their responsibilities with patients ended with the providing the patients with information, and that the patient would decide on what to do with this information. They went on to justify this by indicating that most patients, especially those that had been taking the same medications for some time were quite knowledgeable already and that there was no point in repeating the same information to them.

You are giving out the medication which patients have been taking for years, there is no point though, referring such patients. You don't even bother to ask whether the patient is um, if they've had their medications before, so you assume that they know what they are doing with the medication.

ECP008

5.4.4.2 Skills training and support

Participants discussed if and how they provided support to help patients develop self-care skills. Many participants initially struggled to identify any self-care skills that they supported and had to be prompted with examples such as LTCs self-monitoring, adherence and self-administration of medicines and coping skills to deal with, and respond to the psychosocial and emotional aspects of LTCs.

LTCs Self-monitoring

Active provision of training and support to patients to self-monitor their LTCs appeared to be lacking in community pharmacy. Most participants were unable to describe whether and how they provided this in spite of the probes and examples used such as coaching patients to know how to check that their LTCs are controlled and to monitor the signs and symptoms of deterioration. Many participants viewed this as not within the ambit of their professional roles. A few participants however said that, while they often had the devices to help patients monitor their conditions within the pharmacy, they would often focus on ensuring that the patients are being seen by other healthcare professionals (e.g. asthma nurse).

Um, again, not really. We tend to just check that they are getting seen by somebody every so often. It's not really us that does it. Um, but we do, we make sure that you know that they are getting seen...Just seeing you know, are they managing ok, you know, just questions like that can sometimes open up information that, um, I would tend to just, if they were saying they were struggling, I would just say, see your asthma nurse, or just make sure they are getting regular checks. I don't think I would specifically sit down and check it myself.

SCP016

Some participants however suggested that their involvement in self-monitoring support was by supplying patients with self-monitoring tools and devices. Most participants mentioned blood pressure monitors, blood glucose monitors (‘test-kits and strips’) and cholesterol test kits that they had for sale in their pharmacies. They however suggested that they would not proactively offer patients
these devices unless patients made specific requests for them. Participants here pointed out that once they had sold the device to patients they rarely got involved in how patients used the tools and devices, or in interpreting the results and clinical signs, unless there was a request for help by a patient. Many participants further stated that they would prefer to refer patients back to their GPs if there were any concerns about the test results.

The best time is when somebody gets the first treatment for blood pressure, and then I would be, um, encourage them to purchase and have it in place, that they could check it, not necessarily every 15 minutes, but just regularly and not worry unduly about it, but to keep an eye on the situation and if there are any changes they can then speak to the GP…. that's an area where I probably would be even, I'll say if it...speak to your GP, but again that could be um, a CPD point I could develop.

SCP018

A few participants also suggested that they encouraged patients to purchase self-monitoring tools and devices during specific periods of health promotion, either from their PCTs (now CCGs) or from their employers. They suggested that they sometimes used marketing incentives to get patients to purchase these self-monitoring devices.

For example if we are doing something on blood pressure, know your numbers like something, your guide to managing your high blood pressure, we probably would write to all patients that we have actually blood pressure test in the branch. You know, give them vouchers, if they want to purchase some blood pressure monitors, that's fine, you know...

ECP009

In addition to supplying self-monitoring tools to patients, some participants indicated that they had free health check services like blood pressure monitoring and BMI checks which they offered to patients with LTCs as well as to their customers in general. When probed further about supporting patients with self-monitoring devices at home, some participants said that they did not proactively encourage patients to engage in this because they were cautious that some could get unnecessarily worried about fluctuating readings. Participants here indicated that while they sometimes provided advice to patients about the general use of self-monitoring devices, they would mainly refer them back to their healthcare professionals (e.g. specialist nurses), if the patient had any concerns.

A lot of patients now have their own [BP] machines… sometimes, I worry that they get too overly involved. So, cholesterol checking and like glucose measurements frighten me because of the training I’ve had... Just saying you know, that's just such a snapshot, if they are really worried you know, come and see the nurses or whatever. So when they come in and ask for that, we explain obviously what it may be and then refer them to the Surgery. And the nurses there, they've got lead nurses in each practice

SCP024

**Adherence and self-administration of medicines**

Almost all participants agreed that they had important support roles of ensuring that their patients were adherent to their medication regimens. Most participants indicated that they would initially try to
identify and address the reasons why the patient was not adhering to their regimen. Some of the reasons for patients’ non-adherence to medicines that participants discussed were around medicines side effects, lack of knowledge about the medicines, lack of motivation and inability to self-administer the medicine. Most participants said that they would generally support their non-adherent patients by encouraging them and by making them see the importance of taking their medications. In some other cases, they indicated that would address any other specific concerns.

R: the reasons could be many for reasons why people don’t comply. The reasons could be um, fear of side effects, fear of the unknown, just the inability to take medicines, so some people would take one paracetamol and they’ve finished. You know, they just don’t want to take you know, the idea of taking tablets, um many feel that we’ve got so far without medication, so, why have it now, um, some people, mental health problems, they just don’t want felt they need to take them you know, for whatever reasons, psychological, they are not keen on taking it. So, and

I: and how would you now

R: so these are issues, to combat this? Once you’ve established that patient is not complying, then you have to have, emphasis to them the importance of medication, you’ve established why they are not taking their medicines, what are their concerns, and then if you could with your own ability, and in line to the patient as to you know, the reality of the situation, then you can possibly sway them in that way, if for example, someone is non-compliant because of their technique of using their injection or inhaler, you can run that step-by-step, and can talk with them that you know, that this is the correct technique. And they do know if they start using it correctly and they start seeing improvements, its self-care.

ECP010

For LTCs like asthma and COPD that require patients to self-administer medicines with inhalers and spacer devices, participants indicated that they provided support to patients with using these devices correctly during medicines consultations, e.g. MUR or CMS. There were however indications from a number of participants that they only got involved with this opportunistically. They indicated that they assumed that patients already knew how to use these devices because they were already being seen by their specialist (asthma) nurses or GPs and would have been shown how to use these devices. They suggested that, while they would offer support to patients that made requests for help, they would usually refer most of them back to their GPs and nurses.

Many of them have been shown how to use, because a lot of them you’ll say, but do you know how to use the inhaler, they say, yes, the doctor showed me but I didn’t quite understand it. So, most of them have been shown how to use it, wherever, either by the GP or the nurse.

ECP001

Some participants also stated that they sometimes supported their patients with the application of devices such as asthma inhalers during their MUR or NMS consultations however, the way they talked about this suggested that this could be opportunistic. This inference was made because participants here suggested that although they had tools such as spirometers in their consultation rooms, they rarely or occasionally used them during health promotion campaigns.

We actually have all the gear [spirometer] here. During some of our MURs, we, I do the measure. I have the throwaway tops [inaudible] and everything, and um, it’s one of the
Providing psychosocial and emotional support

Participants described situations where they had helped patients to manage their emotions by using words and phrases like encouraging, calming down, showing empathy, reassuring and helping patients to relax. However when they were asked explicitly about whether they provided any psychosocial and emotional support to patients, many participants indicated that this was beyond their roles as pharmacists or that they were not trained enough to provide counselling on emotional issues. A few mentioned that they would refer patients on to other resources if they viewed them as requiring emotional support. It seemed that participants viewed providing emotional support as providing some form of specified psychological intervention specific to people with psychological needs such as anxiety disorders and depression.

R: But I try to make them understand that it's just taking one step at a time, things like that. You encourage, that's how I encourage them that, that's what physical activity means, you know....
I: OK, and do you provide any forms of emotional support to your patients?
R: Not really, I don't think, I think it's beyond our job description to get to the emotional level.

However, many participants recognised that supporting patients to manage their emotions was part of their innate human and professional duties and roles as pharmacists.

Um you have to use your discretion, you have to be professional and um you have to be sincere, you have to be honest and you have to be kind and affective, use your qualities which a pharmacist, I think, forget a pharmacist, I think these are qualities every human being should have, you know what I mean, that's generally speaking.

5.4.4.3 Self-care support networks

Participants were asked about their awareness, knowledge and use of support networks or groups when interacting with patients with LTCs. Many participants initially appeared unsure about this and had to be prompted with illustrations and examples that support networks included individuals, organisations or resources, within or outside the healthcare sector, where patients could get more information and/or support with living with their LTCs. Participants discussed their interactions with patients' self-care support networks with the interviews focussing on patients' personal communities such as family/carers and friends and community and voluntary self-help groups (national and local groups).
**Personal communities**

Patients’ family members and carers were the main personal communities discussed by almost all participants. In particular, many participants indicated that they interacted with patients’ spouses, partners, children (for elderly patients) and carers. Many participants underscored the importance of family members and carers of patients as key contacts that provided practical support such as collecting dispensed medicines.

> Yea, family members, um, they are quite important and key contacts. Sometimes, we are unable to approach the patient, so we try to ring the phone numbers for delivery of their medications. Sometimes patients are not able to pick up, so the second point of contact is the family member. It might be even difficult for the blind person to open the door for the driver, so key contacts are the family members, who could help trying to open the door or deliver the medication or collect the medication. Or coming on the behalf of the patient to deliver a prescription to the pharmacy, and things like that happen. You know, family is family. They take care of each other.

_ECP006_

Some participants also indicated that they interacted directly with patients’ family members/carer when they accompanied them to the pharmacy for a consultation. Participants indicated they encouraged family members/carers to support patients in making lifestyle changes (such as quitting smoking), help with reminding and administering medicines for elderly patients and encouraging them to keep an eye on the patients’ conditions.

> That’s really helpful, I do that sometimes with MURs, and a daughter or a son comes in, and it’s really good. Because, they normally are on your side, and they help, when the patient leaves, you feel they are going to help that process.

_ECP002_

A few participants indicated they sometimes provided support to the family members/carers themselves by encouraging them and offering comforting words

> Um, obviously, there is a lot of support, not just for the patients, but also for their family members as well. Just a bit of word of comforting sometimes helps.

SCP016

**Community and voluntary self-help groups**

When probed further about patient self-help/support groups, most participants indicated that they were aware of national support groups that focused on different types LTCs (e.g. British Heart Foundation), or local lifestyle support groups. Several participants stated that they had a list of a number of self-help support groups in their consultation rooms. But from the ways that participants referred to the ‘list’ of self-help groups, it appeared that this was not something that they made use of regularly.
We have, yea, we have um, the PCT supplies us with a guide, yea, I have one to show you. That’s a pharmacist signpost information pack, so everything is in there, depending on what help the person needs.

ECP009

While signposting is an essential component of the community pharmacy contractual framework in England for example, it appeared that most participants did not proactively get involved in signposting. While some participants indicated signposting was undertaken when the need arose, most participants suggested that they did not engage in this very often.

Um, there are support networks, however, I personally have not recommended that, oh, go to, other than going to see their, say diabetic nurse or asthma nurse, or, um, I’ve not recommended any support group personally.

ECP005

The reason for this is not very clear, but a few participants reflected that although they knew of these groups, the reason for not using them maximally to support patients was attributed to the fact that they were not too confident about providing appropriate information about the groups to patients.

Um, but generally, no, I wouldn’t say I do that particularly regularly....well, yea maybe it’s just that we feel unconfident, I don’t really know myself, exactly, where that could go for help. Um, we kinda you know, I’ve heard of these things, but you know, I don’t know that patients would sign up to get emails or whatever. So it’s probably just the fact that I don’t know myself.

SCP019

On the whole, it seemed that participants had limited awareness of patient self-help/support groups. Some participants indicated that they had a list and contact details of patient self-help groups, but it appeared that they were not proactively signposting patients to these groups. Some participants indicated that they predominantly referred patients to these groups during dedicated periods of health promotion campaigns, or when the groups approached them to display their leaflets and posters.

Um, unless, you know, as part of the public health campaign, the PCTs might ask us to carry out some self-care campaigns for them, get involved with like, displaying posters, establishing you know, what services are available, um, when and how to see the doctor, how to refer themselves and things like that.

ECP007

5.4.4.4 Self-care technology

Participants were asked about their knowledge, awareness and use and any forms of self-care technologies in supporting patients with LTCs. There was a consensus among almost all participants that the use of self-care technologies to support patients with LTCs in community pharmacy was very limited. Some participants however referred to the use of telephone (to follow up or make enquiries)
and internet technologies (mainly via signposting patients to relevant websites) as a way of using technology to support their patients. A few participants however expressed some concern about how the use of the internet technology could potentially distress some patients.

_I think...the internet in general, I think they essentially can be, um they prove more helpful because, some of the information that they read on there, if there are not educated enough, I feel they can misunderstand things and become more worried than they need to be_  
_ECP003_

While some participants indicated that they were aware of, or had heard about, the use of emerging technologies such as mobile ‘apps’ and devices and tele-health/tele-monitoring applications, most participants admitted that community pharmacy was yet to adapt these into practice. Most participants however recognised the potential of these self-care technologies to the management of LTCs, particularly noting that most patients now had access to the internet and smart mobile devices.

_It’s funny because I was looking, I had a conversation with one of my colleagues not long ago, but we should have an app, um, if you are taking your meds at a particular time, and there are some out there, um, but I’ve not looked at them in great detail, but no, technology should be there to help um....yea, no, I might need to believe in technology, um, it’s there, it’s right and it will, everybody has got mobile phones now._  
_SCPO23_

A few participants reflected on the potential place, in community pharmacy, of technologies that support patients with taking their medications. They suggested that community pharmacy may need to find a way to get involved in the engaging patients with these technologies as there may be competition from other healthcare professionals.

_No, but it’s certainly something I think we should be getting involved in because it’s the way forward and other industries are certainly doing it. And I guess I’m also conscious of the fact that if we don’t do it, someone else will._  
_SCPO13_

### 5.4.4.5 Collaborative care planning

Participants’ views were explored on different aspects of the collaborative care planning process such as written care plans, partnership and shared-decision making, goals-setting, proactive follow-up and problem-solving. On the whole, while almost all participants recognised the importance of collaborative care planning in helping patients to change behaviours to manage their LTCs, it appeared that they were not routinely engaged in this in their interactions with patients.

**Written care plans**

There was an agreement among most participants in England that the use of written care plans was beyond the remit of their responsibilities as community pharmacists. Participants suggested that this was the responsibility of the patient’s direct care teams in GP surgeries (doctors and/or nurses),
especially since they had access to individual patient’s information and records. While most participants expressed the desire to be more involved in the written care planning process with patients and their GPs, particularly in areas relating to the use of medications, many others pondered on how this would work in practice.

No, we don’t do that really because, that’s done by the health team in the surgery, the nurses, the doctor, anyone else in the surgery, they have their own care-plans for the patient. Basically, we are community pharmacy really....... in terms of their medications, I think it would do really. Um, because, well to be honest, some doctors don’t know much about medications anyway. Um, I think it would help to reduce um, the risk of um, inappropriate use of medications really, if pharmacists are involved in informing the care plans with the GP really. Am sure it will enhance the patient’s understanding of their medication anyway, so, I think overall, it will have better health outcomes for the patient if the pharmacist are involved. But how are they going to work that one out is what I don’t know really?

ECP007

Even among participants in Scotland who are contractually obliged to provide pharmaceutical care planning as part of the CMS, their views suggested that they did not engage collaboratively in care planning with their patients and/or other healthcare professionals. Many participants here suggested that an informal care planning process that involved paperwork similar to the MUR and NMS in England.

We don’t as such draw care plans, but what I do, do is if there are any issues, but you think all the pharmacists will fill a form...and I would send that off to the GP. And obviously inform the patient as to what I feel the issues are. I would fill in this form, [do you want a copy of the form to have a look at?]. I write to the GP using that format, either that, or there is a summary page that you print off of the um, the CMS that you document, and I can just print that off. And I would give a copy to the patient and send a copy up to the GP.

SCP022

Furthermore, from the ways that participants described the involvement of patients in the pharmaceutical care planning process, it appeared that they essentially got patients to consent to taking part in the service, rather than getting them to be actively involved in the process of care-planning.

It’s agreed with the patient, well the patient, from it yea, you would conduct the care plans, the patient knows what you are doing, and then that gets all recorded. You review anything that is necessary to review...

SCP014

While participants recognised the importance of patients having written and agreed care plans in place, many reflected that a lot of patients were either not aware, or did not have written care plans in place. Participants went on to suggest that practice nurses and GPs were responsible for developing and agreeing care plans with patients, inadvertently inferring that this process was not part of the pharmaceutical care planning process.
...certainly with asthma, I’ve noticed that in the past a lot of people with asthma, they
don’t have an asthma plan, or they don’t know about their asthma plan, so if you are talking
about patients who may get a chest infection, they don’t know what to do with their
inhaulers, or who to see, you know, they may end up getting more ill until they eventually go
to the doctor, and they end up on all those steroids that sort of things, instead of just maybe
increasing their inhalers or something. You know, having these plans, I’ve talked to
patients about that in the past, and you know, just/
I: so, who is involved in helping them do the asthma plan?
R: well, the asthma nurse would definitely develop an asthma plan with them, or their
GP. I wouldn’t be involved in setting the plan, not generally, I mean, the surgery here also
has a practice pharmacy, so if any pharmacist were to get involved, it’s likely to be her.
SCP017

**Partnership and shared-decision making with patients**

A requirement for effective collaborative care planning is that healthcare professionals see patients as
active partners and involve them in making decisions about the care of their LTCs. While most
participants indicated that they had good relationships with the majority of their regular patients with
LTCs, it appeared that their interaction and communication with them were more instructional than
active partnerships. Most participants suggested that they just provided the information and advice
that they deemed necessary during the consultation.

Well, you provide them with information anyway. You can advise them that you think this is
the best, but it’s still up to them really.…
ECP011

However, some participants indicated they tried to have two-way discussions with their patients and
asked open questions in order to elicit discussions, most participants acknowledged the difficulty of
getting patients to come forward with information during consultations and stated that having an open
kind of conversation would gradually put patients at ease with them and more willing to open up and
work in partnership.

Well, yea, when you are having a one-to-one discussion with them, yea. I suppose even
ideally, you brainstorm the idea with the patient and see how they would think about it yea,
from that point of view…um, it depends on um, the circumstance, it’s probably down to the
conversation that you have with the patient as well, not so much a case of lecturing the
patient, but asking questions, ask with open questions. It gives a wee more at ease in their
coming forward with information, and, it becomes a two-way thing as opposed to you just
talking at them I suppose
SCP014

**Goal-setting and proactive follow-up**

An essential component of collaborative care planning in self-care support is goal-setting (or
implementation intentions) and active follow-up which aims to help effect and sustain behaviour
change. Analysis of participants’ views suggested that active goal-setting and follow-up were not
routinely used in community pharmacy practice unless they were delivering contracted services that
had goal-setting and follow-up built into them, for example when undertaking services such as
smoking cessation service, weight management service and the New Medicine Service (NMS) in
England. Most patients referred to setting goals and following up with patients mostly when they were providing a stop smoking service.

Yea, I mean certainly with quit smoking, you know, I’d always be sort of coaching them on you know where they should be getting to that sort of thing. With other conditions, probably not…

SCP023

Some participants also described goal-setting and follow-up opportunities when patients requested to buy certain products, for example, weight loss or quit smoking kits. They indicated that they used this opportunity to refer the patient to another service in the community pharmacy.

You might do that [set goals and follow-up] when you sell them some products or when you offer the stop smoking service, or like patients on medication for obesity like Orlistat. Part of the things you do is to agree with patient um, their goal really. Because over certain period, you expect them to have lost certain weights. So you can agree with them that well, over certain period, other things being equal, we expect you to have lost this weight, or you have achieved this state really…. smoking cessation as well, you can do that with them when you say, when do you want to quit smoking? You agree with them, when do you want to quit smoking, you know, by so, so week, you should have quit…yea, so you that.

ECP007

However, when probed about other opportunities for goal-setting and follow-up particularly around the management of the patients’ LTCs, participants indicated that these were responsibilities of the patients’ doctors and nurses that were managing the patients. Most participants indicated that goal-setting, particularly relating to attaining clinical goals such as cholesterol levels or blood pressure was challenging for them since the goals might require adjusting patients’ medications, which required input of the patient’s GPs.

Even cholesterol level is not something that we can set a goal here. They will need to go back to their GPs because those ones are dependent on, medications. Um, So it would be smoking cessation, where we can help them to set goals. But I must say that I don’t have enough training, on how to help to somebody to set a goal, in that aspect [clinical goals]…

ECP001

Many participants recognised the difficulties and challenges of undertaking proper goal-setting with, and follow-up of patients with LTCs in the current structure and arrangement of services in community pharmacy.

I’m afraid we don’t, because, once again, it’s down to costs. With staff cutting now, I’ll just get through the day with MURs and scripts. But a system in place to follow it up, there would have to be some sort of, but the thing is that if we took on extra roles and we are paid, like MURs, that’s when those, they will naturally come in as part of the service. And the nice thing is we can afford to do it.

ECP002
Even with new services such as the NMS in England that has a follow-up component built into it, some participants described the difficulty of following patients up due to the demanding workload within the pharmacy.

Um, no I advise them on what it [talking about following up after providing a blood pressure check] should be, um, but, you know it’s the follow up, that’s it, that’s the hardest thing following up. Because, this new scheme, the NMS, its, they require you to ring the patient 2 weeks after they have the first [medication]. That’s difficult in itself, to pull away from everything. But in order for me to follow up any advice I give to, let’s say I give advice to 10 different people in 1 day, how can I ever follow...it’s difficult to

ECP003

5.4.5 Barriers and enablers to managing and supporting self-care of LTCs

This section examines the barriers and enabling factors that participants described as influencing how they managed and provided self-care support of LTCs. Participants were asked at the end of the interviews to reflect on factors that currently, and could potentially influence how they provided self-care support of LTCs. Many of these factors were also gleaned during the interviews particularly during participants’ description of their general approach to managing and support LTCs, as well as during discussions around operationalising core elements of self-care support. Although the factors identified were categorised as ‘barriers’ and ‘enablers’ in the analysis, most participants focussed on barriers that hindered them from contributing more to patient care. Hence, the data presented in this section will focus more on the barriers. Specific barriers relating to operationalising the core elements of self-care support where identified and discussed, while broader barriers relating to how community pharmacy provided care of LTCs were also discussed. On the whole, generic barriers such as limited time spent with patients, lack of recognition/financial incentives and high workload were frequently cited by almost all participants. The main factors from the data analysis that were found to underpin these generic barriers are presented in Table 5.3 below. Many of these barriers are already well-recognised in literature; hence the data is presented as a table with exemplar quotes, instead of extensive narratives of participants’ views.
Table 5.3: Barriers to providing self-care support of LTCs

<table>
<thead>
<tr>
<th>Broad barrier</th>
<th>Specific barrier</th>
<th>Illustrative quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional roles constrained to dispensing and supply activities</td>
<td>Focus on preparing and checking prescriptions</td>
<td>I think there’s um, I think we haven’t got there yet, as a profession, um in community. We are not there yet. We are restricted in the roles that we are in because we are busy in the dispensaries, so, especially, a lot of the independents, um, so, it is difficult to be able to get the time to play more of a role in terms of long-term conditions. …ECP008</td>
</tr>
<tr>
<td></td>
<td>Increasing workload due to increasing LTC population</td>
<td>Well, the truth is I don’t see us spending more time with our patients, if anything we are going to spend less time because the patient population is growing and the demand for pharmaceutical care [prescriptions] is growing. So, pharmacy profession is getting under more pressure really to deliver those services within less time, so, I don’t see it happening….ECP007</td>
</tr>
<tr>
<td></td>
<td>Reluctance to give-up traditional dispensary roles of community pharmacy</td>
<td>Pharmacists like me who maybe have been 20 years in the business, who’ve come from a historical dispensing background to give up dispensing as part of your job, …I think probably, you might find that a lot of pharmacist who’ve maybe being in my age group 20 years, they can’t quite give up the dispensing, I think they see that as their responsibility. But if you maybe talk to pharmacists who are 2, 3 years qualified, and they have an accuracy checker, coz we’ve got an accuracy checking technician, if they’ve got an ACT, they are probably quite happy to walk away from dispensing you know, I don’t know, but that’s my feeling. SCP021</td>
</tr>
<tr>
<td>Limitations of current community pharmacy contractual framework</td>
<td>Limited time spent when providing a service</td>
<td>I think the main thing is we don’t spend lots of time with, I know we come across lots of patients, but the average time we spend with them is so small compared to other healthcare professionals. Nurses spend a lot of time with each of their patients, doctors do, we spend fewer times with them, so, that’s one of the things really. ECP011</td>
</tr>
<tr>
<td>Patients’ expectations and awareness of community pharmacy’s roles</td>
<td>Service-focussed orientation of current contract</td>
<td>So the only real time we will sit down with the patient is during the MUR. Yea…the barriers are that we are restricted to, we have at to be at the pharmacy [dispensary]. The pharmacy [dispensary] can’t function without us. Um you know, that’s probably the biggest barrier. …ECP012</td>
</tr>
<tr>
<td></td>
<td>Lack of patients’ awareness and understanding of community pharmacists roles</td>
<td>And maybe we can give advice on inhaler techniques as well, but um, patients can be quite strange, they could be quite rare, not too bothered to talk about it, they can be quite rare to come and have consultation with me and sort of be seen that way, you know, they’ve got their asthma nurse, you know, and they would see those along in the surgeries. So, they are happier to see, you know, maybe people like that in the GP setting. But in the pharmacy setting, there is very much this tendency towards, you know, your customer would rush in, get their medications and thank you, run out again. That’s kind of all they want from you. Some patients are different but certainly, so we tend to limit our interaction in terms of long term care, to sort of friendly advice….SCP017</td>
</tr>
<tr>
<td></td>
<td>Patients perception of the pharmacist as a supplier of medicine</td>
<td>Yea, I guess, I mean, um, that’s a curious one because, I guess really, that depends on what the patient maybe expects of you. Um, you know the thing a lot of the time in pharmacy, patients are, you know, patients are very receptive to what you do as a pharmacist, but you know, a lot of patients do see your only commitments to them is give them their meds, and they don’t really see that you’ve got any role played beyond that. SCP024.</td>
</tr>
<tr>
<td>Broad barrier</td>
<td>Specific barrier</td>
<td>Illustrative quotes</td>
</tr>
<tr>
<td>--------------------------------------------------</td>
<td>----------------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>Poor remuneration and lack of recognition/reward</td>
<td>Differences with the remuneration structure for other healthcare professionals</td>
<td>For example, and that’s why you have the QOF points in doctors surgeries, because you know, um so many patients, if they cut [inaudible], and they’ll get fees, its only with patients that they are managing, such and such disease, they will get extra money for it. So the outcome is down to money really, unfortunately. ECP008</td>
</tr>
<tr>
<td></td>
<td>Lack of recognition and reward</td>
<td>Obviously, out of all the health professionals, we are the most accessible. People probably see us more often than they see their GPs, their nurses, so, where we can have regular interactions with these people… Yea, so, um, I think pharmacists are generally quite de-motivated, so I mean… I think it’s just because of lack of recognition, um, that's due to probably, poor leadership in pharmacy. I mean. Pharmacists are probably the least acknowledged, I mean, I went to the university. I studied 4 years. I did physiology, pharmacology, in-depth, chemistry and everything, and, what do I do in practice? I don’t use any clinical knowledge, minimal, you know. I check prescriptions, a qualified dispenser could do what I do, day in day out. ECP003</td>
</tr>
<tr>
<td>Staffing levels, skill-mix and supervision in community pharmacy</td>
<td>Inadequate staffing levels</td>
<td>And I think we are doing some work on that because if you are sole pharmacist in a really busy pharmacy, and you maybe don’t have the support team in place, that can be tricky. We are lucky, we’ve worked hard over the last 5 years to get the support team there, and often I think we need 2 checking technicians and not just one, to let the pharmacists to go and speak to the patients. But um, well baby steps, we are getting there. …SCP018</td>
</tr>
<tr>
<td></td>
<td>Limited knowledge of support staff about supporting LTCs</td>
<td>The counter staff help in general advice, but education is really, if they have any long-term conditions, generally when they come for any over the counter advice they are always referred to the pharmacist anyway. Um, so we tend to speak to them more.” ECP002</td>
</tr>
<tr>
<td>Working relationship with GPs</td>
<td>Limitations of the supervision regulation</td>
<td>I think one of the issues is responsibility and supervision. I fail to see how a pharmacist can effectively be in 2 places at once. And let’s face facts; we are not going to have 2 pharmacists in most pharmacies. Yea, there may be well be occasions where you’ve got to have a second pharmacist, but, you as a pharmacist are probably going to be relying upon your support staff to provide the services you give. And whether that means them actually doing the support service, so in terms of like a CMS consultation, I don’t know why a pre-reg pharmacist, or even a dispensing technician cannot do it SCP017</td>
</tr>
<tr>
<td></td>
<td>Lack of direct communication with GPs</td>
<td>I would say we do [have good relationships], yea. There is quite a lot of surgeries in [named location] and we cover quite a wide basis, so it’s being a bit wee harder to get the same relationship, like the practice across the road….it would mainly be through the phone. I have done before like going there to the practice, but it’s more the practice managers, so obviously, the GPs getting the time to speak to you certainly [laughs]. SCP016</td>
</tr>
<tr>
<td></td>
<td>Limited support from GPs</td>
<td>I think GPs time is very. very limited for us speaking to people. and um, it can be quite hard to get time with the doctor, um, I think there is also still a little bit of, friction between GPs and pharmacists.” ECP011</td>
</tr>
</tbody>
</table>
5.5 Discussion

5.5.1 Strengths and limitations of this study

To the best of the researcher's knowledge, this is the first time that self-care support as a distinct concept in the management of LTCs has been explored among community pharmacists in the UK. The qualitative design of the study allowed deep insights to be gained into current practice of supporting people with LTCs, the conceptualisation and operationalisation of self-care support and the factors that influence how self-care support is provided in community pharmacy. The study was grounded in theory, guided by the literature, where the framework of the core elements of self-care support underpinned the data collection and analysis. This is considered as novel as no similar framework of such is known to have been used in the pharmacy literature. This framework provided granular insights into how self-care support of LTCs is currently and could potentially be provided by community pharmacists. In addition, this study examined community pharmacists' views in relation to the wide range of LTCs that they encountered in practice, rather than focussing on specific single diseases, which is reflective of the real world scenario, since people with LTCs often live with multiple co-morbid conditions. The majority of other studies that have examined the potential of community pharmacy practice to provide self-care support have focused on single LTCs such as coronary heart disease, diabetes and asthma.

This study was a qualitative study that explored the perspectives of a small sample of 12 community pharmacists in England and 12 in Scotland to understand the contributions of community pharmacy in self-care support as a concept in the management of LTCs. The qualitative nature of the study limits the generalizability of the study findings and/or may not accurately reflect the perspectives of the general population of community pharmacists, although the maximal variation sampling strategy adopted was an attempt to ensure that participants that were sampled reflected the variety of community pharmacists working in practice. However, the demographic characteristics of participants in this study does not compare with the characteristics of pharmacists in actual practice, for example, the proportion of female participants were smaller when compared to the proportion of female community pharmacists on the GPhC register. However, the study did not aim to be representative of the demographic profile of community pharmacists in practice.

5.5.2 Summary of main findings

The main findings from interpretative analysis of the perspectives of community pharmacists in England and Scotland that participated in this study are discussed here. The broader implication of these findings is discussed in the general discussion chapter (Chapter 7). The discussion focuses on the themes and subthemes that emerged from the four broad summary structure from the IPA undertaken, and include; managing and supporting LTCs in community pharmacy; conceptualization
of self-care support in community pharmacy; operationalization of the core elements of self-care support; and factors influencing how LTCs are managed and supported in community pharmacy.

5.5.2.1 Managing and supporting LTCs in community pharmacy

The findings showed that there were no notable differences in the views of participants in England and Scotland despite the differences in the ways that community pharmacy LTC services are organised and delivered. Participants in this study encountered and interacted with patients with a wide range of single and multiple LTCs in their everyday practice. The main contractual services for LTCs – the MURs, NMS and CMS, in addition to dispensing and repeat dispensing activities provided the main opportunities to support patients. The overarching finding was that these services were predominantly medicines-focused, where patients were primarily supported to manage and make the best use of their medicines. Participants described other opportunities in community pharmacy to support patients with LTCs as lifestyle support services such as smoking and weight management interventions, health check services, prescription collection and delivery services, signposting and use of multi-compartment compliance aids (MCAs). However, it was found that these other services were fragmented and provided opportunistically, and were not part of a comprehensive package of care that targeted patients with LTCs. Many participants believed that supporting the use of medicines for patients with LTCs was the central component of their professional role. Studies that have examined community pharmacists’ self-perception of their professional role found that pharmacists viewed themselves, primarily as dispensers of medicines and not patient-centred practitioners. While this study did not extensively explore the nature of interaction and communication with patients during the provision of these services, other studies that have examined this found that the interaction were characterised by very brief, one-way communication where community pharmacist mostly used closed questions and focussed less on the patient on more the medicines.

5.5.2.2 Conceptual understanding of self-care support

This study showed that while community pharmacists had some general understanding of the theoretical principles of self-care of LTCs, they did not translate this to the systematic practice of self-care support. Self-care of LTCs was broadly described by participants as activities and behaviours that patients engaged in to develop the knowledge, understanding and skills to make informed decisions about their health, become more actively involved with healthcare professionals, taking more responsibilities for the overall health and becoming more independent of healthcare professionals. However, participants used mainly medicines-related examples such as self-administering medicines, adherence and resolving medication problems to describe how patients engage in self-care activities and behaviours. In describing their understanding of self-care support however, almost all participants suggested that self-care support in community pharmacy was
primarily about providing patients with the information and advice to enable them to undertake self-care. The type and nature of the information and advice provided was explored in more detail during discussion around self-care information and advice as an element of self-care support. However, the key finding was that participants conceptualised self-care support of LTCs primarily as the provision of information and advice about medicines use through patient education.

While information and advice helps to improve patients' knowledge and understanding on how to care for their LTCs, there is clear evidence that providing information and advice alone is insufficient in effecting and sustaining behaviour change. Many successful self-care support interventions are grounded and underpinned by theories of human behaviour and incorporate active behaviour change techniques such as cognitive behavioural therapy, behaviour change counselling and motivational interviewing in helping to change patient behaviour. Self-care support interventions utilise these targeted behaviour change techniques to ensure that information and advice provided to patients results in improved self-efficacy, which in turn results in behaviour change. Some participants in this study discussed certain instances where they used behaviour change techniques to provide information and advice to patients, for example in the use of goal-setting and proactive follow-up when providing lifestyle services like stop smoking interventions. While they provided anecdotal evidence of the success of these interventions, it appeared that they did not apply these techniques in their routine practice and only used them because it was part of a service.

5.5.2.3 Operationalising self-care support of LTCs

This study explored how the theoretical framework of the five core elements of self-care support were described and operationalised by participants. In general, participants appeared to freely discuss the core elements of self-care information and advice and collaborative care planning, while probes and cues were used extensively to encourage them to discuss self-care skills training and support, self-care support networks and self-care technologies. It was found that operationalisation of self-care support of LTCs in community pharmacy was more opportunistic and reactive, rather than systematic and proactive.

Self-care information and advice

Self-care information and advice provided to patients with LTCs focused predominantly on the use of medicines while other information and advice, for example to improve lifestyle, was provided opportunistically. Furthermore, it also appeared that the approach taken by community pharmacists to provide information and advice to patients during a consultation followed the didactic, traditional patient education approach, rather than the patient-centred, self-care education approach. This approach has been conceptualised by some authors as being a transmission model, rather than a transaction model. This study also found that participants believed that patients would have
already been provided with self-care information and advice by other healthcare professionals (mainly doctors and nurses), hence, their roles was to reinforce this information and advice.

**Self-care skills training and support**

Skills training and support is an aspect of self-care education where patients are actively supported to learn and acquire specific skills that empower them to live and care for their LTCs. Some self-care support interventions focus on training and supporting patients to develop certain skills such as self-monitoring skills, coping skills to deal with psychosocial and emotional issues, self-monitoring changes in LTC signs and symptoms, self-administration of certain medicines such as inhalers, and medicines adherence and ability to effectively use prescribed medicines. While the self-care skills required by patients vary according to their individual needs, the findings suggests that community pharmacists provide limited skills training and support in their routine interactions with patients. There may however be opportunities that community pharmacists can take to support patients, for example, when they supply patients with self-monitoring devices, they could take the opportunity to support patients in the correct use of the device as well as in ongoing monitoring and interpretation of the test results. Similarly, it was found that other types of skills training and support, such as helping patients with their inhaler technique, are mostly undertaken opportunistically rather than proactively in community pharmacy. There is evidence of incorporating skills training and support in inhaler techniques into routine community pharmacy, through the commissioning of services such as the Greater Manchester Community Pharmacy Inhaler Technique Service. However, in the report on the evaluation of the service, it appears that the focus of this service is more about the inhaler itself (medicines-focussed), rather than on other important determinants of good asthma control (patient-centred care). This further reinforces the finding that community pharmacists’ approach to providing self-care support is focused on how the medication worked for the patients (medicines-focussed approach), rather than on how patients used their medicines (patient-centred approach).

**Self-care support networks**

Patients’ self-care support networks can be divided into three; personal communities such as family/carers, friends, peers; non-healthcare professional support such as social workers, health trainers; and voluntary and community groups that includes self-help support groups such as the Chronic Disease Self-Management Programme (CDSMP) and the Expert Patient Programme. Patients’ personal communities, particularly family member/carers were discussed by participants in this study. Community pharmacists in this study indicated that they interacted with patients’ family members when they accompanied patients to a pharmacy consultation and many suggested that they valued and encouraged the roles that family members played such as; providing practical support like collecting dispensed medicines, supporting patients with medications use and helping patients to make lifestyle changes. However, with community and voluntary self-help groups, the key finding was that there was a very low level of awareness and engagement with these groups. For example, while
community pharmacists in England are contractually required to refer and signpost patients with LTCs to such groups, it was found that participants rarely did this or tended to do so in a passive approach rather than in a systematic way. Patients’ support networks are now increasingly being recognised as an important element of self-care support of LTCs, although it has not been given as much consideration in research when compared to other elements.442

**Self-care technology**

A wide range of technologies to improve self-care of LTCs is emerging and healthcare professionals are being encouraged to play a key role in supporting patients to engage in these technologies.501 These technologies include information technologies,156 mobile applications ('apps'),502 web-based tools,444 and assistive, ‘smart’ home technologies.503 This study found that in community pharmacy, there was even less awareness and use of any of these innovative technologies to support self-care of LTCs, although many participants demonstrated the willingness to learn more about how these technologies could be incorporated into community pharmacy. There was however a general consensus from participants that these technologies were a thing for the future and not for current community pharmacy practice. Studies that have examined the use of these technologies in routine primary care practice are limited504 but evidence is emerging.444, 503, 506 A systematic review of the efficacy of mobile phone interventions to improve medication adherence found that the use of text-messaging improved medicines adherence although it was noted that there is a need for more rigorous studies.502 In 2005, the Department of Health published a report that reviewed existing diagnostic, monitoring and assistive tools, devices technologies and equipment to support self-care.508 This showed that while there were a myriad of self-care technologies, technologies that provide continuous monitoring of LTCs were the most promising although these were complex and expensive with little evidence of collaborative research, most of which were small scale pilot studies.508 Community pharmacy may have an opportunity to take a lead role in the use of self-care technologies to support patients with LTCs although this will require community pharmacy to develop evidence of interventions that work.

**Collaborative care planning**

Collaborative care planning refers to the collaborative interaction between patients and healthcare professionals where the perspectives and expertise of both are shared and used to provide personalised care and support.416 Collaborative care planning is an interactive, cyclical process that includes action planning and documentation, goal setting, proactive follow-up.48, 416 The key finding from this study was that collaborative care planning is not yet seen as part of community pharmacy practice in the management of LTCs. Written care plans were viewed as the purview of other healthcare professionals such as GPs while involvement and partnership with patients was viewed from a paternalistic perspective, where participants provided instructions to patients, rather than partner with them. Goal-setting and proactive follow-up was not a routine practice except when providing a service or intervention such as the stop smoking service and the NMS that has a goal-setting and/or
follow-up element built into it. However, a recent study provided evidence that pharmacists can help patients with asthma to set and achieve their asthma management goals if collaborative goal setting is incorporated into community pharmacy’s routine strategy for managing asthma.\textsuperscript{177} Collaborative care planning is at the heart of the framework of the core elements of self-care support, and this reflects its central role in bringing together all the other elements at the point of interaction between the patient and the healthcare professional. Many other models of care of LTCs, such as the Five A’s of self-management support\textsuperscript{48} and the ‘house of care’ model\textsuperscript{116} include collaborative care planning as their central component.

5.5.2.4 Factors influencing how LTCs are supported in community pharmacy

Community pharmacy as a healthcare profession is well-recognised as having the potential to provide more support to people LTCs, although many barriers that hinder its potential are well-acknowledged.\textsuperscript{167, 171, 211, 212, 534} Participants in this study identified and discussed a number of factors - mostly barriers, that influenced how they managed and supported patients with LTCs in community pharmacy. These factors were not limited to providing self-care support, but covered their general approach of interacting with patients with LTCs. Most participants identified and described generic barriers such as lack of time, financial incentives and increased workload. However, a closer analysis of the data provided more insights into more specific factors that underlined these generic barriers. These include; priority accorded to dispensing in community pharmacy; deficiencies in the structure and remuneration in the current NHS CPCF; working relationship with GPs; limited access to patient information; inadequate staffing levels and skill mix; inadequate recognition and reward system; and low patients’ expectations and lack of awareness of community pharmacy’s potential. Most of these barriers and challenges are not new and are well-recognised, having been described extensively in a wide range of qualitative and quantitative literature that have examined the perceptions of community pharmacists, other healthcare professionals and patients/customers on services and interventions provided by community pharmacy.\textsuperscript{195, 236, 466, 535-539} Some authors have suggested that community pharmacists’ self-perception as “dispensers of medication” are important barriers to practice change in community pharmacy.\textsuperscript{529} The findings from this study support this view that there is a need for a radical shift in this cultural orientation in community pharmacy, which require a shift from medicines-focussed professionalism to patient-centred professionalism and re-professionalization of the pharmacy profession.\textsuperscript{540}

6.1 Introduction
This chapter presents Work Stream Three which was a cross-sectional study that surveyed a sample of 10,000 community pharmacists in England, conducted between August and November 2014. The preceding chapter provided the findings from qualitative interviews with a small sample of community pharmacists where the concept of self-care support in the management of LTCs in community pharmacy was explored extensively. This chapter presents the study that was informed and developed from the findings of these qualitative interviews in combination with the extant literature on self-care support that led to the development of a survey instrument (online questionnaire) for community pharmacists.

6.2 Aim and objectives
The aim of this survey study was to triangulate and elaborate on the themes and concepts that emerged from the pharmacists’ interviews to provide a more generalizable and insightful understanding of the concept of self-care support of LTCs in community pharmacy. In order to meet this aim, the following objectives were set;

1. To examine the current nature of the interactions and support being provided by community pharmacy to people with LTCs
2. To investigate how community pharmacists conceptually understand the key principles of ‘self-care’ in relation to the management of LTCs
3. To identify and examine the self-care support activities that are important to community pharmacists and the extent to which they engaged in these activities
4. To identify the barriers and enabling factors to providing self-care support in community pharmacy

6.3 Methods
The methods described in this section complement the methodological justification of the quantitative design described in section 2.5.2.2 in Chapter Two. This section provides the methodological procedure and a justification of some of the key decisions undertaken in this study.
6.3.1 Study design

This study employed a cross-sectional design using survey methodology (online) to investigate community pharmacists' views on concepts and themes relating to current practices of supporting LTCs, conceptualisation and operationalization of self-care support and factors influencing how self-care support is provided in community pharmacy. The cross-sectional survey design is underpinned by the philosophical perspective of objectivism and positivism where reality is viewed as external to the researcher and must be investigated through the use of deductive processes and empirical observations. The design of this study took this perspective in order to illuminate the qualitative findings from the pharmacists' survey by exploring relationships and association between different themes and concepts (variables), allowing for a clearer and more complete understanding.

6.3.2 Study population

The population included in this study were community pharmacists who were domiciled in England. Community pharmacists in England alone were included in this study due to a combination of three reasons. Firstly, the findings from the qualitative study in Work Stream Two indicated that the views of community pharmacists in England and Scotland were very similar. Secondly, the marked differences in the services within the contractual frameworks (e.g., the MUR, NMS and CMS) in the two countries will require undertaking separate surveys (including the design and analysis of separate instruments), which were considered too resource-intensive and not pragmatic within the timeframe of the research. Thirdly, the researcher could only obtain permission to use the database of community pharmacists in England only within the timeframe and logistical capacity of the research programme.

The study population of community pharmacists in England was determined based on the database of registered pharmacists held by the General Pharmaceutical Council (GPhC) in England. The GPhC holds a register of about 45,000 pharmacists with registered addresses in Great Britain (England, Wales and Scotland). About 82% (~36,900) of pharmacists on the GPhC register are domiciled in England. Results from the most recent survey of pharmacists registered with the GPhC found that about 72% of pharmacists indicated that their main job setting was in the community pharmacy. Hence the estimated total number of the population eligible to be included in this study was approximately 26,600 practising community pharmacists domiciled in England. The researcher did not have direct access to the GPhC database, but was able to obtain permission to use the database held by the Centre for Pharmacy Postgraduate Education (CPPE) based at the Manchester Pharmacy School, the University of Manchester. The CPPE offers continuing professional development opportunities for all pharmacists providing NHS services in England and had access to the GPhC database.
6.3.3 Sample size

The study's sampling frame was from the estimated 26,600 practicing community pharmacists in England on the GPhC register held by the CPPE. When considering the sample size for this survey, it was determined that it would be difficult to calculate a formal sample size because there were several variables of interest for which no data exists on their distribution in the community pharmacists’ population. However, a sample size calculation based on the assumption of an overestimated response distribution of 50% and a 5% margin of acceptable error and 95% confidence level gave a sample size of about 380 participants. A study that undertook a national online survey of community pharmacists, sampled 10,000 pharmacists and obtained about 700 responses (7% response rate). Hence, in considering the final sample size for this study, it was decided that a random sample of 10,000 participants would provide a large enough sample size to generate the minimum responses to meet the assumptions in the sample size calculation. The final sample size was reviewed and agreed by the researcher’s supervisory team as well as by an independent expert based in the Centre for Biostatistics, Institute of Population Health at the University of Manchester.

6.3.4 Sampling strategy

A single-stage sampling procedure was employed where the sample was drawn only from the GPhC register held by the CPPE. The study included 10,000 participants from the GPhC database that had indicated that they worked in community pharmacy, and had provided their email addresses to the CPPE. The participants’ selection process was undertaken using a probabilistic process where each individual working in community pharmacy and with valid email addresses had an equal chance of being selected. The randomisation and selection process was undertaken by an IT specialist working with the CPPE who had experience in using the CPPE database for research.

6.3.5 Data collection

6.3.5.1 The survey instrument (“Questionnaire design”)

The survey instrument (Appendix 18) used in this study was informed and iteratively designed and developed from a synthesis of the findings from the qualitative analysis of interviews with community pharmacists with the core elements of self-care support of LTCs and the wider literature on ‘self-care’ and ‘self-care support’. Some key texts on survey methodology were consulted before and during the process of designing and drafting the questions in the questionnaire. The first step in designing the survey instrument was to conduct a literature search to identify and review existing instruments and scales that could be adapted to design and development of the questionnaire in this study. This search found an existing instrument the Healthcare Professional Patient Assessment of
Chronic Illness Care (HCP-PACIC) used in the Diabetes Attitudes Wishes and Needs 2 (DAWN2) study. The HCP-PACIC consisted of some statements (see section D) that were found relevant to address some of the objectives of this study. Using and adapting statements and questions from other research studies is acceptable and encouraged in survey research. It was however decided that a questionnaire that consisted of questions to address the study’s specific aim and objectives should emanate from the empirical work that had been undertaken in this programme of work. The questions in the questionnaire were drafted and constructed by following the guidelines prescribed in key texts by Blair, Czaja and Blair (2013) and Dillman (2008) to improve the questionnaire in terms of its language, wording and length, as well as in the visual presentation of the questions.

The questionnaire consisted of a combination of different question types and format in order to make it interesting and to encourage participants to respond and complete it. The online survey used ‘forced-response’ and ‘forced-choice’ features in the questionnaire. Forced-response relates to the overall design of the questionnaire and meant that respondents could not progress to the next page of the survey unless they provided a response to a particular question/item. The forced-response option was used to ensure that respondents provided a response to every questions/items, although it was not applied to questions that required a text entry. Forced-choice on the other hand relates to specific questions, where respondents were forced to provide a specific answer and are not given a specific option such as ‘no opinion’, ‘don’t know’, ‘not sure’ or ‘non-applicable’. The forced-choice feature was only applied to sections A, C, D and F (see questionnaire in Appendix 18).

The questionnaire consisted of seven sections;

- Section A: Screening question
- Section B: Supporting people with LTCs in community pharmacy
- Section C: Understanding of self-care
- Section D: Self-care support activities in community pharmacy
- Section E: Factors affecting ability to provide self-care support in community pharmacy (Barriers and enablers).
- Section F: About you (Respondents’ demography)
- Section G: Additional comments

**Section A: Screening question**

This section consisted of a screening question “Do you currently work in community pharmacy?” to ensure that only respondents that worked in community pharmacy were able to proceed with completing the questionnaire.

**Section B: Supporting people with LTCs in community pharmacy**

This section aimed to understand the views of respondents on the ways they interacted with and supported people with LTCs in their community pharmacy practice. The items in this section were
informed by relevant discussions in the qualitative interviews with community pharmacists. A text entry was included at the end of this section to allow respondents to include any additional comments about other opportunities they took to support people with LTCs.

**Section C: Understanding of self-care**

This section aimed to examine how respondents perceived the term ‘self-care’ as a concept in the care of LTCs. The section consisted of a series of statements about the core principles of self-care with respondents required to indicate their extent of agreement or disagreement with 10 statements using a 5-point Likert-like scale. The statements were informed by the wider literature as well as the findings from the pharmacists’ interviews.

**Section D: Self-care support activities in community pharmacy**

This section aimed to understand the self-care support activities respondents think are important for them to be engaged in (Q6), and the current self-care support activities that they were already providing to patients with LTCs (Q7). The statements consisted of a series of statements that reflected the theoretical framework of the five core elements of self-care support of LTCs. The section was informed and developed from the analysis of the qualitative interviews with community pharmacists as well as from the scoping of the literature that identified the core elements of self-care support of LTCs. In addition, some of the statements were adapted from the HCP-PACIC instrument from the DAWN-2 study.

**Section E: Factors affecting ability to provide self-care support in community pharmacy**

This section aimed to identify what participants perceived as the barriers and enablers to providing self-care support of LTCs in community pharmacy informed from the pharmacists’ interviews. It included a list of barriers and enablers with respondents required to select their top three barriers and enablers respectively. A text entry box was included (separately for barriers and enablers) to allow respondents to comment on their reasons for selecting these barriers and enablers.

**Section F: About you**

This section collected demographic data from participants in order to examine if there were any characteristics that influenced how participants responded to the different sections of the questionnaire.

**Section G: Additional comments**

Respondents were asked to use a text entry box to provide any additional comments they might have on self-care support of LTCs in community pharmacy.
6.3.5.2 Pretesting and pilot work

The early drafts of the questionnaire were reviewed and revised extensively and underwent a number of iterations. The early iteration and discussions with supervisors focussed on the relevance of each question/section to the study objectives and whether the questions were clearly worded and structured. Subsequent discussions and iterations focussed on how each question was phrased and arranged and the general flow and formatting of the questionnaire. Decisions were made to reduce, restructure and remove the content of the questionnaire at all stages during its development. The survey was initially planned and designed to be a paper-based postal questionnaire but was later adapted as an online questionnaire with the aid of the Qualtrics™ survey software. The final draft of the paper questionnaire was piloted with two practicing community pharmacists and two pharmacy practice researchers at the Manchester Pharmacy School with experience in questionnaire design and development. The participants involved in the pilots were asked to provide feedback according to the following criteria: 558

- How long it took to complete the questionnaire
- The flow of the questions
- Whether or not the questions were clearly defined
- Whether or not the questions were relevant to community pharmacists
- Whether the scale fitted the question asked
- Information on the filter questions, i.e. whether or not participants in the pilot understood where to go after each question
- Whether or not any demographic information was missing
- Whether or not there were any grammatical errors.

The final draft of the questionnaire on the online format was then piloted with one PhD candidate conducting pharmacy practice research who had experience with the design and use of the online questionnaire software. All suggestions and amendments to the questionnaire during the piloting stage were discussed and agreed by the supervisory team before it was prepared to be administered to respondents. It was estimated that the questionnaire would take approximately 15 to 20 minutes to complete.

6.3.5.3 Online survey mode

This study aimed to examine the views of a large sample of community pharmacists registered in England. The mode of data collection in cross-sectional surveys may involve the use of postal surveys, online surveys or both (mixed-mode methods).546 It was decided to administer this questionnaire using the online mode only two reasons. Firstly, a comprehensive electronic database (email) of practising community pharmacists in England exists which has been used effectively to communicate with community pharmacists in England, as well as used to capture their views in previous studies. Secondly, the majority of community pharmacists in England now have access to
the internet and emails which would mean that a significantly large sample could be reached easily with the click of a button, providing quickness and ease of administering the survey with minimal use of financial resources when compared to a postal survey.\textsuperscript{547}

6.3.5.4 Survey administration procedure

The online questionnaire was designed and managed using the Qualtrics™ Research suite software. Participants in the study sample were invited by email (Appendix 19) to take part in the study by clicking on a link to the online questionnaire to complete. The study’s participant information sheet (Appendix 20) was attached to the email. The initial mail out was undertaken in September 2014 followed with two reminders sent at two-week intervals (Appendix 21). Participants were made aware of their choice of taking part in the study as well as the confidentiality and data protection of their responses (see email invitation and participant information sheet in Appendix 19 and 20 respectively). Completion of the survey was deemed as consent to be part of the study. The responses from participants who completed the online questionnaires were collected and collated from the Qualtrics™ software directly into the IBM SPSS™ statistics software (Version 20) spreadsheet.

6.3.6 Data analysis

6.3.6.1 Data screening

An initial screening of the data was done according to the recommendation of Tabachnick and Fidell,\textsuperscript{559} which included checking for accuracy of data entry; dealing with missing data; and assessing the data to explore if they met necessary assumptions. Errors in data entry were minimised through the use of the Qualtrics™ software to build and administer the survey since there was no need to manually enter the data into a spreadsheet where errors could have occurred. The Qualtrics™ software has specialised tools which were used to screen and check for consistency of coding in the data, as well as to conduct some preliminary descriptive analysis of the data. The raw data was then exported into the SPSS spreadsheet for further analysis.

6.3.6.2 Incomplete/missing data

Screening of the survey data indicated that some variables were not completed. These were coded as ‘missing’ data and data analysis of cases with incomplete data was undertaking by deleting those cases ‘pairwise’, meaning that cases with missing data for each variable being examined were excluded from the analysis, whereas, cases that had complete data for each variable being examined were included in the analysis. This is based on the assumption that the data are missing completely
at random (MCAR).\textsuperscript{560} This is a conventional method of dealing with missing data to reduce the impact that a ‘listwise’ deletion (complete exclusion of a case with a missing value) could have on the sample size (power) of the analysis.\textsuperscript{560}

6.3.6.3 Descriptive statistics

The purpose of the descriptive statistics presented was to explore and describe the basic features of the data generated from the survey. The analysis provides the summaries of the measures used to describe each variable in the data. Some variables were transformed where appropriate to provide more insight into the data and to allow for ease of analysis and interpretation. The transformation undertaken are described under the relevant results section. A range of univariate statistics was employed depending on the type of variable. The two main types of variables generated from this survey study were categorical variables and continuous (interval) data.

- **Categorical variables**: The vast majority of variables from the survey were categorical (nominal and ordinal) and these are explored and presented using frequency distribution tables. The tables presented respondents’ views as proportions (percentages, rounded up to one decimal place). The median and/or mode values of the distributions were used as the measure of central tendency and were highlighted in the tables.

- **Continuous variables**: Only two continuous variables were generated from the survey data and these were explored and described using univariate statistics. The means, standard deviations (SD) and range were used to provide a summary for each continuous variable.

6.3.6.4 Additional statistical analysis and tests

In addition to the descriptive univariate statistics, some additional statistical analysis and tests were undertaken to further explore and provide some more insight into the data. The main purpose of the statistical analyses and tests undertaken was to compare the relationship and associations between two different variables in the data (bivariate analysis) with the aim to providing a better understanding of the key concepts and themes of interest. The type of bivariate analysis undertaken was dependent on whether the variables met the assumptions for parametric tests. Analysis was undertaken to determine if the data met the three key assumptions of a parametric data as described below.\textsuperscript{561}

1) Normal distribution: using a histogram with a normal distribution curve to visually check if the data conformed to a normal distribution

2) Test of normality: A Kolmogorov-Smirnov (K-S) test of normality
3) Test of homogeneity of variance: Using the Levene’s test of homogeneity of variance

Where the data did not meet these assumptions, non-parametric tests were used. In all of the statistical tests undertaken, the significance level was set at $p=0.05$. The following statistical tests were used in the data analysis in this survey study:

- **Pearson’s chi-square test**: This test used cross-tabulations to examine the relationship between two categorical variables. The Pearson’s Chi-Square statistics ($X^2$), the degree of freedom (DF) and the p-values are presented to interpret the results of the analysis. The key assumption of the Chi-Square test is that the expected frequencies should be greater than five. Analyses that did not meet this assumption are not included in the findings.\(^{561}\)

- **The Wilcoxon Signed Ranks Test**: This is a non-parametric statistical test used to compare the scores from two dependent variables from the same participant. The Wilcoxon Signed Rank Tests provides two important test statistics, the z-score and the corresponding p-value, to help in interpreting the findings. In addition, an effective size (‘r’) can be calculated using the formula $r = z/\sqrt{N}$, where $z$ is the test statistics (z-score) and $N$ is the number of total responses.

- **Mann-Whitney test**: This is the non-parametric equivalent of the independent t-test and is used to compare the relationship between two independent variables. The test produces a Mann-Whitney test statistic $U$ with a corresponding p-value used to interpret the results of the analysis.

- **One-way ANOVA test**: This is a parametric test used to compare the mean difference of three or more independent variables, which produces a test statistics (F-statistics) and a corresponding p-value used to interpret the results of the analysis.

### 6.3.6.5 Qualitative data

The survey generated qualitative data from the free text boxes in the different sections of the survey. These qualitative data were transferred into a database using NVIVO® software and were analysed using content analysis. Content analysis adheres to a naturalistic paradigm that requires interpretation of meaning from the content of textual data.\(^{562}\) It is a flexible method of analysing textual data that results in a simplistic description of data.\(^{563}\) The directed approach to content analysis was used in this study with the aim of conceptually validating and/or extending the understanding of the variables of interest.\(^{562}\) The process of the analysis was undertaken by initially using a deductive approach to code the comments generated under pre-existing categories and themes. In this case, the comments provided in the text entry box questions/items were coded under each questions/responses, for example, comments relating to ‘access to patient medical records’ as a
barrier where coded as a broad category. However, the flexible nature of content analysis also allowed for an inductive approach to generate new themes, for example, new themes were identified from the free text entry box in section B (additional comments on opportunities to provide self-care support) as well as in the additional comments box in section G. The analysis process then continued by reading through the transcripts produced under the initial codes generated from the deductive and inductive analysis to get more familiar with the data and to identify any additional themes, and/or merging and recoding existing themes.

6.4 Results

6.4.1 Presentation of findings

The survey response rate is initially presented, followed by the descriptive and inferential statistical analyses undertaken for the different sections and subsections of the questionnaire. The descriptions of the findings are presented in the following order:

- Section A: Background
- Section F: About you (Respondents demography)
- Section B: Supporting people with LTCs in community pharmacy
- Section C: Understanding of self-care
- Section D: Self-care support activities in community pharmacy
- Section E: Barriers and enablers
- Section G: Additional comments

6.4.2 Survey response rate

In total, 609 responses to the survey were received providing a response rate of 6.1%. Nine of these were excluded from further analysis as they selected the option “No, I do not work in community pharmacy” to the screening question at the beginning of the survey. Of the remaining 600 responses, there was a marked decline in the rate of completion of the survey as respondents moved through the different sections of the survey. The total number of respondents that completed all sections of the survey (i.e. with no missing values) was 334. The rate of completion of the different sections of the survey is shown in table 6.1 below.
Table 6.1: Survey completion rate by sections of the questionnaire

<table>
<thead>
<tr>
<th>Section</th>
<th>Total responses</th>
<th>Completion rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section A</td>
<td>609</td>
<td>100%</td>
</tr>
<tr>
<td>Section B</td>
<td>455</td>
<td>75.8%</td>
</tr>
<tr>
<td>Section C</td>
<td>419</td>
<td>69.8%</td>
</tr>
<tr>
<td>Section D</td>
<td>353</td>
<td>58.8%</td>
</tr>
<tr>
<td>Section E</td>
<td>339</td>
<td>56.5%</td>
</tr>
<tr>
<td>Section F</td>
<td>334</td>
<td>55.6%</td>
</tr>
</tbody>
</table>

6.4.3 Section A: Background/screening question

6.4.3.1 A1. Do you currently work in community pharmacy?

Section A is the screening question taken by respondents at the start of the survey. In total, 600 respondents (98.5%) indicated that worked in community pharmacy suggesting that the CPPE database used was reliable. Of these, 354 (58.1%) indicated that they worked full time (> 32 hours per week), 132 (21.7%) part time (< 32 hours per week) and 114 (18.7%) with no set hours (e.g. locum/sessional work).

6.4.4 Section F: Demography/respondent characteristics

Section F presents the demographic characteristics of respondents. Of the 334 respondents that completed this section, 232 (69.5%) were females. The mean length of time that respondents had worked in community pharmacy was 18.2 years (SD = 12.6 years; range: 1 month – 52 years). The length of time that respondents had been working in community pharmacy in years was used a proxy for their level of experience in practice, which was then used in subsequent statistical analysis. About three-quarters of respondents (n=242, 67.1%) indicated that they did not have any additional qualifications. Of the remaining, 23.9% (n=80) indicated that they had either the supplementary and/or independent prescriber qualifications while 4.8% (n=16) indicated that they had other qualifications such as a PhD, other postgraduate or undergraduate degree and the OSPAP. The remaining demographic characteristics of respondents relating to age, job role, pharmacy setting, pharmacy location and geographical location are described below:
**Age (Age-group)**

There were eight respondents (2.4%) aged over 65 years and 13 (3.9%) under 25 years old. There were more respondents aged between 45-54 years (n=89, 26.7%), followed by those in the 25-34 years (n=81, 24.3%), the 35-44 years (n=75, 22.5%) and the 55-64 years (n=68, 20.4%) age groups.

**Community pharmacy setting**

Most respondents (n=143, 42.8%) indicated that they worked in multiple pharmacies (200 outlets or more) while 109 (32.6%) respondents indicated that they worked in independent pharmacies (5 outlets or fewer). Of the remainder, 34 (10.2%) indicated that they worked in large chain pharmacies (between 20 – 200 pharmacies), 25 (7.5%) in supermarkets and 23 (6.9%) in small chain pharmacies (between 5 – 20 pharmacies).

**Job role**

The survey allowed respondents to make multiple selections on their job roles. From a total of 379 responses obtained, 114 (30.1%) respondents indicated that they were pharmacy managers while 101 (26.7%) indicated that they were locum pharmacists. Other job roles selected by respondents included relief pharmacists (n=49, 12.9%), second pharmacist (n=33, 8.7%), pharmacy owners (n=25, 6.6%), superintendent pharmacists (n=24, 6.3%), area manager (n=1, 0.3%) and ‘other’ (n=32, 8.4%).

**Pharmacy location**

This item in the survey also allowed respondents to make multiple selections. Of the 369 responses obtained from respondents, almost half of respondents (n=175, 47.5%) indicated that they worked on the high street, 72 (19.5%) worked in a health centre/GP practice, 28 (7.6%) worked in a shopping centre and 26 (7.1%) worked in a retail park. Some respondents (n=68, 18.4%) indicated that they worked in ‘other’ location.

**Geographical location of pharmacy**

The majority of respondents indicated that they worked in towns (n=138, 41.3%), while the remainder indicated that they worked in suburban areas (n=84, 25.2%), cities (n=61, 18.3%) and villages/rural areas (n=43, 12.9%). A few respondents (n=8, 2.4%) indicated that they worked in ‘other’ geographical locations.

**6.4.5 Section B: Supporting people with LTCs in community pharmacy**

This section presents how respondents indicated that they currently managed and supported people with LTCs in their everyday practice. The questions here were designed to collect and gather data to capture an overall picture of the current practice and approach to managing LTCs in community pharmacy.
6.4.5.1 B1. How are patients’ prescribed medicines supplied?

Respondents were asked “In the community pharmacy where you work, please estimate the proportion of patients with LTCs that receive their prescribed medications via the following means.” Table 6.8 below presents respondents’ estimation of the proportion of their patients that receive their prescribed medicines from their community pharmacy; whether by collecting it in person, via home delivery or via care/nursing home services.

<table>
<thead>
<tr>
<th>Table 6.2: How are patients’ prescribed medicines supplied?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Collection in person</td>
</tr>
<tr>
<td>0</td>
</tr>
<tr>
<td>(0%)</td>
</tr>
<tr>
<td>Delivered to home</td>
</tr>
<tr>
<td>(14.2%)</td>
</tr>
<tr>
<td>Care/nursing home</td>
</tr>
<tr>
<td>service</td>
</tr>
</tbody>
</table>

The modal distributions are highlighted in the ‘dark pink colour’ and this showed that respondents indicated that ‘about three-quarters’ of their patients collect their prescribed medicines in person, ‘about one-quarter’ gets delivered their prescribed medicines at home and ‘none’ provide care/nursing home services. Further examination of the data in this variable was undertaken to validate the responses. For example, of the 189 respondents who indicated that “three-quarters” of their patients collected their prescribed medicines in person, about 95% (n=180) of them indicated that either “about one-quarter” or “none” were delivered to home or received care/nursing home services respectively. Hence, the remaining 5% (n=9) that selected “about half”, “about three-quarters” or “All” to either delivered to home or care/nursing home services may be invalid responses.

6.4.5.2 B2: Pharmacy team member’s interaction with patients

Respondents were asked “To what extent do the members of your community pharmacy team have face-to-face (direct) contact or interactions with people with LTCs?” This required respondents to ‘guesstimate’ the proportion of time that members of their community pharmacy team have to contact
and interact with people with LTCs. Table 6.9 below shows that respondents indicated that all the team members in their community pharmacy have some face-to-face (direct) contact or interactions with people with LTCs. The median/modal response distribution (highlighted) showed that respondents indicated that the team members that had “most of the time” face-to-face contact and interactions with people with LTCs were pharmacists and medicines counter assistants. Whereas, the median response distribution for other team members was that they had contact and interact and interacted with LTC patients “some of the time”.

Table 6.3: Extent to which community pharmacy team members interact with LTCs patients

<table>
<thead>
<tr>
<th>Team Member</th>
<th>None of the time</th>
<th>A little of the time</th>
<th>Some of the time</th>
<th>Most of the time</th>
<th>Always</th>
<th>Not applicable (N/A)</th>
<th>Total Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pharmacist(s) (including yourself)</td>
<td>0 (0%)</td>
<td>25 (5.5%)</td>
<td>141 (31%)</td>
<td>222 (48.8%)</td>
<td>65 (14.3%)</td>
<td>2 (0.4%)</td>
<td>455 (100%)</td>
</tr>
<tr>
<td>Pre-registration pharmacist trainee(s)</td>
<td>34 (7.5%)</td>
<td>40 (8.8%)</td>
<td>75 (16.5%)</td>
<td>39 (8.6%)</td>
<td>12 (2.6%)</td>
<td>255</td>
<td>455 (100%)</td>
</tr>
<tr>
<td>Pharmacy technician(s)</td>
<td>19 (4.2%)</td>
<td>70 (15.4%)</td>
<td>138 (30.3%)</td>
<td>97 (21.3%)</td>
<td>23 (5.1%)</td>
<td>108 (23.7%)</td>
<td>455 (100%)</td>
</tr>
<tr>
<td>Accuracy checker(s)</td>
<td>41 (9%)</td>
<td>63 (13.8%)</td>
<td>85 (18.7%)</td>
<td>37 (8.1%)</td>
<td>15 (3.3%)</td>
<td>214 (47%)</td>
<td>455 (100%)</td>
</tr>
<tr>
<td>Dispensing/pharmacy assistant(s)</td>
<td>10 (2.2%)</td>
<td>71 (15.6%)</td>
<td>170 (37.4%)</td>
<td>145 (31.9%)</td>
<td>41 (9%)</td>
<td>18</td>
<td>455 (100%)</td>
</tr>
<tr>
<td>Medicines counter assistant(s)</td>
<td>9 (2%)</td>
<td>50 (11%)</td>
<td>99 (21.8%)</td>
<td>81 (17.9%)</td>
<td>6 (1.3%)</td>
<td>455 (100%)</td>
<td>455 (100%)</td>
</tr>
<tr>
<td>Delivery driver(s)</td>
<td>37 (8.1%)</td>
<td>102 (22.4%)</td>
<td>133 (29.2%)</td>
<td>77 (16.9%)</td>
<td>37 (8.1%)</td>
<td>69 (15.2%)</td>
<td>455 (100%)</td>
</tr>
</tbody>
</table>
6.4.5.3  B3: LTCs services and activities provided by community pharmacy

Respondents were asked “Which of the following activities are provided by the community pharmacy where you work, or where you most recently worked? (Please tick ALL that apply).” Table 6.10 below shows the types of LTC services and activities that respondents reported that they provided in the community pharmacy where they worked. Most respondents provided the main LTC services - the MUR (96%) and the NMS (92%), whereas few respondents provided activities such as anticoagulant monitoring (6%) and medication review – full clinical review, not MUR (7%). 92% (n=418) of respondents indicated that they provided both the MUR and NMS in their community pharmacy. In the ‘other (relating to LTCs)’ category (n = 67, 15%), the responses in the free text box came from 39 respondents. These responses included many non-LTCs activities/services such as vaccination/flu service vaccines, minor ailment service, EHC, etc.

Table 6.4: Type of LTC services and activities provided in community pharmacy (n=455)

<table>
<thead>
<tr>
<th>Service</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medicines Use Review (MUR)</td>
<td>436 (96%)</td>
</tr>
<tr>
<td>New Medicine Service (NMS)</td>
<td>419 (92%)</td>
</tr>
<tr>
<td>Supervised administration of prescribed medicines</td>
<td>324 (71%)</td>
</tr>
<tr>
<td>Stop smoking service</td>
<td>307 (67%)</td>
</tr>
<tr>
<td>Public health promotion</td>
<td>305 (67%)</td>
</tr>
<tr>
<td>Blood pressure checks</td>
<td>296 (65%)</td>
</tr>
<tr>
<td>Inhaler technique checks</td>
<td>262 (58%)</td>
</tr>
<tr>
<td>Blood glucose testing</td>
<td>167 (37%)</td>
</tr>
<tr>
<td>Care/Nursing home service</td>
<td>140 (31%)</td>
</tr>
<tr>
<td>Weight management service</td>
<td>121 (27%)</td>
</tr>
<tr>
<td>Other (relating to LTCs)</td>
<td>67 (15%)</td>
</tr>
<tr>
<td>Out of hours service (access to medicines)</td>
<td>57 (13%)</td>
</tr>
<tr>
<td>Medication review (full clinical review - not MUR)</td>
<td>30 (7%)</td>
</tr>
<tr>
<td>Anticoagulant monitoring</td>
<td>29 (6%)</td>
</tr>
</tbody>
</table>
Additional statistical analysis

The variable – the type of LTCs services and activities provided in community pharmacy, was transformed to determine the number of LTC services and activities that individual respondent indicated that they provided. This was undertaken by computing a new continuous variable which counted the number of LTCs services and activities selected by each respondent to provide the total number of services/activities provided in community pharmacy by each respondent. It was found that the mean number of LTC services and activities provided was 6.5 (range: 1 – 13, SD 2.2) and no respondents indicated that they provided all 14 of the LTC activities and services listed. The statistical tests to determine if this variable met the parametric or non-parametric assumptions were undertaken. (see section 6.4.4). The findings showed that the variable showed a fairly normal distribution, hence it was determined that the data was sufficient enough to meet the assumptions of parametric analysis.

Bivariate statistical analysis (one-way ANOVA) was then undertaken to examine if there were any associations between the number of LTC services and activities provided and some demographic characteristics that were considered important. These demographic characteristics were – community pharmacy setting (multiples versus independents), pharmacy location (high street versus health centre/GP surgery) and geographical location (rural areas versus city centre). These demographic characteristics were considered important because of the findings from the interviews with pharmacists as well as patients, where it was found that the pharmacy setting, location and geographical areas could affect how self-care support was provided.

The findings from the one-way ANOVA undertaken showed that there were no statistically significant relationship between the number of LTCs services and activities provided by respondents when compared to most of the demographic variables tested (P>0.05) with the exception of geographical location of respondents. It was found from the one-way ANOVA that there was a statistical significant relationship between the number of LTC services/activities provided and respondents’ geographical location. \( F = 2.688, \text{p}=0.047 \). Post-hoc tests suggests that statistically significant mean difference in the number of LTC services/activities provided was between respondents that worked in the city compared to those that worked in the village/rural area (\( \text{p}=0.044 \)). This finding is further depicted in the error bar plot in Figure 6.3 below, showing that the mean number of services increases from village/rural areas (5.7, range 1-10) to suburban areas (6.4 (range: 2-10), to towns (6.6, range 1- 13) to cities (6.9, range 3 – 12).
6.4.5.4 B4: Opportunities taken to support patients with LTCs

Respondents were asked “Given the time and resources available to you, how often do you speak with your patients about how they live with, and care for their LTCs.” Respondents’ views are presented in Table 6.11 below. These opportunities were assessed by asking respondents about how often they speak with patients with LTCs about living and caring for their LTCs when undertaking/providing certain routine tasks in their community pharmacy. The modal distribution of the responses (highlighted) indicate that respondents “always” took the opportunity during a MUR (70.9%) and NMS (55.0%) consultation, whereas, they did this “frequently” when providing a lifestyle intervention (36.5%), health check/monitoring activity (32.0%) or when handing out a new medication (39.7%). However, respondents indicated that they only “sometimes” speak with patients when handing out regular medications (49.8%) to patients.
### Table 6.5: Opportunities taken to interact with and support patients with LTCs

<table>
<thead>
<tr>
<th>Tasks/activities</th>
<th>Never</th>
<th>Seldom</th>
<th>Sometimes</th>
<th>Frequently</th>
<th>Always</th>
<th>Total Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>When handing out a regular medication</td>
<td>7</td>
<td>77</td>
<td>225</td>
<td>117</td>
<td>26</td>
<td>452</td>
</tr>
<tr>
<td>(1.5%)</td>
<td>(17%)</td>
<td>(49.8%)</td>
<td>(25.9%)</td>
<td>(5.8%)</td>
<td>(5.8%)</td>
<td></td>
</tr>
<tr>
<td>When handing out a new medication</td>
<td>1</td>
<td>13</td>
<td>81</td>
<td>180</td>
<td>178</td>
<td>453</td>
</tr>
<tr>
<td>(0.2%)</td>
<td>(2.9%)</td>
<td>(17.9%)</td>
<td>(39.7%)</td>
<td>(39.3%)</td>
<td>(39.3%)</td>
<td></td>
</tr>
<tr>
<td>When undertaking a MUR consultation</td>
<td>3</td>
<td>2</td>
<td>32</td>
<td>91</td>
<td>312</td>
<td>440</td>
</tr>
<tr>
<td>(0.7%)</td>
<td>(0.5%)</td>
<td>(7.3%)</td>
<td>(20.7%)</td>
<td>(70.9%)</td>
<td>(70.9%)</td>
<td></td>
</tr>
<tr>
<td>When undertaking a NMS consultation</td>
<td>2</td>
<td>12</td>
<td>64</td>
<td>115</td>
<td>236</td>
<td>429</td>
</tr>
<tr>
<td>(0.5%)</td>
<td>(2.8%)</td>
<td>(14.9%)</td>
<td>(26.8%)</td>
<td>(55.0%)</td>
<td>(55.0%)</td>
<td></td>
</tr>
<tr>
<td>When providing a lifestyle intervention e.g. stop smoking</td>
<td>0</td>
<td>25</td>
<td>108</td>
<td>148</td>
<td>125</td>
<td>406</td>
</tr>
<tr>
<td>(0%)</td>
<td>(6.2%)</td>
<td>(26.6%)</td>
<td>(36.5%)</td>
<td>(30.8%)</td>
<td>(30.8%)</td>
<td></td>
</tr>
<tr>
<td>When providing a health monitoring service e.g. blood pressure check</td>
<td>9</td>
<td>17</td>
<td>75</td>
<td>106</td>
<td>124</td>
<td>331</td>
</tr>
<tr>
<td>(2.7%)</td>
<td>(5.1%)</td>
<td>(22.7%)</td>
<td>(32.0%)</td>
<td>(37.5%)</td>
<td>(37.5%)</td>
<td></td>
</tr>
</tbody>
</table>

**Additional statistical analysis**

Although the median response distribution (being a univariate analysis) is useful as a measure of central tendency, it cannot tell whether there is a statistical significant association when comparing 2 or more groups. The Wilcoxon Signed Ranks test was used to compare the associations between the opportunities that respondents took to speak with LTC patients “when handing out a regular medication” compared to when they carried out the other activities (MURs, NMS, handing out new medicines, etc).

The findings from the test show that there was a statistically significant association between the opportunities that respondents take to speak to and interact with patients with LTCs when handing out regular medications and all the other activities (P<0.05). The calculation of the effects sizes (r>0.5), showed a large effect for when handing out new medications (Z=-15.728, p>0.001, r=0.52), undertaking a MUR consultation (Z=-17.289, p>0.001, r=0.58), undertaking a NMS consultation (Z=-15.733, p>0.001, r=0.53) and providing a health monitoring service (Z=-14.463, p>0.001, r=0.52), whereas, it showed a medium effect when providing a lifestyle intervention (Z=-13.077, p>0.001, r=0.45). What this essentially means is that when compared to handing out regular medications, the main opportunities that respondents took to speaking to, and interacting with patients with LTCs were (in decreasing order) when undertaking a MUR consultation (r=0.58), a NMS consultation (r=0.53),
when handing out new medications \( (r=-0.52) \), when providing a health monitoring service \( (r=-0.52) \) and when providing a lifestyle intervention \( (r=-0.45) \).

6.4.5.5 B5: Additional comments about opportunities to support LTCs in community pharmacy

Respondents were asked to provide any additional comments they had about the opportunities to support people with LTCs in community pharmacy. A total of 67 respondents provided additional comments. Three themes emerged from the directed content analysis of these additional comments – supporting patients at home, social interactions with patients and opportunistic advice-giving.

**Supporting patients at home**

About half of respondents indicated that they provided different types of support to patients with LTCs that were home-bound. In particular, a few respondents indicated that they provided domiciliary visits to patients’ homes, where they took the opportunities to provide support with the use of medications and lifestyles.

"I am involved with DOM-MUR where I meet house bound lonely some neglected elderly. I not only tell them about their medication, why they are taking and also go through life-style, diet, exercise, fluid intake and exercise that can be done sitting on sofa so they cannot fall down"

Questionnaire ID47

Some respondents also indicated that they took the opportunity to support patients at home by speaking with them over the telephone and/or providing information and support via their delivery drivers.

"Also use telephone for house bound patients who see our driver, on calling we would check LTC progress, concordance, remind about what medications they are taking or not as well as regular monthly calls to check needs before our driver delivers there are also calls for prescription or OTC products in between visits and we ask the same questions to check their conditions"

Questionnaire ID64

In addition, a few respondents also indicated that they valued the roles that carers played in the care of patients’ LTCs. Hence, they also took the opportunities when interacting with carers to ensure that their patients received the necessary support, particularly with the use of their medicines.

"I especially spend more time with carers to ensure they are comfortable with using them. It is amazing how much knowledge carers have, with regards to their patients’ medication, appointments, etc. I make sure I encourage them to continue doing what they are doing so reliantly."

Questionnaire ID42
**Opportunities for social interactions for patients**

Many respondents suggested the community pharmacy provided the opportunity for social interactions with many patients with LTCs, particularly the elderly, who were often isolated and lonely. Respondents indicated that regular customers and patients often valued these roles, although a few respondents also indicated that they felt that these roles often went unrecognised and unrewarded.

“Although as pharmacists we do not always talk to our patients with LTCs on each visit our patients know us well. It is the development of that relationship over the years and monthly/ bimonthly/ quarterly visit to the pharmacy, they know that the pharmacist is always available if needed. Often the banter with the staff raises spirits, even opportunity to moan about NHS services is important to patients. Community pharmacy plays an unmeasurable role in LTCs management especially with the elderly patients who do not have many people to talk to.”

Questionnaire ID62

In addition to these social interactions a few respondents indicated that the community pharmacy provided the opportunities for some patients to come in contact with a healthcare professional, particularly patients on regular medications who have repeat prescriptions with long durations. Respondents indicated that this provided opportunities to support and intervene in the care of such patients when the need arose.

“For many of our patients with LTC the pharmacy/ pharmacist is the only regular contact with a health care professional as repeat prescriptions are authorised for 6 or 12 months & patients are not encouraged to order from the surgery whereas we actively encourage patients to order their repeat prescriptions through the pharmacy. We can then check that medication is being requested regularly & have the opportunity to intervene if patients are not requesting items that they should be.”

Questionnaire ID52

**Opportunistic advice-giving and support**

Many respondents indicated that they took the opportunity to provide information and advice and support some patients with LTCs when they visited the pharmacy to purchase over-the-counter (OTC) medications.

“I opportunistically approach customers who buy OTC products for NRT or weight-loss to discuss their life-style habits.”

Questionnaire ID48

“When a patient comes to by a OTC med and if they say they have a certain condition I always ask questions to see if they are well and just remind them of the symptoms they could get if their condition was getting bad”

Questionnaire ID07
Some other participants also indicated that they took the opportunity to support LTCs when patients made specific requests

“All opportunities to speak with the patient, especially if requested by the patient, are taken”
Questionnaire ID65

In addition many respondents also indicated that they took the opportunity to support LTC patients by providing them with information and advice via leaflets and printed materials, as well as by signposting them to any relevant resources where they could get more information and help.

“Providing printed material when possible to patients such as ‘Healthy Eating In Diabetes’, ‘Lowering Cholesterol’ etc.”
Questionnaire ID21

“give them leaflets and sign-post to other services or give web sites for useful info”
Questionnaire ID49

6.4.6 Section C: Understanding of self-care

In this section, respondents were asked to indicate their level of agreement or disagreement with 10 statements about their understanding of self-care and one statement about their overall understanding of self-care (highlighted in bold) using a 5-point Likert-type scale as shown in Table 6.8. Responses to these statements were reordered and colour-coded based on respondents rating of each statement in decreasing level of agreement, i.e., statements with higher proportion of respondents indicating that they ‘agree’ or ‘strongly agree’. The colour-coding was undertaken to arbitrarily order the statements into 3 categories, according to whether the level of agreement was high, mixed, or low (Box 6.1). The colour-coding reflects more of a continuum in respondents’ levels of agreement, i.e., decreasing levels of agreement, as opposed to clearly distinct categories.

Box 6.1: Colour codes to indicate level of agreement

<table>
<thead>
<tr>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>High level of agreement (agree)</td>
</tr>
<tr>
<td>Mixed levels of agreement</td>
</tr>
<tr>
<td>Low level of agreement (disagree)</td>
</tr>
</tbody>
</table>
Table 6.6: Understanding of self-care showing responses to 5-point Likert-type scale (n=419)

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Agree nor Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-care is about patients getting actively involved in consultations</td>
<td>0.2%</td>
<td>1.0%</td>
<td>6.0%</td>
<td>52.5%</td>
<td>40.3%</td>
</tr>
<tr>
<td>with their healthcare professional</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-care is about patients making informed decisions through</td>
<td>0.7%</td>
<td>1.0%</td>
<td>5.7%</td>
<td>47.3%</td>
<td>45.3%</td>
</tr>
<tr>
<td>improved knowledge and understanding</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-care is about patients making the necessary lifestyle changes</td>
<td>1.2%</td>
<td>0.5%</td>
<td>6.7%</td>
<td>50.6%</td>
<td>41.1%</td>
</tr>
<tr>
<td>to improve their health</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-care is about patients with LTCs developing the confidence to</td>
<td>0.2%</td>
<td>2.6%</td>
<td>12.2%</td>
<td>53.2%</td>
<td>31.7%</td>
</tr>
<tr>
<td>make desired changes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-care is about patients adhering to their medications and treatment</td>
<td>0.7%</td>
<td>5.3%</td>
<td>14.3%</td>
<td>50.1%</td>
<td>29.6%</td>
</tr>
<tr>
<td>Self-care requires patients to take the lead role in their own care</td>
<td>0.7%</td>
<td>8.6%</td>
<td>18.6%</td>
<td>50.1%</td>
<td>22.0%</td>
</tr>
<tr>
<td>Self-care is about patients taking overall responsibility for</td>
<td>1.7%</td>
<td>11.7%</td>
<td>15.5%</td>
<td>49.6%</td>
<td>21.5%</td>
</tr>
<tr>
<td>managing their own condition(s)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-care requires patients to tell healthcare professionals how to</td>
<td>1.7%</td>
<td>10.3%</td>
<td>23.4%</td>
<td>44.2%</td>
<td>20.5%</td>
</tr>
<tr>
<td>best support them in managing their LTCs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall, I have an excellent understanding of self-care as a concept in</td>
<td>1.0%</td>
<td>5.7%</td>
<td>34.8%</td>
<td>46.3%</td>
<td>12.2%</td>
</tr>
<tr>
<td>relation to patients with LTCs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-care is about patients becoming more independent of healthcare</td>
<td>5.3%</td>
<td>34.6%</td>
<td>23.6%</td>
<td>29.1%</td>
<td>7.4%</td>
</tr>
<tr>
<td>professionals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-care requires patients to seek out the information they need to</td>
<td>11.2%</td>
<td>33.4%</td>
<td>23.6%</td>
<td>23.4%</td>
<td>8.4%</td>
</tr>
<tr>
<td>manage their LTCs on their own</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Overall understanding of self-care

As shown in Table 6.8 above, respondents rated their agreement or disagreement with the statement “Overall, I have an excellent understanding of self-care as a concept in relation to patients with LTCs.” While the majority of respondents (58.5%) selected either ‘strongly agree’ or ‘agree’ with this statement, a significant proportion (41.5%) selected ‘neither agree nor disagree’, ‘disagree’ or ‘strongly disagree’ with the statement on their overall understanding. Hence, respondents’ overall understanding of self-care fell under the ‘mixed level of agreement’ category; these responses was dichotomised to allow for further exploration and for better insights to be gained into the views of respondents that ‘agreed’ or ‘disagreed’ that they had an excellent overall understanding of the principles of self-care of LTCs.
Additional statistical analysis

Additional statistical tests was undertaken to explore if there were any associations between respondents that agreed and disagreed that they had an excellent overall understanding of self-care and their ratings of the ten statements relating to the principles of self-care of LTCs. Each of the ten statements were dichotomised by collapsing the ‘strongly disagree’, ‘disagree’ and ‘neither agree nor disagree’ responses into ‘NOT AGREE’ and the ‘agree’ and ‘strongly agree’ responses into ‘AGREE’. A chi-square test was carried and the statements that were statistically significant are as follows:

- Self-care is about patients getting actively involved in consultations with their healthcare professional ($X^2=4.541$, P=0.033)
- Self-care requires patients to take the lead role in their own care ($X^2=7.525$, P=0.006)
- Self-care is about patients taking overall responsibility for managing their own condition(s) ($X^2=5.532$, P=0.019)
- Self-care is about patients becoming more independent of healthcare professionals ($X^2=4.707$, P=0.030)
- Self-care requires patients to seek out the information they need to manage their LTCs on their own ($X^2=9.188$, P=0.002)

Further statistical analysis was carried out to compare respondents’ overall understanding of self-care of LTCs and their demographic characteristics. The purpose of this was to examine if there were any demographic factors that influenced respondents’ self-rating of their overall understanding self-care of LTCs. The results of the Pearson’s Chi-square test on variables such as gender, age (age-group), job group, additional qualification, pharmacy setting/type and pharmacy location showed that there were no statistically significant associations with respondents’ overall understanding of self-care (P>0.05).

However, the results of the Mann-Whitney test that compared the length of time that respondents worked in community pharmacy and their overall understanding of self-care showed that respondents with less experience (median age = 14.4 years) of working in community pharmacy were significantly more likely to agree that they had an excellent understanding of self-care (Mann-Whitney test statistics $U = 10878$, P=0.002), compared to those that had more experienced (median = 20.1 years). This finding is further described in the boxplot in Figure 6.4 below.
6.4.7 Section D: Self-care support activities in community pharmacy

This section consists of two broad questions (D1 and D2) about self-care support activities in community pharmacy. Both questions consisted of the same statements, and respondents were asked to indicate whether they thought it was an important role in community pharmacy (D1) and whether (how much) they had engaged in them in the last day that they worked in community pharmacy (D2).

6.4.7.1 D1. Importance to engage in self-care support in community pharmacy

In this question, respondents were asked “For each of the following statements, please indicate if you think that it is important that you should be engaged in these activities in community pharmacy”. The response options for each statement are shown in Box 6.2 below, showing a colour-coding based on the mode response to each statement. The total number of responses to each statement was 374 but the “Don't know” response category was excluded from the analysis accounting for the differences in the total response to each statement. There were a total of 27 statements (items 1 – 27) and each
statement was grouped according to the five core elements of the theoretical framework of self-care support. The descriptive statistical analysis is presented and described under each of the core elements of self-care support.

**Box 6.2: Response options to question D1 with colour coding showing the median response**

<table>
<thead>
<tr>
<th>Response option</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other = Role for other healthcare professional</td>
</tr>
<tr>
<td>Minor = Minor role for community pharmacy</td>
</tr>
<tr>
<td>Major = Major role for community pharmacy</td>
</tr>
<tr>
<td>Lead = Lead role for community pharmacy</td>
</tr>
</tbody>
</table>

**Self-care Information and advice**

The responses to the statements relating to the element information and advice are shown in Table 6.16 below. The analysis shows that respondents indicated that most of the statements (using the modal distribution) were a major role for community pharmacy. However, providing patients with information and advice on taking medications as recommended was indicated as the lead role for community pharmacy (68.6%). This was not a surprising finding as it supports the qualitative findings that self-care support in community pharmacy is predominantly medicines-focused. On the other hand, providing patients with information and advice on dealing with the emotional needs associated with living with a LTC was indicated as a minor role for community pharmacy. Again, this was not a surprising finding as it supports the findings from the qualitative interviews that pharmacists were not confident in supporting patients with LTCs in dealing with emotional issues, as they either considered it not within their domain in community pharmacy, or because they did not have the expertise knowledge and skills to provide this type of self-care support.
Table 6.7: Self-care support activities: Information and advice

<table>
<thead>
<tr>
<th>#</th>
<th>Statement</th>
<th>Other</th>
<th>Minor</th>
<th>Major</th>
<th>Lead</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Make an assessment of a patient’s needs before providing information and advice</td>
<td>7.8%</td>
<td>23.3%</td>
<td>53.6%</td>
<td>15.3%</td>
<td>360</td>
</tr>
<tr>
<td>2</td>
<td>Provide patients with information and advice on: “Taking medications as recommended”</td>
<td>0.8%</td>
<td>0.3%</td>
<td>30.3%</td>
<td>68.6%</td>
<td>373</td>
</tr>
<tr>
<td>3</td>
<td>Provide patients with information and advice on: “Eating healthily”</td>
<td>1.3%</td>
<td>22.5%</td>
<td>55.0%</td>
<td>21.2%</td>
<td>373</td>
</tr>
<tr>
<td>4</td>
<td>Provide patients with information and advice on: “Being physically active”</td>
<td>2.7%</td>
<td>24.3%</td>
<td>52.7%</td>
<td>20.3%</td>
<td>374</td>
</tr>
<tr>
<td>5</td>
<td>Provide patients with information and advice on: “Maintaining a healthy weight”</td>
<td>2.1%</td>
<td>20.9%</td>
<td>56.1%</td>
<td>20.9%</td>
<td>374</td>
</tr>
<tr>
<td>6</td>
<td>Provide patients with information and advice on: “Stopping smoking”</td>
<td>1.1%</td>
<td>5.1%</td>
<td>58.8%</td>
<td>35.0%</td>
<td>374</td>
</tr>
<tr>
<td>7</td>
<td>Provide patients with information and advice on: “Consuming alcohol healthily”</td>
<td>1.6%</td>
<td>18.4%</td>
<td>57.0%</td>
<td>23.0%</td>
<td>374</td>
</tr>
<tr>
<td>8</td>
<td>Provide patients with information and advice on: “Dealing with the emotional needs associated with living with a LTC”</td>
<td>22.6%</td>
<td>41.5%</td>
<td>27.0%</td>
<td>8.9%</td>
<td>371</td>
</tr>
<tr>
<td>9</td>
<td>Make an assessment of a patient’s needs after providing information and advice</td>
<td>13.4%</td>
<td>30.4%</td>
<td>39.8%</td>
<td>16.4%</td>
<td>359</td>
</tr>
<tr>
<td>10</td>
<td>Utilise a behaviour change technique (e.g. health coaching or motivational interviewing) to help patients change behaviours</td>
<td>22.8%</td>
<td>31.5%</td>
<td>33.4%</td>
<td>12.2%</td>
<td>368</td>
</tr>
</tbody>
</table>

**Self-care Skills training and support**

Responses to the statements relating to providing self-care skills training and support are shown in table 6.17 below, and the modal response distribution shows that respondents viewed all the statements as a major role for community pharmacy.
Table 6.8: Self-care support activities: Skills training and support

<table>
<thead>
<tr>
<th>#</th>
<th>Statement</th>
<th>Other</th>
<th>Minor</th>
<th>Major</th>
<th>Lead</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Advise patients to know how to recognise deteriorating signs and symptoms</td>
<td>4.8%</td>
<td>13.7%</td>
<td>48.7%</td>
<td>32.8%</td>
<td>372</td>
</tr>
<tr>
<td></td>
<td>of their LTCs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Advise patients to know how to act on the deteriorating signs and symptoms</td>
<td>5.6%</td>
<td>13.1%</td>
<td>49.3%</td>
<td>31.9%</td>
<td>373</td>
</tr>
<tr>
<td></td>
<td>of their LTCs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Recommend and/or supply self-testing devices (e.g. blood pressure monitors)</td>
<td>3.5%</td>
<td>19.7%</td>
<td>47.7%</td>
<td>29.1%</td>
<td>371</td>
</tr>
<tr>
<td>14</td>
<td>Help patients to interpret the results from their self-testing devices</td>
<td>3.2%</td>
<td>14.7%</td>
<td>51.6%</td>
<td>30.5%</td>
<td>374</td>
</tr>
<tr>
<td>15</td>
<td>Provide support to patients to self-administer certain medicines (e.g.</td>
<td>4.3%</td>
<td>10.2%</td>
<td>48.2%</td>
<td>37.2%</td>
<td>371</td>
</tr>
<tr>
<td></td>
<td>insulin injection, inhaler technique)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Self-care Support networks

Responses to the statements relating to the use of support networks in self-care support of LTCs in Table 6.18 below and the analysis of the mode response showed that respondents viewed signposting as a major role for community pharmacy. They however indicated that helping patients to make plans for how to get support from their friends, family or community and encouraging patients to go to a specific group or class to help them cope with their LTCs were minor roles for community pharmacy.

Table 6.9: Self-care support activities: Support networks

<table>
<thead>
<tr>
<th>#</th>
<th>Statement</th>
<th>Other</th>
<th>Minor</th>
<th>Major</th>
<th>Lead</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>Signpost patients to local or national self-help groups</td>
<td>1.9%</td>
<td>14.0%</td>
<td>49.7%</td>
<td>34.4%</td>
<td>372</td>
</tr>
<tr>
<td>24</td>
<td>Help your patients make plans for how to get support from their friends,</td>
<td>16.3%</td>
<td>38.8%</td>
<td>34.4%</td>
<td>10.6%</td>
<td>369</td>
</tr>
<tr>
<td></td>
<td>family or community</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>Encourage your patients to go to a specific group or class to help them</td>
<td>14.3%</td>
<td>43.2%</td>
<td>31.4%</td>
<td>11.1%</td>
<td>370</td>
</tr>
<tr>
<td></td>
<td>cope with their LTCs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Self-care Technology

Responses to the statements relating to using technology in self-care support of LTCs are shown in Table 6.19 below, where analysis showed that respondents viewed the use of technology to interact with, and support, patients with LTCs as a minor role for community pharmacy.

Table 6.10: Self-care support activities: Technology

<table>
<thead>
<tr>
<th>#</th>
<th>Statement</th>
<th>Other</th>
<th>Minor</th>
<th>Major</th>
<th>Lead</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>Communicate or interact with patients through web-based social media and instant messaging applications</td>
<td>22.7%</td>
<td>44.1%</td>
<td>26.5%</td>
<td>6.7%</td>
<td>313</td>
</tr>
<tr>
<td>17</td>
<td>Inform patients about the use of mobile or internet-based applications ('apps')</td>
<td>16.3%</td>
<td>46.8%</td>
<td>28.3%</td>
<td>8.6%</td>
<td>325</td>
</tr>
</tbody>
</table>

Collaborative care planning

Responses to the statements relating to working collaboratively with patients (collaborative care planning) are shown in Table 6.20 below. The analysis indicated respondents’ views on the role of community pharmacy were mixed. While asking patients about any problem relating to medicines or their effects was indicated as a major role for community pharmacy, helping patients with plans to get support from friends, family or the community and encouraging patients to go to specific groups or classes were indicated as minor roles for community pharmacy. Most of the other self-care support activities were indicated as a major role for community pharmacy.
Table 6.11: Self-care support activities: Collaborative care planning

<table>
<thead>
<tr>
<th>#</th>
<th>Statement</th>
<th>Other</th>
<th>Minor</th>
<th>Major</th>
<th>Lead</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>19</td>
<td>Ask your patients how their LTCs affects their daily life</td>
<td>4.1%</td>
<td>18.6%</td>
<td>50.3%</td>
<td>27.0%</td>
<td>370</td>
</tr>
<tr>
<td>20</td>
<td>Ask your patients to talk about any problems they might have with their medicines or their effects</td>
<td>0.8%</td>
<td>1.6%</td>
<td>34.3%</td>
<td>63.2%</td>
<td>370</td>
</tr>
<tr>
<td>21</td>
<td>Ask your patients for their preferences when making a plan for their LTCs</td>
<td>15.0%</td>
<td>19.9%</td>
<td>42.0%</td>
<td>23.2%</td>
<td>367</td>
</tr>
<tr>
<td>22</td>
<td>Help your patients to set specific goals to improve the management of their LTCs</td>
<td>13.4%</td>
<td>26.4%</td>
<td>38.4%</td>
<td>21.8%</td>
<td>367</td>
</tr>
<tr>
<td>23</td>
<td>Help your patients to make plans to achieve their LTC care goals</td>
<td>13.6%</td>
<td>26.7%</td>
<td>41.1%</td>
<td>18.5%</td>
<td>367</td>
</tr>
<tr>
<td>24</td>
<td>Help your patients make plans for how to get support from their friends, family or community</td>
<td>16.3%</td>
<td>38.8%</td>
<td>34.4%</td>
<td>10.6%</td>
<td>369</td>
</tr>
<tr>
<td>25</td>
<td>Encourage your patients to go to a specific group or class to help them cope with their LTCs</td>
<td>14.3%</td>
<td>43.2%</td>
<td>31.4%</td>
<td>11.1%</td>
<td>370</td>
</tr>
<tr>
<td>26</td>
<td>Contact your patients after a consultation with you to see how things were going</td>
<td>6.3%</td>
<td>27.4%</td>
<td>46.6%</td>
<td>19.7%</td>
<td>365</td>
</tr>
<tr>
<td>27</td>
<td>Coordinate patient care with the other healthcare professionals that your patient sees for their LTCs</td>
<td>15.9%</td>
<td>26.6%</td>
<td>41.1%</td>
<td>16.4%</td>
<td>365</td>
</tr>
</tbody>
</table>

**Additional statistical analysis**

While the mode response to each statement was used as a measure of central tendency in the descriptive analysis, it does not take account for the spread of the responses. In this analysis, respondents’ views of the importance of self-care support in community pharmacy were grouped as a whole (statements 1 – 27), rather than under the five core elements of self-care support. In order for further insights to be gained into the data, further analysis was undertaken by dichotomising the response options. The dichotomisation was undertaken by collapsing the ‘other’ and ‘minor’ response categories into ‘minor or no role for community pharmacy’ and the ‘major’ and ‘lead’ response categories into ‘major or lead role for community pharmacy’. Furthermore, the statements were ordered and colour-coded according to decreasing importance that respondents attached to each statement (Table 6.21). Box 6.3 below shows the colour coding used to categorise each self-care support activity in terms of priority of their importance for community pharmacy to be engaged in using arbitrary cut-off ranges. This categorisation reflects more of a continuum, rather than distinct categories of how important these self-care support activities were to respondents.
Box 6.3: Colour-coding showing level of priority accorded to self-care support in community pharmacy

Continuum of self-care support priority for community pharmacy

- High priority
- Medium priority
- Low priority

Table 6.12: Self-care activities in community pharmacy

<table>
<thead>
<tr>
<th>#</th>
<th>Statement</th>
<th>Minor or no role</th>
<th>Major or lead role</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Provide patients with information and advice on: Taking medications as recommended</td>
<td>1.1%</td>
<td>98.9%</td>
<td>373</td>
</tr>
<tr>
<td>20</td>
<td>Ask your patients to talk about any problems they might have with their medicines or their effects</td>
<td>2.4%</td>
<td>97.6%</td>
<td>370</td>
</tr>
<tr>
<td>6</td>
<td>Provide patients with information and advice on: Stopping smoking</td>
<td>6.1%</td>
<td>93.9%</td>
<td>374</td>
</tr>
<tr>
<td>15</td>
<td>Provide support to patients to self-administer certain medicines (e.g. insulin injection, inhaler technique)</td>
<td>14.6%</td>
<td>85.4%</td>
<td>371</td>
</tr>
<tr>
<td>18</td>
<td>Signpost patients to local or national self-help groups</td>
<td>15.9%</td>
<td>84.1%</td>
<td>372</td>
</tr>
<tr>
<td>14</td>
<td>Help patients to interpret the results from their self-testing devices</td>
<td>17.9%</td>
<td>82.1%</td>
<td>374</td>
</tr>
<tr>
<td>11</td>
<td>Advise patients to know how to recognise signs and symptoms of their LTCs</td>
<td>18.5%</td>
<td>81.5%</td>
<td>372</td>
</tr>
<tr>
<td>12</td>
<td>Advise patients to know how to act on signs and symptoms of their LTCs</td>
<td>18.8%</td>
<td>81.2%</td>
<td>373</td>
</tr>
<tr>
<td>7</td>
<td>Provide patients with information and advice on: Consuming alcohol healthily</td>
<td>20.1%</td>
<td>79.9%</td>
<td>374</td>
</tr>
<tr>
<td>19</td>
<td>Ask your patients how their LTCs affects their life</td>
<td>22.7%</td>
<td>77.3%</td>
<td>370</td>
</tr>
<tr>
<td>5</td>
<td>Provide patients with information and advice on: Maintaining a healthy weight</td>
<td>23%</td>
<td>77%</td>
<td>374</td>
</tr>
<tr>
<td>13</td>
<td>Recommend and/or supply self-testing devices (e.g. blood pressure monitors)</td>
<td>23.2%</td>
<td>76.8%</td>
<td>371</td>
</tr>
<tr>
<td>3</td>
<td>Provide patients with information and advice on: Eating healthily</td>
<td>23.9%</td>
<td>76.1%</td>
<td>373</td>
</tr>
<tr>
<td>4</td>
<td>Provide patients with information and advice on: Being physically active</td>
<td>27%</td>
<td>73%</td>
<td>374</td>
</tr>
<tr>
<td>1</td>
<td>Make an assessment of a patient’s needs before providing information and advice</td>
<td>31.1%</td>
<td>68.9%</td>
<td>360</td>
</tr>
</tbody>
</table>
Table 6.12 (Continued): Self-care support activities in community pharmacy

<table>
<thead>
<tr>
<th>#</th>
<th>Statement</th>
<th>Minor or no role</th>
<th>Major lead role</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>26</td>
<td>Contact your patients after a consultation with you to see how things were going</td>
<td>33.7%</td>
<td>66.3%</td>
<td>365</td>
</tr>
<tr>
<td>21</td>
<td>Ask your patients for their preferences when making a plan for their LTCs care</td>
<td>34.9%</td>
<td>65.1%</td>
<td>367</td>
</tr>
<tr>
<td>22</td>
<td>Help your patients to set specific goals to improve the management of their LTCs</td>
<td>39.8%</td>
<td>60.2%</td>
<td>367</td>
</tr>
<tr>
<td>23</td>
<td>Help your patients to make plans to achieve their LTC care goals</td>
<td>40.3%</td>
<td>59.7%</td>
<td>367</td>
</tr>
<tr>
<td>27</td>
<td>Coordinate patient care with the other healthcare professionals that your patient sees for their LTCs</td>
<td>42.5%</td>
<td>57.5%</td>
<td>365</td>
</tr>
<tr>
<td>9</td>
<td>Make an assessment of a patient’s needs after providing information and advice</td>
<td>43.7%</td>
<td>56.3%</td>
<td>359</td>
</tr>
<tr>
<td>10</td>
<td>Utilize a behaviour change technique (e.g. health coaching or motivational interviewing) to help patient’s change behaviours</td>
<td>54.3%</td>
<td>45.7%</td>
<td>368</td>
</tr>
<tr>
<td>24</td>
<td>Help your patients make plans for how to get support from their friends, family or community</td>
<td>55%</td>
<td>45%</td>
<td>369</td>
</tr>
<tr>
<td>25</td>
<td>Encourage your patients to go to a specific group or class to help them cope with their LTCs</td>
<td>57.6%</td>
<td>42.4%</td>
<td>370</td>
</tr>
<tr>
<td>17</td>
<td>Inform patients about the use of mobile or internet-based applications (‘apps’)</td>
<td>63.1%</td>
<td>36.9%</td>
<td>325</td>
</tr>
<tr>
<td>8</td>
<td>Provide patients with information and advice on: Dealing with emotions associated with their LTC</td>
<td>64.2%</td>
<td>35.8%</td>
<td>371</td>
</tr>
<tr>
<td>16</td>
<td>Communicate or interact with patients through web-based social media and instant messaging applications</td>
<td>66.8%</td>
<td>33.2%</td>
<td>313</td>
</tr>
</tbody>
</table>

6.4.7.2 D2. Engaging in self-care support activities

In this question, respondents were asked, “For each of the following statements, please indicate how much you engaged with these activities in the LAST DAY that you worked in a community pharmacy”. The response categories to this question were:

- None = None of the time
- Little = A little of the time
- Some = Some of the time
- Most = Most of the time
- Always = Always
The descriptive statistics are presented and described under the five core elements of the theoretical framework of self-care support of LTCs. The modal response is highlighted to indicate the central measure of distribution for each item. The statements were reordered according to decreasing self-care support activity that respondents engaged in, in their last day of work.

**Self-care Information and Advice**

Respondents’ views of how much they engaged in the self-care support activities relating to information and advice are shown in Table 6.22 below. The findings indicate that respondents provided patients with information and advice on taking medications as recommended most of the time. Whereas, provision of information and advice on eating healthily and making an assessment of a patient’s needs before providing information and advice were undertaken some of the time. Most of the other self-care support activities were undertaken either little or none of the time in the last day that respondents worked in a community pharmacy.
Table 6.13: Self-care support activities: Information and advice

<table>
<thead>
<tr>
<th>#</th>
<th>Statement</th>
<th>None</th>
<th>Little</th>
<th>Some</th>
<th>Most</th>
<th>Always</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Provide patients with information and advice on: “Taking medications as recommended”</td>
<td>0.6%</td>
<td>8.2%</td>
<td>28.9%</td>
<td>41.6%</td>
<td>20.7%</td>
<td>353</td>
</tr>
<tr>
<td>3</td>
<td>Provide patients with information and advice on: “Eating healthily”</td>
<td>16.4%</td>
<td>27.2%</td>
<td>31.2%</td>
<td>17.8%</td>
<td>7.4%</td>
<td>353</td>
</tr>
<tr>
<td>1</td>
<td>Make an assessment of a patient’s needs before providing information and advice</td>
<td>15.0%</td>
<td>25.8%</td>
<td>28.9%</td>
<td>21.8%</td>
<td>8.5%</td>
<td>353</td>
</tr>
<tr>
<td>5</td>
<td>Provide patients with information and advice on: “Maintaining a healthy weight”</td>
<td>20.1%</td>
<td>30.3%</td>
<td>27.5%</td>
<td>16.4%</td>
<td>5.7%</td>
<td>353</td>
</tr>
<tr>
<td>4</td>
<td>Provide patients with information and advice on: “Being physically active”</td>
<td>17.3%</td>
<td>29.2%</td>
<td>28.6%</td>
<td>16.7%</td>
<td>8.2%</td>
<td>353</td>
</tr>
<tr>
<td>6</td>
<td>Provide patients with information and advice on: “Stopping smoking”</td>
<td>22.1%</td>
<td>28.6%</td>
<td>25.5%</td>
<td>15.6%</td>
<td>8.2%</td>
<td>353</td>
</tr>
<tr>
<td>10</td>
<td>Utilise a behaviour change technique (e.g. health coaching or motivational interviewing) to help patients change behaviours</td>
<td>47.3%</td>
<td>22.1%</td>
<td>16.1%</td>
<td>10.5%</td>
<td>4.0%</td>
<td>353</td>
</tr>
<tr>
<td>8</td>
<td>Provide patients with information and advice on: “Dealing with the emotional needs associated with living with a LTC”</td>
<td>40.2%</td>
<td>25.8%</td>
<td>22.1%</td>
<td>8.5%</td>
<td>3.4%</td>
<td>353</td>
</tr>
<tr>
<td>7</td>
<td>Provide patients with information and advice on: “Consuming alcohol healthily”</td>
<td>29.7%</td>
<td>27.5%</td>
<td>23.2%</td>
<td>13.0%</td>
<td>6.5%</td>
<td>353</td>
</tr>
<tr>
<td>9</td>
<td>Make an assessment of a patient’s needs after providing information and advice</td>
<td>27.5%</td>
<td>25.8%</td>
<td>24.9%</td>
<td>16.7%</td>
<td>5.1%</td>
<td>353</td>
</tr>
</tbody>
</table>

Self-care Skills training and support

Most of the self-care support activities relating to skills training and support were provided either little or none of the time by respondents in the last day that they worked in a community pharmacy as shown in Table 6.23 below.
Table 6.14: Self-care support activities: Skills training and support

<table>
<thead>
<tr>
<th>#</th>
<th>Statement</th>
<th>None</th>
<th>Little</th>
<th>Some</th>
<th>Most</th>
<th>Always</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Advise patients to know how to recognise deteriorating signs and symptoms of their LTCs</td>
<td>21.2%</td>
<td>30.9%</td>
<td>22.7%</td>
<td>19.3%</td>
<td>5.9%</td>
<td>353</td>
</tr>
<tr>
<td>12</td>
<td>Advise patients to know how to act on the deteriorating signs and symptoms of their LTCs</td>
<td>21.8%</td>
<td>28.0%</td>
<td>25.5%</td>
<td>17.8%</td>
<td>6.8%</td>
<td>353</td>
</tr>
<tr>
<td>14</td>
<td>Help patients to interpret the results from their self-testing devices</td>
<td>42.5%</td>
<td>24.4%</td>
<td>17.3%</td>
<td>11.0%</td>
<td>4.8%</td>
<td>353</td>
</tr>
<tr>
<td>13</td>
<td>Recommend and/or supply self-testing devices (e.g. blood pressure monitors)</td>
<td>39.4%</td>
<td>29.2%</td>
<td>17.0%</td>
<td>9.1%</td>
<td>5.4%</td>
<td>353</td>
</tr>
<tr>
<td>15</td>
<td>Provide support to patients to self-administer certain medicines (e.g. insulin injection, inhaler technique)</td>
<td>27.2%</td>
<td>26.9%</td>
<td>26.1%</td>
<td>13.3%</td>
<td>6.5%</td>
<td>353</td>
</tr>
</tbody>
</table>

**Self-care Support networks**

Table 6.24 below shows that the self-care support activities relating to the use of support networks was provided little or none of the time in the last day that respondents worked in a community pharmacy.

Table 6.15: Self-care support activities: Support networks

<table>
<thead>
<tr>
<th>#</th>
<th>Statement</th>
<th>None</th>
<th>Little</th>
<th>Some</th>
<th>Most</th>
<th>Always</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>Signpost patients to local or national self-help groups</td>
<td>31.4%</td>
<td>36.0%</td>
<td>17.8%</td>
<td>9.3%</td>
<td>5.4%</td>
<td>353</td>
</tr>
<tr>
<td>24</td>
<td>Help your patients make plans for how to get support from their friends, family or community</td>
<td>53.5%</td>
<td>22.7%</td>
<td>13.3%</td>
<td>8.2%</td>
<td>2.3%</td>
<td>353</td>
</tr>
<tr>
<td>25</td>
<td>Encourage your patients to go to a specific group or class to help them cope with their LTCs</td>
<td>52.7%</td>
<td>25.5%</td>
<td>11.6%</td>
<td>7.9%</td>
<td>2.3%</td>
<td>353</td>
</tr>
</tbody>
</table>

**Self-care Technology**

Self-care support activities relating to the use of technology was provided by respondents none of the time in the last day that they worked in a community pharmacy, as shown in table 6.25 below.
Table 6.16: Self-care support activities: Technology

<table>
<thead>
<tr>
<th>#</th>
<th>Statement</th>
<th>None</th>
<th>Little</th>
<th>Some</th>
<th>Most</th>
<th>Always</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>Inform patients about the use of mobile or internet-based applications ('apps')</td>
<td>74.5%</td>
<td>12.5%</td>
<td>6.8%</td>
<td>4.5%</td>
<td>1.7%</td>
<td>353</td>
</tr>
<tr>
<td>16</td>
<td>Communicate or interact with patients through web-based social media and instant messaging applications</td>
<td>72.8%</td>
<td>13.6%</td>
<td>5.4%</td>
<td>6.2%</td>
<td>2.0%</td>
<td>353</td>
</tr>
</tbody>
</table>

**Collaborative care planning**

Table 6.26 below shows that respondents indicated that they did not provide most of the self-care support activities relating to collaborative care planning in the last day that they worked in community pharmacy. However, respondents indicated that they asked patients to talk about any problems they might have with their medicines or its effects most of the time.

Table 6.17: Self-care support activities: Collaborative care planning

<table>
<thead>
<tr>
<th>#</th>
<th>Statement</th>
<th>None</th>
<th>Little</th>
<th>Some</th>
<th>Most</th>
<th>Always</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>Ask your patients to talk about any problems they might have with their medicines or their effects</td>
<td>9.6%</td>
<td>23.2%</td>
<td>28.0%</td>
<td>29.2%</td>
<td>9.9%</td>
<td>353</td>
</tr>
<tr>
<td>19</td>
<td>Ask your patients how their LTCs affects their daily life</td>
<td>30.9%</td>
<td>31.7%</td>
<td>19.3%</td>
<td>14.7%</td>
<td>3.4%</td>
<td>353</td>
</tr>
<tr>
<td>24</td>
<td>Help your patients make plans for how to get support from their friends, family or community</td>
<td>53.5%</td>
<td>22.7%</td>
<td>13.3%</td>
<td>8.2%</td>
<td>2.3%</td>
<td>353</td>
</tr>
<tr>
<td>23</td>
<td>Help your patients to make plans to achieve their LTC care goals</td>
<td>52.7%</td>
<td>19.3%</td>
<td>17.6%</td>
<td>7.4%</td>
<td>3.1%</td>
<td>353</td>
</tr>
<tr>
<td>25</td>
<td>Encourage your patients to go to a specific group or class to help them cope with their LTCs</td>
<td>52.7%</td>
<td>25.5%</td>
<td>11.6%</td>
<td>7.9%</td>
<td>2.3%</td>
<td>353</td>
</tr>
<tr>
<td>21</td>
<td>Ask your patients for their preferences when making a plan for their LTCs care</td>
<td>52.4%</td>
<td>18.4%</td>
<td>14.4%</td>
<td>8.8%</td>
<td>5.9%</td>
<td>353</td>
</tr>
<tr>
<td>22</td>
<td>Help your patients to set specific goals to improve the management of their LTCs</td>
<td>50.4%</td>
<td>20.4%</td>
<td>15.3%</td>
<td>9.6%</td>
<td>4.2%</td>
<td>353</td>
</tr>
<tr>
<td>27</td>
<td>Coordinate patient care with the other healthcare professionals that your patient sees for their LTCs</td>
<td>42.5%</td>
<td>24.9%</td>
<td>19.3%</td>
<td>9.1%</td>
<td>4.2%</td>
<td>353</td>
</tr>
<tr>
<td>26</td>
<td>Contact your patients after a consultation with you to see how things were going</td>
<td>41.1%</td>
<td>26.1%</td>
<td>19.8%</td>
<td>9.3%</td>
<td>3.7%</td>
<td>353</td>
</tr>
</tbody>
</table>
6.4.8 Section E: Barriers and enabling factors for providing self-care support

This section presents respondents’ selections of the barriers and enablers to providing self-care support of LTCs. Respondents were presented with a list of barriers and enablers and were asked to select their top three for each (with no particular ranking order). A text entry box was provided to allow respondents to provide a brief explanation of their reasons for making their selections. These explanations were analysed as qualitative data using the directed content analysis. The findings from the analysis of the barriers and enablers are presented below.

6.4.8.1 E1. Barriers

In this question, respondents were asked “From the list below, which are the TOP 3 BARRIERS that most influence your ability to effectively support people with LTCs in community pharmacy. Please read through all the options before ticking 3 boxes that apply”. Table 6.27 below shows the proportions of respondents that selected each barrier from the list provided. A total of 339 respondents made at least one selection. Of these, 93.2% (n=314) selected three barriers only, although this did not affect the order of the top barriers shown.
Table 6.18: Barriers to providing self-care support of LTCs (n=339)

<table>
<thead>
<tr>
<th>Answer</th>
<th>Response</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access to patient medical records</td>
<td>199</td>
<td>59%</td>
</tr>
<tr>
<td>Remuneration for providing support of LTCs</td>
<td>122</td>
<td>36%</td>
</tr>
<tr>
<td>Working relationship and communication with GPs</td>
<td>113</td>
<td>33%</td>
</tr>
<tr>
<td>Current community pharmacy contractual arrangement</td>
<td>108</td>
<td>32%</td>
</tr>
<tr>
<td>Skill mix and organisation of community pharmacy team</td>
<td>95</td>
<td>28%</td>
</tr>
<tr>
<td>Public trust and awareness of community pharmacy’s capabilities</td>
<td>76</td>
<td>22%</td>
</tr>
<tr>
<td>Support from community pharmacy employers</td>
<td>67</td>
<td>20%</td>
</tr>
<tr>
<td>Involvement in continuity of care after patients’ hospital discharge</td>
<td>65</td>
<td>19%</td>
</tr>
<tr>
<td>Supervision regulations in community pharmacy</td>
<td>50</td>
<td>15%</td>
</tr>
<tr>
<td>Access to educational resources and training for supporting LTCs</td>
<td>50</td>
<td>15%</td>
</tr>
<tr>
<td>Ability to support and motivate patients to change behaviour</td>
<td>49</td>
<td>14%</td>
</tr>
<tr>
<td>Access to NHS IT infrastructure</td>
<td>39</td>
<td>12%</td>
</tr>
<tr>
<td>Support from pharmacy profession leadership</td>
<td>22</td>
<td>6%</td>
</tr>
<tr>
<td>Patients’ accessibility to community pharmacists/pharmacy</td>
<td>21</td>
<td>6%</td>
</tr>
<tr>
<td>Availability of private consultation rooms</td>
<td>9</td>
<td>3%</td>
</tr>
</tbody>
</table>

6.4.8.2 E2: Explanation for selecting barriers

Respondents were asked to “Please provide a brief explanation of why you made your selections to the question above (barriers)” The response this question was provided by a total of 187 of 339 respondents (54.9%) that selected at least one barrier in E1 above. The qualitative data collected were broad and covered almost all of the listed barriers. However, the content analysis focused on the five most selected barriers. A number of themes emerged from the analysis using the selected barriers as a predefined thematic coding structure. These findings are summarised in table 6.28 below.
Table 6.19: Themes and exemplar quotes from content analysis of the five most selected barriers

<table>
<thead>
<tr>
<th>Predefined categories</th>
<th>Specific themes</th>
<th>Exemplar quote</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access to patient medical records</td>
<td>'Working blindly'</td>
<td>“Not able to access full medical records from GP/hospital limits the condition being treated known to me and hence limits any relevant information/advice that can be passed onto the patient.” Questionnaire ID86</td>
</tr>
<tr>
<td>Relying on patients for medical information</td>
<td>“when I speak to a patient, I am relying on them to tell me test results etc, and I am then giving them advice based on their perception of good/bad results.” Questionnaire ID15</td>
<td></td>
</tr>
<tr>
<td>Assessing patients’ needs</td>
<td>“without access to medical records I do not know what are the most appropriate questions to ask or the most useful information to share/discuss”. Questionnaire ID12</td>
<td></td>
</tr>
<tr>
<td>Making ‘uninformed’ decisions</td>
<td>“Sometimes is difficult to make decisions or suggestions if you don’t have access to patients’ records.” Questionnaire ID59</td>
<td></td>
</tr>
<tr>
<td>Remuneration for providing support of LTCs</td>
<td>Employers commercial interests</td>
<td>“My employer will not support me in any patient service without payment for the service provided.” Questionnaire ID102</td>
</tr>
<tr>
<td>Minimal staffing levels due to remuneration</td>
<td>Remuneration is important to employ more staff so quality time can be spent with patient” Questionnaire ID09</td>
<td></td>
</tr>
<tr>
<td>Working relationship and communication with GPs</td>
<td>Lack of support from GPs</td>
<td>“not enough support from GPs and other health professionals in promoting the use of pharmacy in providing this kind of support which creates a barrier with a lot of patients who don't think i have the right or the training to discuss these things with them.” Questionnaire ID27</td>
</tr>
<tr>
<td>Limited direct communication with GPs</td>
<td>“Lack of communication from GPs - the response is always communicated back via a receptionist, often not resolved in the first instance” Questionnaire ID107</td>
<td></td>
</tr>
<tr>
<td>Power status of GPs</td>
<td>“GPs as a group are the biggest barrier to successful run local services, go problem, too much power.” Questionnaire ID49</td>
<td></td>
</tr>
<tr>
<td>Current community pharmacy contractual arrangement</td>
<td>Priority accorded to dispensing-related activities</td>
<td>“With most time spent in supervision (and checking) there is little time available for providing unpaid support-other than through MUR and NMS services.” Questionnaire ID12</td>
</tr>
<tr>
<td>Funding, remuneration and incentives to provide self-care support</td>
<td>“We are paid for dispensing prescriptions and some services e.g. MURs. Long term changes e.g. weight loss etc require I suspect considerable time with patients and it would divert time in a pharmacy away from the core business. It would need to be very well paid to be worth doing” Questionnaire ID23</td>
<td></td>
</tr>
<tr>
<td>Target-focussed services</td>
<td>“The community setting is based largely on meeting and exceeding targets on the number of MURs, NMS and the waiting times for walk in prescriptions. This limits the amount of time you can spend with each patient.” Questionnaire ID52</td>
<td></td>
</tr>
<tr>
<td>Skill mix and organisation of community pharmacy team</td>
<td>Inadequate staffing levels</td>
<td>“We are struggling to provide even the most basic service due to lack of staff. This is not only our employers fault but all pharmacy organisations who could influence staffing levels . We are tied to the dispensing process and the counter. We are fighting to survive each day.” Questionnaire ID22</td>
</tr>
<tr>
<td></td>
<td>Lack of support from employers</td>
<td>“Some employers run on minimal staff meaning pharmacist works with minimal support so doesn’t have time to spare for long consultations.” Questionnaire ID60</td>
</tr>
</tbody>
</table>
### 6.4.8.3 E3. Enablers

Respondents were asked “From the list below, which are the TOP 3 ENABLING FACTORS that most influence your ability to effectively support people with LTCs in the community pharmacy? Please read through all the options before ticking 3 boxes that apply”. Table 6.29 below shows the proportions of respondents that selected each enabler from the list provided. A total of 339 respondents made at least one selection. Of these, 92.3% (n=316) selected three enablers only although this did not affect the order of the top barriers.

Table 6.20: Enablers to providing self-care support of LTCs in community pharmacy (n=339)

<table>
<thead>
<tr>
<th>Answer</th>
<th>Response</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability of private consultation rooms</td>
<td>177</td>
<td>52%</td>
</tr>
<tr>
<td>Patients’ accessibility to community pharmacists/pharmacy</td>
<td>134</td>
<td>40%</td>
</tr>
<tr>
<td>Working relationship and communication with GPs</td>
<td>108</td>
<td>32%</td>
</tr>
<tr>
<td>Skill mix and organisation of community pharmacy team</td>
<td>93</td>
<td>27%</td>
</tr>
<tr>
<td>Access to educational resources and training for supporting LTCs</td>
<td>89</td>
<td>26%</td>
</tr>
<tr>
<td>Access to patient medical records</td>
<td>79</td>
<td>23%</td>
</tr>
<tr>
<td>Public trust and awareness of community pharmacy’s capabilities</td>
<td>68</td>
<td>20%</td>
</tr>
<tr>
<td>Ability to support and motivate patients to change behaviour</td>
<td>64</td>
<td>19%</td>
</tr>
<tr>
<td>Remuneration for providing support of LTCs</td>
<td>47</td>
<td>14%</td>
</tr>
<tr>
<td>Support from community pharmacy employers</td>
<td>47</td>
<td>14%</td>
</tr>
<tr>
<td>Current community pharmacy contractual arrangement</td>
<td>38</td>
<td>11%</td>
</tr>
<tr>
<td>Involvement in continuity of care after patients’ hospital discharge</td>
<td>30</td>
<td>9%</td>
</tr>
<tr>
<td>Support from pharmacy profession leadership</td>
<td>29</td>
<td>9%</td>
</tr>
<tr>
<td>Supervision regulations in community pharmacy</td>
<td>11</td>
<td>3%</td>
</tr>
<tr>
<td>Access to NHS IT infrastructure</td>
<td>9</td>
<td>3%</td>
</tr>
</tbody>
</table>
6.4.8.4 E4: Explanations for selecting enablers

Respondents were asked “Please provide a brief explanation of why you made your selections to the question above (Enablers)”. The response to this question was provided by a total of 127 of 339 respondents (37.5%) that selected at least one enabler in E3 above. The qualitative data collected were broad and covered almost all of the listed enablers. However, the content analysis focused on the five most selected enablers. A number of themes emerged from the analysis using the selected enablers as a predefined thematic coding structure. These findings are summarised in Table 6.30.
<table>
<thead>
<tr>
<th>Predefined categories</th>
<th>Specific themes</th>
<th>Exemplar quote</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability of private consultation rooms</td>
<td>Ensuring confidentiality and privacy</td>
<td>“The consultation room provides a comfortable, private location away from the distractions of the shop floor. It allows me to focus on the patient's needs.” Questionnaire ID52</td>
</tr>
<tr>
<td></td>
<td>Engaging patients to talk</td>
<td>“Having somewhere private to talk to a patient makes them more willing to discuss their medical conditions.” Questionnaire ID97</td>
</tr>
<tr>
<td></td>
<td>Community pharmacy provides improved access to healthcare</td>
<td>“Most areas have a community pharmacy (statistically, deprived areas have more access to community pharmacies and also have a larger proportion of their population with a LTC), many people come to us their pharmacist for advice as GPs are so hard to see these days” Questionnaire ID11</td>
</tr>
<tr>
<td>Patients’ accessibility to community pharmacists/pharmacy</td>
<td>Trust and approachability of community pharmacy</td>
<td>The majority of patients with LTCs visit the pharmacy on a regular basis and trust the advice given by the pharmacist. They find us more approachable than GPs.” Questionnaire ID31</td>
</tr>
<tr>
<td>Working relationship and communication with GPs</td>
<td>Mutual understanding and respect</td>
<td>“Being trusted by the GPs to act professionally and work in conjunction with their processes and advice in a major enabler especially where the patients are aware of this collaborative approach to their care and health outcomes” Questionnaire ID33</td>
</tr>
<tr>
<td></td>
<td>Building relationships requires time and diplomacy</td>
<td>“Having good relationships with local GPs takes a long time (I have worked in my pharmacy for 10 years) to develop. You have to earn their respect and prove your expertise in medicines. It also requires diplomacy when interacting with GPs to ensure that their short comings are not over highlighted causing GPs to clam up.” Questionnaire ID04</td>
</tr>
<tr>
<td>Skill mix and organisation of community pharmacy team</td>
<td>Division of labour and good team working</td>
<td>“Skill mix is the essential factor with all the team being focused on patient care and positive outcomes for the patient and being enabled to advise/act at their level of expertise - health care champions and counter staff are often the first point of contact and are known and trusted by patients and the public. Technicians provide advice on inhaler technique and medicine usage etc. It is not just the pharmacist.” Questionnaire ID100</td>
</tr>
<tr>
<td></td>
<td>Trained and trusted community pharmacy staff members</td>
<td>“I would have to make sure my staff are suitably trained to be able to take on more responsibility in the dispensary, so that the work flow and efficiency of the walk-in business did not suffer.” Questionnaire ID123</td>
</tr>
<tr>
<td>Access to educational resources and training for supporting LTCs</td>
<td>Support from employer</td>
<td>“Employers provide training materials and encourage support of LTC” Questionnaire ID109</td>
</tr>
<tr>
<td></td>
<td>More support for training to support behaviour change</td>
<td>My employers provide good training for LTC management but we could always do with more training on how to motivate patients to change” Questionnaire ID13</td>
</tr>
</tbody>
</table>
6.5 Discussion

6.5.1 Study strengths and limitations

This study was grounded in literature and was informed by the qualitative findings from pharmacists’ interviews undertaken in Work Stream Two (Chapter 5). The larger sample of community pharmacists provided data to converge and triangulate the findings from work stream 2 which helped to provide ‘completeness’ of the contributions of community pharmacy to providing self-care support of LTCs. The survey built on the theoretical framework of the core elements of self-care support that was developed by the researcher from existing self-care support literature and explored in-depth among community pharmacists in the qualitative interviews. While the use of an online mode to disseminate the survey provided a cheap and quick mode of reaching a large number of community pharmacists in a vastly diverse geographical population across the whole of England, it has its limitations. One of the limitations is sampling self-selection bias where community pharmacists who do not have or do not regularly check their emails, or prefer a paper format of the survey may have been systematically excluded. However, the vast majority of community pharmacists in England have email addresses as they require it for correspondences with the GPhC and/or to undertake their continuing professional development (CPDs). Furthermore, the CPPE database that was used to identify respondents has its limitations. Community pharmacists who do not engage regularly with the CPPE may have been excluded, while some others may not have an updated email address with the CPPE.

This study experienced other limitations relating to low response rate and the high rate of dropout/incomplete data. The response rates for online surveys using probability samples varies extensively depending on a combination of factors, but in general, response rates have been reported from lows of 4% – 6% to highs of 78% - 80%. The response rate in this study was 6%; however, a similar study that used the same sampling frame of community pharmacists (CPPE database) reported a response rate of 7%. Nonetheless, non-response bias could have been introduced into the study due to the large proportion of non-responders who may be systematically different from the responders. Some studies offer incentives such as vouchers and lotteries to improve response rate but this was not considered because of the limited financial resources available to the researcher. This study attempted to improve responses by sending the email link to the survey from a well-recognised email address (CPPE No-Reply email address) as well as by sending two reminders at two week interval. Despite the apparent low response rate recorded in this study, the sample size calculation as well as the opinion of an expert biostatistician suggested that responses generated from a minimum sample of 380 respondents would be sufficient for the purpose of the study. This study generated 609 responses although only 334 (55.6%) of these completed all sections of the survey. The high rate of dropout/incomplete responses to the survey is another limitation of this study. A number of reasons could have been responsible for this high dropout rate. Firstly, the survey could have been too long, resulting in response fatigue where respondents just dropped out.
along the way. Secondly, it could have been because the questions in each section required/requested a ‘forced response’, meaning that respondents were unable to skip to subsequent questions if they did not provide responses to the preceding question/section. This may have prevented respondents who did not want to complete some of the sections to abandon the survey. Web-based surveys are known to have a higher dropout rate when compared to postal surveys.\textsuperscript{566}

In general, lower response rates have been reported with online surveys when compared to mail/postal surveys,\textsuperscript{568, 569} however, studies have also shown comparable characteristics of respondents in terms of age, gender, income, education and health status.\textsuperscript{566, 570} A further drawback of this study was that a comparison between the study sample’s characteristics could not be adequately compared with the data on community pharmacist’s population the GPhC register. This is because the available data about registrants on the GPhC register\textsuperscript{528, 542} focused on the population of all pharmacists, rather than community pharmacists. Furthermore, the demographic data collected in this study did not account for data on respondents’ ethnicity due to a technical glitch in the software used to design and administer the survey.

The questionnaire used in the survey had some limitations. During the design phase of the study, it was recognised that it would be a challenge to capture the data in section D2, which required respondents to rate how much they had engaged in the statements relating to self-care support activities in their last day of working in community pharmacy. The main limitation discussed was the differences and uniqueness of everyday community pharmacy practice, where the last day in practice could be a completely different experience from the penultimate day or week, particularly among locum pharmacists working in different settings. However, it was considered as the most appropriate way of capturing respondents’ views in order to reduce recall bias and social desirability. Hence, while the experience of the last day of working may not truly reflect the usual practice for some community pharmacists, this data aimed to provide a snapshot of how much self-care support activities are undertaken in the typical day for community pharmacists across a large, diverse area of practice.

### 6.5.2 Summary of findings

The key findings from this study are discussed in the context of the findings from the pharmacists’ interviews in Work Stream Two (Chapter Five) which, in combination with the literature, informed the questionnaire used in this study. The findings are summarised under the four broad sections that reflects the main areas of the questionnaire used in the study; current status of managing LTCs in community pharmacy; community pharmacists’ conceptual understanding of self-care; components of self-care support in community pharmacy using the theoretical framework of the five core elements of self-care support of LTCs; and the barriers and enablers influencing self-care support. The wider
implications of the findings from this study are discussed in the general discussion chapter (Chapter 7).

6.5.2.1 Supporting people with LTCs in community pharmacy

Community pharmacy’s traditional role in the management of LTCs has been the safe, effective and appropriate supply of prescribed medicines to patients and the provision of appropriate information and advice about the medicines to improve adherence and other outcomes. While patients with LTCs, visiting the community pharmacy, have the opportunity to interact with a community pharmacist when collecting their medicines, there is reduced opportunity for patients that are supplied their medicines via home delivery. Community pharmacists in this study indicated that, on the average, about three-quarters of their patients with LTCs collect their prescribed medicines in person (or by proxy, through family and carers), while the rest were supplied via home delivery services. This finding supports the finding from the pharmacists’ interviews, where it was found that home delivery services by community pharmacies were on the increase, with patients interacting more with delivery drivers than with the pharmacist. There is currently a paucity of research studies that have explored the implications of community pharmacy home delivery services to patients’ interactions with pharmacists as well as access to healthcare professionals, health and medicines information and general health status/outcomes.

This study showed that that there are currently many opportunities for community pharmacy to interact and support people with LTCs with a wide range of medicines optimisation, public health services and health checks and monitoring services are provided across many community pharmacies. The main medicines optimisation services for LTCs in England (MURs and NMS) were provided by most of the respondents in this study. This is similar to the general uptake of these services among community pharmacies in England; 92% of respondents provided the NMS in this study compared with 90% of community pharmacies in England providing the NMS as of January 2014. Further analysis in this study showed that the most common opportunities taken by most respondents to talk to, and interact with, patients with LTCs was during a MUR or NMS consultation, and to a lesser extent, when handing out new medicines, when providing a health monitoring service and when providing a lifestyle intervention. The majority of respondents indicated that they only sometimes or seldom took the opportunity to talk to patients with LTCs when handing out regular medicines. This finding supports the findings from the pharmacists’ interviews, where pharmacists believed that patients on regular/repeat medicines did not require much support. Other studies have shown that patients receiving new medicines are more likely to be counselled compared to patients on regular/repeat medicines.  

The number and types of LTC services and activities offered by community pharmacies in this study was found to be similar across different community pharmacy settings (e.g. multiples vs
independents) as well as across different locations (e.g. high street versus health centre/GP pharmacies). However, it was found that the number of services provided to people with LTCs varies according to the geographical location of the community pharmacy, with community pharmacies located in rural areas providing less services compared to those that were in towns and cities. This may be a reflection of the characteristics of the LTCs populations living in these geographical locations. Furthermore, the opportunities taken to interact with and support people with LTCs were compared with respondents’ demographic characteristics to examine whether there were any characteristics of respondents that might be important to consider. The opportunities to support people with LTCs when handing out regular medications was used to explore these relationships because this was the only option that had the lowest proportion of respondents indicating that they frequently or always (n=143, 31.6%) to support people with LTCs. However, it was found that female community pharmacists were more likely to provide support to patients when handing out a regular medication compared to male community pharmacists. Similarly, community pharmacists that indicated that they frequently or always provided support to patients when handing out a regular medication were more likely to be providing more LTC services/activities.

6.5.2.2 Community pharmacists’ conceptual understanding of self-care

Community pharmacists in this study were asked to rate their understanding of ten statements relating to principles of self-care of LTCs and one statement on their overall understanding of self-care of LTCs. This analysis provided a more detailed insight into how self-care is conceptualised in community pharmacy vis-à-vis the findings from the pharmacists’ interviews in Work Stream two. Ordering of the ten statements relating to the principles of self-care of LTCs according to decreasing level of agreement by respondents provided some insights into their understanding of self-care. Almost all respondents agreed with the statements on the broader patient-centred principles of self-care of LTCs, which focussed on patients getting actively involved in consultations, improving their knowledge and understanding to make informed decisions, making lifestyle changes, improving their confidence to make change (self-efficacy) and adhering to medications and treatments. However, there were mixed agreements on statements relating to the patient empowerment principles of self-care such as patients taking the lead role and overall responsibility for managing their LTCs and patients telling healthcare professionals how they wanted to be supported. Further down the statements, there were disagreements by respondents on the more idealistic principles of self-care that required a paradigm shift in the healthcare professional-patient relationship where patients become more independent of healthcare professionals and where they actively seeking out the information that was needed to manage their own LTCs. These findings corroborate the views that community pharmacists, as with many other healthcare professionals, still hold paternalistic beliefs and values in their approach to self-care of LTCs.
Analysis of respondents' rating of their overall understanding of the concept of self-care of LTCs showed that almost half (42%) of community pharmacists indicated that they did not have a good understanding of self-care of LTCs. Hence, further analysis was undertaken to compare respondents that indicated that they had a good overall understanding of self-care and those that indicated otherwise, to examine the associations with other variables. The analysis showed that respondents who perceived to have an excellent overall understanding of self-care were more likely to agree with statements relating to the patient empowerment and more idealistic principles of self-care. This may suggest that community pharmacists' understanding of self-care of LTCs is related to the values and beliefs that they hold about the principles of self-care; those that do not have a good understanding of the concept of self-care may be more likely to be paternalistic in their approach to providing self-care support.

In relation to the opportunities taken to interacting with and support people with LTCs, respondents that perceived themselves as having an overall excellent understanding of self-care were more likely to indicate that they frequently or always supported patients with LTCs when handing out regular and new medications, when undertaking a NMS consultation and when providing a lifestyle intervention or a health check/monitoring service. Whereas, the opportunities to support people during a MUR consultation was not related to respondents' overall understanding of self-care. The implications of these findings are that community pharmacists' understanding of self-care may predict the opportunities that they take to support self-care for people with LTCs. Hence, improving the knowledge and understanding of community pharmacists on the principles of self-care may help to improve the ways that they provide self-care support for people with LTCs.

The length of time that respondents had been working in community pharmacy practice, i.e., their experience, was found to be associated with their perceived overall understanding of self-care. Community pharmacists that had more experience and spent more time working in community pharmacy (median = 20 years) were more likely to indicate that they did not have a good understanding of self-care. This could be due to changes to the pharmacy undergraduate curriculum in recent times where there has been increasing focus on patient-centred principles during consultations in community pharmacy. Another explanation of this finding could be related to the reluctance by older generation community pharmacists to give up their traditional dispensing roles and to adapt changes of patient-centred care of LTCs in community pharmacy. This explanation is supported by the findings for the qualitative interviews of community pharmacists where it was found that some pharmacist held the belief that the traditional dispensing/supply functions of community pharmacy should remain the dominant feature of community pharmacy practice.
6.5.2.3 Operationalising self-care support

This study aimed to provide further insights into how self-care support is operationalised in community pharmacy by examining ‘how important’ and ‘how much’ community pharmacists engaged in self-care support activities. The findings from respondents’ perceived importance of self-care support activities in community pharmacy were analysed and explored from two levels; the first level explored whether community pharmacy should take the lead, major, minor or no role in providing these self-care support activities; while the second level explored the priorities attributed to each activity, i.e. whether it is a high, medium or low priority for community pharmacy. A cross-examination of the findings from these two levels of analysis, i.e. role for community pharmacy and priority attributed to each activity, produced a matrix (Appendix 22) which helped to identify and provide more insight into how self-care support in community pharmacy is operationalised using the framework of the five core elements.

Self-care information and advice

This study found that community pharmacists viewed the provision of information and advice on the use of medicines as a lead role and of high priority for community pharmacy, and also that they engaged in this most of the time in their last day of working in community pharmacy. This finding supports the findings from the qualitative interviews and provides further evidence for the medicines-focussed approach to providing self-care support of LTCs in community pharmacy. The use of behaviour change techniques to help patients change behaviours was viewed as a major role, but of a low priority area for community pharmacy, although respondents indicated that did not engage in these activities in their last day of working. Again, these findings support the findings from the qualitative interviews where community pharmacists indicated that they generally did not use any behaviour change techniques in routine interaction with patients, except when providing an activity such as stop-smoking or weight management service that required them to use a behaviour change technique as part of the service. Supporting patients to deal with the emotional issues associated with living with a LTC was viewed as a minor role, of a low priority area and not undertaken in their last day of working, supporting the qualitative interviews that found that community pharmacists did not emotional support for LTCs because they felt that they did not have the confidence, knowledge and expertise to provide this support in community pharmacy.

Furthermore, the findings indicated that the majority of the self-care support activities relating to providing information and advice on making lifestyle changes were viewed as a major role but of medium priority for community pharmacy, with the exception of providing information and advice on stopping smoking, which was viewed as a major role and of high priority for community pharmacy. Respondents indicated that in their last day of working in community pharmacy, they provided information and advice on making lifestyle changes little or none of the time. What this suggests is that although information and advice were viewed as a major role for community pharmacy, community pharmacists do not routinely engage in providing these in their usual everyday practice.
This finding supports the qualitative interviews with community pharmacists where they indicated that they provided lifestyle information and advice opportunistically rather than proactively. This is further evidenced by the lower priority given to making an assessment of a patient’s needs before and after providing them with information and advice, in addition to the fact that they indicated that they did not engage in these in the last day of working. The findings from a recent qualitative study on community pharmacists’ experience of providing lifestyle advice to patients with cardiovascular disease were similar.466

**Self-care skills training and support**

The findings indicated that the self-care support activities relating to skills training and support were viewed as a major role and of a high priority area for community pharmacy with the exception of recommending and/or supplying self-testing devices to patients, which was viewed as a major role but of medium priority for community pharmacy. However, respondents indicated that in their last day of working in community pharmacy, they engaged in skills training and support little or none of the time. These findings provide a clearer insight into the qualitative findings from work stream 2, where skills training and support of LTCs was described as an area where community pharmacy do not currently engage in.

**Self-care support networks**

The findings showed that signposting patients to self-help groups was viewed as a major role and a high priority area for community pharmacy, whereas encouraging and helping patients to go to a specific self-help group/class, and to get support from friends, family, or the community were viewed as a minor role and low priority area for community pharmacy. Respondents, however, indicated that they engaged in these self-care support network activities little or none of the time in their last day of working in community pharmacy. This finding supports the findings from the qualitative interviews that community pharmacists’ attitude to signposting patients as more reactive than proactive. This inference was made because respondents indicated that signposting patients to local or national self-help groups which essentially involved displaying leaflets and posters (not proactive) in community pharmacy was indicated as a major role for community pharmacy. Whereas, the more proactive form of signposting which involves encouraging (and helping to contact and make plans) patients to go to a specific group or class was indicated as a minor role for community pharmacy.

**Self-care technology**

The findings indicated that the use of self-care support technology, in the form of informing patients about the use of, and interacting with them through internet or mobile applications, was viewed as a
minor role and a low priority area for community pharmacy. Similarly, it was also found that respondents did not engage in these activities in their last day of working in community pharmacy. This finding is not supported by the findings from the qualitative interviews where it was found that, although community pharmacists were not currently making use of these forms of technology in self-care support, they thought that it could be an important role for them in the nearest future.

**Collaborative care planning**

The findings indicated most of the different aspects and process collaborative care planning were viewed as a major role, but of a medium priority for community pharmacy. However, it was found that respondents engaged in most of these activities little or none of the time in their last day of working in community pharmacy. The exception to these findings was the collaborative care planning activity related to asking patients to discuss problems with their medicines and its effects, which was viewed by respondents as a lead role and a high priority areas for community pharmacy, in addition to the views that they engaged in this activity most of the time in the last day that they worked in community pharmacy. This finding further reinforces the current medicines-focused approach to self-care support of LTCs in community pharmacy.

### 6.5.2.4 Barriers and enablers to self-care support of LTCs

Community pharmacists in this study identified the barriers and enabling factors that influenced their abilities to provide self-care support of LTCs. Many of the factors selected as barriers were also selected as enablers. The qualitative data collected from respondents about their reasons for selecting these barriers and enablers provided more insights into the data. These findings complemented and helped to illuminate the findings from the qualitative interviews of community pharmacists in Work Stream Two. The five most selected barriers were: access to patient medical records; remuneration for providing self-care support; working relationship and communication with GPs; current community pharmacy contractual arrangement; and skill mix and organisation of the community pharmacy team. These barriers are well recognised in literature and policy, but the content analysis on the explanation for selecting these barriers provided more insight into how community pharmacists perceived them. For example, access to patient medical records was found to make community pharmacists feel like they were ‘working blindly’ with patients, reliant on patients for medical records which may be unreliable and could lead to making uninformed decisions with the patient. Similarly, respondents that viewed the current community pharmacy contractual arrangement as a barrier indicated that the current contract tied them to the dispensary because of the way they were remunerated which focussed on meeting targets for financial gains, rather than meeting patient outcomes targets.
The enablers to providing self-care support of LTCs highlighted some of the strengths of community pharmacy, which could be built upon. The five most selected enablers identified from this study were; availability of private consultation rooms; patients’ accessibility to community pharmacists/pharmacy, working relationship and communication with GPs; skill mix and organisation of community pharmacy team; and access to educational resources and training for supporting LTCs. Both working relationship and communication with GPs and skill mix and organisation of the community pharmacy team were selected in the top-five barriers and enablers, but the content analysis of respondents’ reasons for selecting both provided a better understanding to the data. As a barrier, working relationship and communication with GPs was selected because of lack of support in promoting the use of pharmacy by GPs and limited direct communication with GPs, whereas, as an enabler, respondents described mutual trusts and respect in their working relationships, which required diplomacy and time to be built. Skill mix and organisation of community pharmacy team was selected as a barrier because of inadequate staffing levels and lack of support from employers, whereas, as an enabler, some respondents indicated that they had good team working and division of labour as well as well-trained and trusted team members.
7. Chapter Seven: General discussion

7.1 Introduction

This chapter brings together, and discusses the findings from all the research work undertaken in this programme of work. It focuses on describing how the research process addressed the overall aim and objectives of the programme of work and discusses the original contributions it makes to extending existing knowledge on self-care support in community pharmacy and the wider literature. First, a summary of the overall programme of work is provided followed by a reflection on its overall strengths and limitations. Following this, the main findings and implications for practice are discussed in context of existing policy and research literature. This then leads on to a discussion of key areas and recommendations for practice, policy and further research in the conclusion and recommendations chapter (Chapter 8).

7.2 Summary of overall programme of work

The main aim of this PhD programme of work was to explore the place and contributions of community pharmacy in self-care support of long-term conditions (LTCs). During the early exploration of the background literature, a dearth of published articles on self-care support as a distinct concept in the management of LTCs was found in the pharmacy literature. A preliminary scoping review\textsuperscript{260} of the literature (Chapter Three) was undertaken to identify and describe the main components of self-care support of LTCs from the large body of published literature and policy documents to guide and focus the development of the programme of work. This review mapped the breadth and depth of the self-care support literature to gain an understanding of how self-care support of LTCs is conceptualised in the wider literature. The findings from the review captured and synthesised the overarching components of self-care support from LTCs interventions in the literature into a single framework. This theoretical framework consisted of the five core elements of self-care support of LTCs; collaborative care planning which was at the heart of the framework, self-care information and advice, self-care skills support and training, self-care support networks and self-care technology (Figure 7.1). This preliminary work contributed to understanding and investigating how self-care support as a concept in the management of LTCs was conceptualised and practised in community pharmacy. It helped to inform a focussed approach in the design of the main research work undertaken in this programme of work and was used to structure the data collection, data analysis and presentation of the findings in the three main work streams.
The primary research work undertaken employed a mixed methods research design using the sequential exploratory strategy. The mixed methods design consisted of qualitative and quantitative methods - qualitative methods were employed in Work Stream One (patients’ interviews) and Work Stream Two (pharmacists’ interviews), which informed the quantitative methods employed in Work Stream Three (pharmacists’ survey). The patient interviews (chapter four) explored the perspectives of patients with LTCs in England and Scotland on how they engaged in self-care and how they viewed and used community pharmacy for self-care support of their LTCs. The pharmacists’ interviews (chapter five) explored the perspectives of community pharmacists in England and Scotland on how they conceptualised and operationalised self-care support of LTCs. The pharmacists’ survey (Chapter Six) was informed by the findings of the pharmacists’ interviews as well as the literature and examined key concepts and themes around self-care support of LTCs across a larger sample of community pharmacists. Each of the three work streams of the programme of work had specific aims and objectives that contributed to addressing the overall aim and objectives of the PhD programme of work. The findings from all three work streams, which are discussed in this chapter, contributed to extending current knowledge and understanding of community pharmacy’s place and contributions to the management of LTCs.
7.3 Strengths and limitations

The strengths and limitations relating to the individual Work Streams in this programme of work have already been discussed in the relevant chapters. The patients’ interviews (Chapter Four) provided the often unheard voice of patients in research to add to the ‘completeness’ of this programme of work. The pharmacists’ interviews (Chapter Five) provided insights into how self-care support of LTCs is conceptualised and operationalised in community pharmacy. The qualitative design of both the patients and pharmacists interviews had the limitations of generalising findings due to the small sample size. The pharmacists’ survey (Chapter 6) expanded some of the key concepts and themes from the pharmacists’ interviews to provide a more generalizable account of community pharmacy’s contributions to the self-care support paradigm. A key limitation of the survey was however the low response and completion rate of the survey. The remaining part of this subsection reflects on the overall strengths and limitations of the programme of work.

7.3.1 Overall strengths

This programme of work explored the under-researched area of self-care support as a distinct concept in the management of LTCs in community pharmacy. The work streams of this programme of work provided empirical data to address this research gap and extended the knowledge base of self-care support of LTCs. This is the first time that self-care support as a distinct concept in the management of LTCs in community pharmacy has been explored among community pharmacists and patients with LTCs. The findings contributed considerably to understanding the perspectives of both patients and community pharmacists and have fed into current debate of how community pharmacy’s well-recognised potential in the management of LTCs could be harnessed through self-care support.

The preliminary work undertaken to scope the literature and identify the main components of self-care support of LTCs was a key strength of this programme of work. The theoretical framework, consisting of the five core elements of self-care support of LTCs provided a theoretical grounding, which allowed the multidimensional and complex concept of self-care support of LTCs to be broken down into granularly and explored in minute detail among patients with LTCs and community pharmacists. The scoping review showed that, although, there is a large body of literature that have described many different components and aspects of self-care support of LTCs, there are currently no widely accepted frameworks that brought together the key elements of self-care support of LTCs. The core elements of self-care support in this framework were identified through a rigorous process that combined and modified components of existing frameworks. To the best of the researcher’s knowledge, this is the first time that a theoretical framework of self-care support of LTCs has been used in community pharmacy research, and is considered a novel aspect of this programme of work.

The mixed methods design of this programme of work was also a key strength, capitalizing on the strengths and minimising the weaknesses of both qualitative and quantitative methods. The
qualitative methods employed semi-structured interviews to allow a detailed exploration of the perspectives of 48 participants (24 patients with LTCs and 24 community pharmacists), providing considerable breadth and richness of the data from which the findings are based. The quantitative methods employed a cross-sectional design using a survey questionnaire to complement and triangulate the findings on the key concepts and themes that emerged from the qualitative work, across a larger sample of community pharmacists.

The explicit acknowledgement and description of the philosophical stance taken by the researcher is a further strength of the research, as it provided a clear description of the worldview of the researcher as well as provided a clear justification for the data collection and analyses. Many qualitative studies, particularly in health research have been criticised for not being explicit enough in providing the philosophical justification and rigour of the research methods employed.579

Finally, one of the main strengths of this programme of work that sets it apart from other studies was the inclusion and exploration of the often ‘unheard’ patient voice in the research. Qualitative healthcare research has often been criticised for not incorporating patients’ views from patients’ perspectives into research.238-241 The patient-centred approach taken in this research added to the ‘completeness’ of the research programme and provided insights into patients’ perspectives and use/lack of use of community pharmacy for self-care support.

7.3.2 Limitations

The limitations of this programme of work have been acknowledged and described in the three different work streams in the relevant chapters of this thesis. While the theoretical framework of the core elements of self-care support is a novel and was a key strength of this programme of work, it has some limitations that need to be acknowledged. There are some concepts and terminologies related to self-care support of LTCs that are recognised as distinct in relation to the management of LTCs that were not explicitly described and articulated within this framework. Some of these concepts include; patient empowerment,573, 574, 576 patient motivation and activation78, 138, 580 and continuity of care.581 However, these concepts are implicit and embedded within the framework and were discussed by participants in this programme of work.

An overarching limitation of this programme of work was that the perspectives of other healthcare professionals, particularly GPs and nurses, who are important stakeholders in self-care support of LTCs in community pharmacy, were not included. Insights from GPs and nurses on the views and perspectives of patients and community pharmacists could have provided a better understanding of how self-care support of LTCs could be better operationalised in community pharmacy, since they (GPs and nurses) are the ‘gatekeepers’ of patients in the NHS. While the researcher considered including GPs and nurses’ perspectives in the qualitative studies, he was faced with significant
logistical and practical challenges and this was considered unfeasible within the timeframe of his PhD programme of work. This could be a potential future area of research.

Additionally, the perspective of community pharmacy support staff was not included in this programme of work. The findings from patient interviews showed that many patients interacted more, and built stronger relationships, with pharmacy support staff than community pharmacists. Community pharmacists also suggested that support staff played important roles in supporting patients with LTCs, for example, many support staff were trained to provide lifestyle advice and ‘triaging’ patients that will benefit from seeing the pharmacists, while some others were trained to deliver lifestyle interventions such as weight management and stop smoking services. An understanding of the perspectives of community pharmacy support staff on self-care support of LTCs would have provided valuable insights into how the community pharmacy team as a whole could be potentially mobilised to support patients. Again, the limited time-frame of the research programme of work was a key barrier to undertaking subsequent research with community pharmacy support staff. This is recommended as an area for future work.

7.4 Synthesis of the main findings

The summary of the main findings from the three work streams of this programme of work are synthesised and summarised here, in the context of existing research and policy literature. The discussion is provided under the following broad sub-sections;

1) Current state of LTCs management in community pharmacy;
2) Meaning of self-care of LTCs;
3) Self-care support of LTCs – mapping patients’ and pharmacists’ perspectives to the theoretical framework.

7.4.1 Current state of LTCs management in community pharmacy

Community pharmacy is often described as the healthcare profession that is most accessible to patients with LTCs due to the fact that many patients frequently visit or make regular contact with pharmacies when collecting their prescribed medicines.\(^{167, 171, 534, 582}\) This programme of work highlighted four main points of interaction between community pharmacy and patients with LTCs as; 1) during the supply of prescribed medicines through the dispensing and repeat/serial dispensing services; 2) during a nationally contracted service such as the MURs and NMS in England, and the CMS and PHS in Scotland; 3) during a locally contracted public health service, such as smoking cessation, weight management and health check services; and 4) when patients proactively seek help and advice from the community pharmacy.
Community pharmacy's traditional role in the management of LTCs has been the safe, effective and appropriate supply of prescribed medicines to patients and the provision of appropriate information and advice about the medicines to improve adherence and reduce wastes. Patients in this programme of work believed that community pharmacy’s role in the management of their LTCs were mainly as the supplier of their prescribed medicines. Community pharmacists agreed that the supply of prescribed medicines was the central part of their professional roles, but that they also counselled and advised patients as necessary when handing out their medicines. Studies that have examined community pharmacists’ self-perception of their professional role found that pharmacists primarily viewed themselves as dispensers of medicines and not patient-centred practitioners. Both patients and pharmacists from this programme of work agreed that very little interaction took place when prescribed medicines were being handed out to patients on regular medicines. For patients with changes or new medicines, both patients and pharmacists suggested that some interaction occurred, which usually involved the pharmacist coming from behind the counter to have a ‘quick chat’ to provide instructions and directions on the use of medicines. Some pharmacists however indicate that they sometimes offered the patient to attend a NMS consultation. It was found that the medicines supply process described by community pharmacists followed a transmission model, which is a linear, one-way process that involved the community pharmacy staff handing out the medicines to patients with little or no information and advice provided. Observational studies that have examined the prescribed medicines collection process have reported low counselling rates when patients collect their prescribed medicines. This programme of work adds to the findings from these observational studies by providing insights from the pharmacists and patients’ perspectives about the medicines supply process.

In addition to the supply of medicines, community pharmacists in this programme of work indicated that the main LTC services in the community pharmacy contractual framework (CPCF) – the MUR and NMS in England and the CMS in Scotland, provided the main opportunities for interacting with patients with LTCs. Community pharmacists believed that these services essentially provided a structure to the traditional patient counselling activities that they had already been providing to patients about medicines use. Patients in this programme of work appeared to have a very low awareness and uptake of these LTCs services. Studies that have examined patients’ perceptions of LTCs services provided in community pharmacy have reported similar findings. The low awareness and uptake of LTC services in community pharmacy could be attributed to the mind-set of patients; believing that the primary role of community pharmacy is to supply their medicines and that they would revert to their GPs or other sources for any concerns relating to their LTCs. However, the few patients in this programme of work that had utilised a LTC consultation service such as the MUR described it as a structured, ‘tick-box’ affair/interaction where they were asked predefined and standardised questions, rather than a focus on identifying and addressing any problems or concerns that they may have with their LTCs. Again this finding has been reported in qualitative studies that have examined the MUR consultation in more depth. These findings suggest that the main LTC services provided in community pharmacy are not patient-centred, but medicines-focused and may
not be positioned to address the needs of patients with LTCs. Community pharmacists in this programme of work recognised that the inherent structure of many of the LTC services, for example having a MUR consultation just once a year, may significantly limit their contributions to providing proactive, patient-centred care. Studies have shown that community pharmacists recognise MURs as an opportunity to extend their roles and improve patient care but have identified other barriers such as availability of consultation rooms, lack of time and support staff and GP's opinion of the service. The recognition that the structure of these services may hinder community pharmacy’s contributions to improving patient care has been raised frequently in the research literature and policy, although there are ongoing debates as to how this could be addressed. The RPS commission on future models of care particularly highlighted the need for community pharmacists to challenge their traditional dispensing roles and responsibilities, develop a coherent LTC strategy and expand its caregiving roles to become more clinically-focussed healthcare professionals.

In addition to the main LTC services, there are local services that community pharmacies provide that target the general public, in addition to patients with LTCs. Some of these services include lifestyle interventions such as stop smoking schemes, weight management programmes, public health promotion services, NHS health checks and health-monitoring services (e.g. blood pressure and blood sugar testing), etc. Community pharmacists in this programme of work indicated that they took the opportunities to support patients with LTCs when providing these services, although it was found that many of these services were often provided separately from, and not linked to, the main LTC services. Furthermore, pharmacists indicated that these services were often provided by trained staff other than the community pharmacists. In addition, it was found that community pharmacists were often not proactive in offering these services to patients during the MUR/NMS/CMS consultation and only offered it when the opportunity arose. This means that the value in providing these services to support LTCs may be lost since they are often provided as a reactive, one-off, fragmented intervention as opposed to a holistic and inclusive ‘package’ for the management of LTCs. Patients with LTCs in this programme of work were found to have very low awareness and uptake of many of these community pharmacy services, particularly those that targeted healthy lifestyles discussed by patients, such as health checks and stop smoking and weight management services. However, the few patients that were aware and had utilised some of these services, particularly the stop smoking service, reported a favourable contribution and support provided by community pharmacy. Studies of community pharmacy services that promote healthy living found strong evidence of community pharmacy contributions in interventions such as stop smoking services and weight management services.

Community pharmacy users including patients with LTCs have long been known to value the roles of community pharmacy in relation to providing advice and the management of minor and common ailments through the use of OTC medicines. With LTCs on the other hand, patients appeared to be reluctant to view and use community pharmacy as a source of support in the ongoing management of their LTCs. However, most patients acknowledged that community pharmacy was a resource...
where they could receive support or general advice for LTCs, but there was a general consensus that community pharmacy was perhaps, used only as a last resort if other options such as the GPs, nurses, online resources, family/carers and friends, etc., were unavailable. In a recent study that explored public trust in services provided by community pharmacists relative to GPs,\textsuperscript{589} it was found that the public had greater trusts in GPs than in pharmacists; pharmacists were considered primarily involved in medicine supply and there was low awareness of pharmacy services. Patients’ perspective in this programme of work were found to be similar, although there was also the finding that community pharmacy appeared ‘invisible’, even among patients that were aware of services that they could benefit from. Public trust and awareness of community pharmacy capabilities, and uptake of community pharmacy services will need to be addressed if community pharmacy to deliver its potential. This is well-recognised\textsuperscript{212} and this will require community pharmacy to develop a clear ‘marketing’ strategy that will require the support of the wider world; health and social care professionals, policymakers and the general population.

### 7.4.2 Meaning of self-care of LTCs

Self-care is a socially constructed concept that has a variety of meanings to different patients in different contexts.\textsuperscript{518,590} It is a part of the everyday lives of people living with LTCs and the ways that they engage in it is often shaped by their individual experiences of living with the LTC and the relationships that they develop along the way.\textsuperscript{57} The essence of undertaking self-care by patients with LTCs however is to achieve some level of normality in their physical, psychosocial and emotional lives and wellbeing.\textsuperscript{591} The patients who took part in this programme of work agreed with the multidimensional concept of self-care, indicating that it was a fundamental and unavoidable part of their daily living. Patients engaged in self-care by taking their medicines, making lifestyle changes, monitoring lifestyle changes, seeking out information about their LTCs and visiting their healthcare professionals for scheduled or unscheduled health checks. On the other hand, findings from the pharmacists’ interviews and survey showed that community pharmacists’ conceptual understanding of self-care was mixed with different views of what self-care by patients with LTCs entailed. While pharmacists generally understood self-care as activities and behaviours that patients engaged in to manage and live with their LTCs, it was found that many community pharmacists had paternalistic views on self-care, particularly with regards to self-care being a paradigm shift in the healthcare professional-patient relationship. This finding supports previous research that showed that most healthcare professionals including community pharmacists still hold a paternalistic beliefs and values in their approach to self-care of LTCs.\textsuperscript{361,484,575,578} Furthermore, community pharmacists’ view of self-care was found to be uni-dimensionally focused on medicines as opposed to the broader, multidimensional views held by patients.

The self-care behaviours and activities that patients engaged in were described in a variety of ways with differences in patients’ reasons and motivations to change behaviours. Behaviour change
among patients with LTCs has been well-explored in the literature and evidence suggests that self-care behaviours by patients with LTCs is developed via a complex combination of patients’ beliefs and values, and their interactions with social networks, consisting of both healthcare professional and non-healthcare professional sources.\textsuperscript{592,597} Patients in this programme of work engaged in self-care behaviours and activities via a combination of their personal beliefs, experiences and interaction with their support networks. Many patients cited healthcare professionals as an important network that provided support with behaviour change. However, while specialist nurses and practice nurses in GP practices were identified by patients as the healthcare professionals that most supported them in improving and engaging in self-care behaviours, there was a consistent suggestion that healthcare professionals in general did not provide sufficient support for self-care. A recent systematic review that examined the perspectives of patients with heart failure on self-care found that while patients could recall self-care advice provided by healthcare professionals, they were unable to integrate this knowledge into their daily lives.\textsuperscript{592}

There was however, very little or no mention by patients of community pharmacy as a healthcare professional that played any significant role in supporting self-care behaviour change. According to community pharmacists in this programme of work, support to help patients change behaviours to engage in self-care was provided primarily via information and advice which was believed would enable patients to undertake self-care. While information provision may help to improve patients’ knowledge and understanding on how to care for their LTCs, there is clear evidence that providing information and advice alone is insufficient in effecting and sustaining behaviour change.\textsuperscript{259} Many successful self-care support interventions are grounded and underpinned by theories of human behaviour\textsuperscript{45} and incorporate active behaviour change techniques such as cognitive behavioural therapy, behaviour change counselling and motivational interviewing in helping to change patient behaviour.\textsuperscript{134, 531} It appeared that community pharmacists do not prioritise the use of targeted behaviour change techniques in their routine interactions with patients with LTCs, except when they providing an intervention such as weight management and smoking cessation service. A recent qualitative study found that GPs and nurses also do not prioritise behaviour change techniques in their consultations with patients, leaving patients’ needs and motivations unaddressed.\textsuperscript{447} However, studies have shown that with extra training, behaviour change approaches can be incorporated into routine community pharmacy communication with patients.\textsuperscript{598}

7.4.3 Self-care support of LTCs – mapping patients’ and pharmacists’ perspectives to the theoretical framework

The theoretical framework of the five core elements of self-care support was used to structure the data collection, analysis and presentation of findings in this programme of work. This framework helped to provide more granular insights and understanding of how self-care support is, or could be operationalised in community pharmacy from the pharmacist and patient perspectives. The findings
from pharmacists’ and patients perspectives of the core elements of self-care support have been discussed extensively in the different chapters. The discussion here aims to identify the gaps and opportunities for community pharmacy to improve its contribution to self-care support of LTCs.

7.4.3.1 Self-care information and advice

This programme of work highlighted three different types of self-care information and advice; – LTC-specific, medicines-related and lifestyle information and advice. Community pharmacists suggested that they were already engaged in self-care support of LTCs which they did by providing patients with the relevant information and advice needed to undertake self-care. Medicines-related information and advice was prioritised by community pharmacists over all other types of information and advice as the most important and relevant to support patients with their LTCs. Whereas, condition-specific and lifestyle information were viewed as secondary to medicines-related information, and were only provided opportunistically to patients. Patients with LTCs, on the other hand, suggested that they did not find the need to obtain medicines-related information and advice from community pharmacy as they relied on other healthcare professionals (e.g. the prescribing GPs and nurses) as well as on the patient information leaflets in the medicines pack. Furthermore, patients were consistent in their views that they did not receive LTC-specific and lifestyle information and advice from community pharmacy. A recent study that explored the support networks that contributed to improving patients’ knowledge and understanding of asthma found that patients did not view community pharmacy as a place where they could receive asthma-related and lifestyle information and advice. This programme of work further found that the approach taken by community pharmacy to provide self-care information and advice to patients with LTCs followed the traditional biomedical patient education approach which is didactic rather than self-care education approach which is patient-centred. However, patients in this study also indicated that other healthcare professionals (doctors and nurses) adopted the traditional biomedical patient education approach in providing information and advice. Some studies have shown similar findings that other healthcare professionals also use the traditional biomedical patient education in their consultations with patients.

7.4.3.2 Self-care skills training and support

Self-care skills training and support is a part of self-care education where patients are actively supported to learn and acquire specific skills that empower them to live and care for their LTCs. Self-care skills for LTCs are very condition- and individual-specific and may include self-monitoring and self-testing skills, coping skills to respond to changes in LTC signs and symptoms, self-administration of certain medicines such as inhalers, and medicines adherence and ability to effectively use prescribed medicines. Although community pharmacists’ viewed self-care skills training and support as a major role for community pharmacy, their involvement appeared to be
limited and opportunistic and not incorporated into routine practice. Patients' views of the roles of community pharmacy in self-care skills training and support reinforced these findings as community pharmacy was not considered as a resource for developing self-care skills. With self-monitoring and self-testing for example, patients viewed community pharmacy essentially as being the 'shops' for them to buy their self-testing kits and accessories, and suggested that they would go back to their GPs or other healthcare professionals (e.g. in the hospital) if they needed any additional support with the use of these kits. Similarly, community pharmacists indicated that they mainly supplied patients with these devices and kits and were not involved in how the patients used them to self-monitor their LTCs. Hence, an opportunity exist here for community pharmacy to support patients when they supply these self-testing and self-monitoring devices, where discussions in the correct use of the device could stimulate further discussions around the any problems in the ongoing monitoring and interpretation of the test results and overall health.

7.4.3.3 Self-care support networks

This programme of work found that patients’ personal communities, particularly close family members and carers, played crucially important support roles in the management of their LTCs. Patients relied on their personal communities for practical support such as collection of prescribed medicines or supporting lifestyle change, as well as emotional support such as having a listening ear, improving their confidence and alleviating their anxieties and fears. Patients, however, suggested that healthcare professionals were not proactive enough in engaging these personal communities. Community pharmacists in this programme of work valued the contributions of patients’ personal communities and provided some insights into how they engaged these communities in their care of patients such as reinforcing information and providing practical support such as helping to administer medicines. Some studies have shown that patients’ personal communities can substitute for the formal care they receive from healthcare professionals, and close family members such as partners and children may contribute more to managing patients’ LTCs in the context of their everyday lives than healthcare professionals.443,600 Non-healthcare professional support was not discussed by both patients and community pharmacists. Both patients and pharmacists’ viewed self-help support groups as not being a self-care resource that they commonly used for support. The very few patients that had attended a self-help class were referred by their practice nurses in the GP surgeries and found it very useful, for example, in validating information and advice they got from healthcare professionals. Community pharmacists in England are contractually obligated to proactively signpost patients to voluntary and community self-help groups. Signposting can be very useful to patients if those that require more support are properly identified and targeted. This programme of work found that community pharmacists may not be utilising signposting appropriately and may need to be more proactive in identifying and targeting patients that may benefit from it.
7.4.3.4 Self-care technology

A wide range of technologies to improve self-care of LTCs is emerging and healthcare professionals, including community pharmacists should play a key role in supporting and encouraging patients to engage in these technologies. Self-care technologies include information technologies, mobile applications (‘apps’), web-based tools, and assistive, ‘smart’ home technologies. These self-care support technologies are now being incorporated into many self-care support interventions that support people with LTCs at home. However, this programme of work found significant gaps in community pharmacy’s awareness and use of any such innovative technologies for self-care support of patients with LTCs. Community pharmacists do not currently view the use of self-care technologies as a major role for community pharmacy although some did express interest and willingness to support the use of self-care technologies in the future. Similarly, patients generally had low awareness and use of these self-care technologies and did not receive any information or support about the use of these technologies from community pharmacy and other healthcare professionals. Studies that have examined the use of these technologies in routine primary care practice are limited but evidence is emerging. The use of self-care technologies is bound to play a major role in the future of healthcare provision for people with LTCs and community pharmacy should give it important considerations in its future strategy for the management of LTCs. Recognition of the potential benefits of mobile self-care support technologies to improve medications adherence is well documented. The review however did not find any studies that involved a community pharmacy-led intervention, meaning that community pharmacy is yet to be engaged in the use of this emerging technology to support patients in medicine adherence - a key domain of community pharmacy. There is a paucity of technology intervention research in pharmacy as found in a recent systematic review that examined the use of social media in pharmacy practice and education, which concluded that most studies in pharmacy were focused on education rather than services and interventions, and most were predominantly descriptive with no controlled studies identified. The use of self-care technology to support LTCs in community pharmacy could potentially be a future area of research.

7.4.3.5 Collaborative care planning

The role of healthcare professionals in actively supporting patients to engage in self-care is now a focal point in research and policy. Collaborative care planning is a cyclical, interactive process that brings together the perspectives and expertise of both healthcare professionals and patients to provide personalised care and support. The collaborative care planning process explored in this programme of work consists of written care plans, partnership and shared-decision making, goals-setting, proactive follow-up and problem-solving. Community pharmacists recognised that these collaborative care planning processes are important, but are yet to form part of pharmacy’s strategy in the routine care of LTCs in community pharmacy. For example, developing and agreeing written care-plans was not prioritised as a role for community pharmacy
except for aspects relating to patients’ medicines. Patients on the other hand were either unaware or had limited knowledge about having written or agreed care plans with healthcare professionals. While many patients indicated that they had good relationships with their healthcare professionals including community pharmacy, the ways that they described their interactions during a consultation suggested that they were not involved in, or worked in partnership with healthcare professionals. Many suggested that consultations involved the healthcare professional instructing and telling them what to do, with little opportunities for the patient to contribute or be involved in shared decision-making. Shared-decision making is an important concept in collaborative care planning where healthcare professionals and patients work together to make choices in a patient-centred approach. There is however some debate about the effectiveness of shared-decision making on patient satisfaction, treatment adherence and health outcomes.

On the whole, this programme of work found that healthcare professionals do not actively involve and collaborate with patients in the management of their LTCs, except when patients made proactive requests to be more involved. Patients views of being involved in collaborative care planning with community pharmacy was even less evident as almost all patients could not think of a situation where they had, or could be involved in making decisions with community pharmacy in the management of their LTCs. Community pharmacists described similar relationship and interactions with patients. Many published papers in research and policy papers now advocate for a shift in the patient-healthcare professional relationship to get patients to work collaboratively with healthcare professionals and to be actively involved in shared-decision making in all aspects of their LTCs management. Similarly, a number of studies that explored what patients want from their interactions with healthcare professionals highlighted that patients want to be better informed, better involved, and have a feeling of control on the decisions relating to the management of their health and care. While community pharmacy’s involvement in collaborative care planning was less evident in this programme of work, some studies have shown that collaborative care planning is not yet embedded and used routinely by other healthcare professionals in clinical practice. A recent qualitative study found that patients with LTCs feel unheard and ‘powerless’ during their consultation with healthcare professionals with very low levels of engagement. Aspects of collaborative care planning such as goal-setting and proactive follow-up could however form a routine part of community pharmacy’s consultations with people with LTCs and some evidence have demonstrated the benefits of implementing and incorporating this in practice. Goal-setting and follow-up are incorporated into the NMS in England as well as the stop smoking service with anecdotal evidence of improving patient engagement. The Scottish CMS has pharmaceutical care planning as a key component and this could be used as a foundation to advance community pharmacy’s routine use of collaborative care planning in practice.
7.5 Implications for practice

This research programme of work was conceived and undertaken at a time of unprecedented and significant changes to the healthcare landscape in the UK. The NHS is faced with increasingly significant challenges of improving the quality of care for patients with LTCs in the face of constrained funding and is constantly exploring better ways and models of care of LTCs. Major reforms to the architecture of the NHS in 2013 which led to the creation of new organisations such as NHS England and Clinical Commissioning Groups aim to streamline healthcare provision to meet the needs of patients with LTCs. In 2014, the NHS Five-Year Forward View\textsuperscript{28} was published by NHS England and other key stakeholders in the health sector in England. This document set-out the challenges ahead for the NHS and suggestions on ways to tackle them including making a strong case for patients to be given more control of their own care. Supporting self-care of LTCs has been a key feature of recent health policy and ultimately, healthcare professionals, including community pharmacists, are now expected to look inwardly, develop models of care and demonstrate evidence of adding value to the changing paradigm of healthcare provision for LTCs in the NHS. Self-care support is inseparable from the provision of high quality healthcare for LTCs.\textsuperscript{75} Community pharmacy's contributions to the growing concept of self-care support in the management of LTCs have been given limited attention in research, providing the basis of this programme of work.

It is now clearly evident that a critical ingredient in the delivery of healthcare services to meet the growing demands of LTCs is to empower and support patients to take control and enable them to self-care their own health and well-being. Health policy and research now place a great emphasis on healthcare professionals to adopt the principles of self-care support in their routine interactions with patients with LTCs because of its well-documented benefits in improving patient outcomes and being resource-efficient.\textsuperscript{43, 367, 414, 415} This programme of work showed that community pharmacy's approach to providing self-care support of LTCs is still very much unidimensional; focussing on how patients use their prescribed medicines, rather than multidimensional; where holistic, patient-centred care is provided to patients. Community pharmacists‘ view themselves primarily as “dispensers of medicines” which suggests a deep-rooted culture and tradition where pharmacy practitioners consider themselves as ‘medicines experts’ and are engrained with the philosophy that the ‘medicine’ rather than the ‘person’ should be the main focus of their interactions with patients, particularly with people with LTCs.\textsuperscript{529} While it could be argued that pharmacy’s traditional tenets around the use medicines is what makes community pharmacy practice different from other healthcare professions, it may also be argued that this tradition is responsible for the lack of integration and acceptance of community pharmacy into the wider multidisciplinary healthcare team, where the focus on medicines is seen from a commercial rather than a patient-centred viewpoint by other healthcare professionals.\textsuperscript{535} Therefore, community pharmacy will need to reform and rebrand itself, in order to be more widely seen and accepted as a healthcare profession that is positioned to improve patients overall health; its expertise on the use of medicines should be one of its many roles and responsibilities. This will require the cultural mind-set and medicines-focussed stereotype in community pharmacy to be challenged at
different levels and will require a concerted effort by leaders and ‘champions’ of the pharmacy profession.

Pharmaceutical care has over the past 25 years been the guiding principle and philosophy of practice in community pharmacy, particularly in the care of LTCs.\textsuperscript{170} Pharmaceutical care, which is the “responsible provision of drug therapy for the purpose of achieving definite outcomes that improve a patient’s quality of life”,\textsuperscript{170} has played a significant part in extending the roles of community pharmacy from being predominantly dispensing of prescribed medicines to becoming more patient-facing.\textsuperscript{609} The majority of current community pharmacy services and interventions have also been underpinned by the philosophy of pharmaceutical care.\textsuperscript{200} The philosophical foundations of pharmaceutical care advocate that it is patient-centred, however, the definition which focuses on the ‘responsible provision of drug therapy’ reflects a product-centred, medicines-focused approach to patient care. This medicines-focused philosophy, which this programme of work found is embedded and applied in most community pharmacy services and interventions, is intrinsically not aligned with the patient-centred, holistic principles of self-care support. Moreover, the language, terminology and nomenclature used in most of the LTCs services and interventions underpinned by pharmaceutical care in community pharmacy, the MURs and NMS in England and the CMS in Scotland, reflect a narrow focus on medicines. Holland and Nimmo\textsuperscript{610-614} recognised this as a potential barrier to pharmacy practice and made recommendations for the use of nomenclature and language used to describe pharmaceutical services, for example, the use of ‘total pharmacy care’ in place of pharmaceutical care. This programme of work agrees with the views of Holland and Nimmo and moves their thinking forward by recommending that the nomenclature of pharmaceutical services should reflect a holistic approach to patient care by using terminologies such as self-care support or self-management support. This has the added benefit theoretically, of aligning community pharmacy with other healthcare fields such as nursing and medicine that are already adopting a similar nomenclature to describe their LTCs services and interventions.

This programme of work found that the structure of current pharmaceutical services and interventions for LTCs embedded in the CPCF in England and Scotland was shown to inherently hinder the culture and practice of self-care support of LTCs. This programme of work, as well as findings from other research studies,\textsuperscript{192, 198} highlighted some of the gaps and deficiencies in the ways that current contracted LTCs services curtails community pharmacists’ capacity to deliver patient-centred, self-care support to patients with LTCs. For example, the structure of the MUR which typically only allows the pharmacist to undertake one consultation with individual patients per year does little to involve community pharmacy in the ongoing care of patients with LTCs. This is in addition to the didactic, structured and generic counselling practices due to the closed nature of questions on the MUR form, providing little opportunities for pharmacists to explore and engage patients in identify and resolving both medicines and non-medicines related issues they might be encountering.\textsuperscript{192} Furthermore, services that target LTCs in the CPCF, e.g. the MUR/NMS and lifestyle services such as stop smoking and healthy lifestyles promotion were found to be provided as fragmented interventions.
rather than as a cohesive, holistic care package that are designed to meet the individual needs of patients. Additionally, current LTC services are target-driven and the remuneration and funding structure which rewards the community pharmacy rather than individual pharmacists have been identified as disincentives. Moreover, the provision of services and care of LTCs have also been found to be substantially influenced by the pharmacy owners’ and employers’ commercial interests, where services that generate income are prioritized over those, such as counselling and interacting with patients, that do not. Community pharmacists in this programme of work highlighted this as a major barrier to providing self-care support.

For community pharmacy to deliver self-care support effectively, the CPCF will need to undergo substantial structural and funding reforms that give and incentivise pharmacist with clear responsibilities for contributing to the overall health outcomes of patients. There are already pockets of promising models of care in community pharmacy that have attempted to address the structural and remuneration challenges in the CPCF. In Scotland for example, the CMS which uses a capitation model of remuneration and provides pharmacists with the opportunity to take responsibility for the care of individual patients that register with their practice and embeds the philosophy of collaborative care planning during the consultation process is a step in the direction towards self-care support. The Scottish Government’s vision and action plan for pharmacy, which advocates a future for pharmaceutical care of LTCs in community pharmacy to be provided by clinical pharmacist independent prescribers working in collaborative partnerships with patients and other healthcare professionals, is also a positive step towards restructuring the CPCF to enable community pharmacy to provide self-care support. The report of the recent national evaluation of the NMS in England, which found that the service improved patients’ adherence to medicines and is cost-effective to the NHS, makes suggestions for improvements in the delivery of the service (more patient-focused and less didactic) and better integration into local primary care provision. The NMS already has key aspects of self-care support of LTCs built into it (e.g. goal-setting and proactive follow-up), which are important in collaborative care planning. Similarly, lifestyle services such as smoking cessation and weight management interventions in community pharmacy are underpinned by behaviour change techniques and a key element of self-care support – collaborative care planning - has also demonstrated significant benefits. The current CPCF could therefore be reformed and restructured by adapting the positive elements of existing services and interventions currently in community pharmacy to provide a more coordinated and cohesive approach to patient care. This could be undertaken via a comprehensive package of care that focuses on involving community pharmacy in the ongoing management of individual patients, rather than the provision of fragmented, one-off services and interventions.

The safe and effective supply of medicines forms core part of community pharmacy’s traditional role and business, and it is understandable that some pharmacists are reluctant to give-up these roles. Dispensing activities and responsibilities could however be taken over by trained members of the community pharmacy team such as accredited checking technicians (ACTs) and trained pharmacy
technicians or via the use of technologies such as robotic dispensers. This argument has been recognised, well-articulated and being promoted in many pharmacy policy documents describing community pharmacy’s vision for the future. Recent studies on supervision in community pharmacy, however found that community pharmacists were reluctant to relinquish control of the dispensary to other support staff because of concerns of patient safety, trust and competencies of support staff, as well as concerns on legal responsibility and accountability. However, self-care support of LTCs can only be effectively delivered in community pharmacy if pharmacists are released from the backroom dispensing activities, and procedures such as clarity of professional responsibility and accountability, are put in place to ensure that the dispensing activities does not compromise patient care. The empowerment of community pharmacy support staff such as pharmacy technicians to take on greater responsibilities in the dispensary may be the key to freeing pharmacists, allowing them to spend more time with patients. In order for this to take place the skill-mix in community pharmacy will have to be reorganised with the possible creation or extension of the roles and responsibilities of other team members and support staff such as medicines counter assistants and delivery drivers. Reorganisation of the skill mix in community pharmacy initiatives such as the Healthy Living Pharmacy (HLP) where new roles and additional training for support staff, such as ‘healthy living champions’ have shown positive improvement in the uptake and development of pharmacy services and increased motivation of the pharmacy team.

While there are ongoing debates as to the most efficient and effective ways of mobilising and repositioning healthcare resources towards providing self-care support, the one area of agreement is that the perspectives and expertise of patients is an underutilised resource that should be exploited, particularly by healthcare professionals. This requires healthcare professionals to gain understanding and give due considerations to the factors and determinants of patient self-care behaviours, as well as to recognise and incorporate the perspectives of patients on how best to provide interventions or support that will enhance their abilities to engage in self-care. This programme of work found that patients with LTCs do not currently view community pharmacists as healthcare professionals that play a major role in the management and self-care support of their LTCs. Patients view community pharmacists mainly as the supplier of their medicines and did not see them as healthcare professionals that could be involved in the ongoing care of their LTCs. However, insights from the analysis suggest that these findings are more closely linked to patients’ low level of awareness and lack of recognition of community pharmacy’s potential as a clinical healthcare profession that could manage and support LTCs. The implication of this is that community pharmacy may need to demonstrate evidence of its value in the management and self-care support of LTCs, as well as effectively ‘market’ and publicise this value not just to patients, but to other key stakeholders such as other healthcare professionals and commissioners of health services. This can be achieved if the ‘patient voice’ is heard and incorporated into the design and development of any community pharmacy interventions and services.
For community pharmacy to improve its contributions to self-care support of LTCs, its professional relationship and collaboration with key stakeholders involved in the management of LTCs, particularly GPs and nurses will have to improve significantly. Community pharmacy is currently not well integrated into the wider multidisciplinary healthcare team that manages people with LTCs. There is a vast amount of evidence in literature that have examined the main barriers and recommended major reforms to the working relationships and interactions between community pharmacy and GPs. This programme of work found that, although community pharmacists generally indicated that they have good relationships and work collaboratively with local GP practices, it appears that this has not been sufficiently exploited to effectively support self-care of LTCs. While this recommendation has been widely promoted in research and policy through inter-professional collaboration, the strategies to implement and operationalise it have proven to be largely ineffective as evidence indicates that there is still a significant gap in the GP-community pharmacy working relationship. Some authors have outlined strategies such as shared access and input to patient medical records, inter-professional training and education at both undergraduate and practitioner levels, and regular meetings and communication to improve the flow of information. It is, however, important to note that there are examples of effective inter-professional collaborative working between community pharmacists and GPs, and this was described by some participants in this programme of work. A suggestion that is gaining increasing traction is that pharmacists working in GP practices could play increasing roles in bridging the gap between community pharmacy and GPs. Practice pharmacists working in GP surgeries are ideally placed to bridge the gap between community pharmacy and GPs, particularly in improving communication and information sharing, continuity of care and the development of mutual trust and respect of professional boundaries. The potential role that pharmacists working in GP surgeries can play has recently been recognised and promoted by the Royal College of General Practitioners (RCGP) and the Royal Pharmaceutical Society (RPS). Furthermore, there is increasing recognition that community pharmacists are well-suited to lead the care of patients with stable, uncomplicated LTCs (those on stable medications) and this is already being promoted in Scotland as part of their vision for the future of community pharmacy. Existing services such as the community pharmacy based heart failure service in Glasgow, Scotland, where pharmacists-led clinics in GP surgeries have shown significant benefits could be built upon. In England, recent announcements of funding by NHS England of a pilot programme of clinical pharmacists employed in GP surgeries is a step in the right direction.
8. Chapter Eight: Conclusion and Recommendations

8.1 Conclusion

This chapter draws conclusions from the overall research work and discussion and provides some recommendations for community pharmacy to make its contributions to self-care support in the management of LTCs. The chapter concludes by reflecting on areas for future research based on the findings from this programme of work. This programme of work set out to explore the place and contributions of community pharmacy in providing self-care support to patients with LTCs. While self-care support has emerged as a distinct concept and model for the management of LTCs in primary care, it was found that community pharmacy is yet to be fully engaged in adopting its principles into practice. The findings from this programme of work highlighted how self-care support is currently conceptualised and operationalised in community pharmacy, as well as the gaps and factors that may hinder community pharmacy from harnessing its potential of contributing to the care and management of people with LTCs. Self-care support by healthcare professionals is the direction of travel of healthcare provision and care of people with LTCs and community pharmacy will need to rethink how it is organised and how it provides care for people with LTCs if it is to remain a relevant healthcare provider to people with LTCs. Community pharmacy and the pharmacy profession as a whole are under increasing pressure to re-professionalise and to delineate its relevance and place in the future of primary healthcare provision, underpinned by robust evidence.\textsuperscript{582, 619, 626}

Community pharmacy in Great Britain has made giant strides over the last 20 years when compared to most other countries, from being ‘shopkeepers’ to a re-professionalised healthcare profession that now engages in clinical care of patients. Community pharmacy has made great leaps as a healthcare profession through significant changes to the pharmacy contract;\textsuperscript{173, 183} major reforms in remuneration and reimbursement mechanisms;\textsuperscript{189, 191, 201, 203} introduction of independent and supplementary prescribing;\textsuperscript{627, 628} continued innovation and rollout of extended services; development of newer and innovative models of practice such as the Healthy Living Pharmacy (HLP) initiative\textsuperscript{175, 617} and wide range of other innovative local services and models of care.\textsuperscript{167, 211, 629} Equally, the re-professionalization agenda in community pharmacy in Great Britain is recognised by the policymakers and Government which now engages community pharmacy in important discussion and consultation in key policy areas, for instance in the recent ‘Call to Action’ consultation.\textsuperscript{630} The recent announcement of the rollout of community pharmacists’ access to the summary care record of patients across the whole of England is a pointer to the progress being made by community pharmacy in Great Britain.\textsuperscript{631}

Despite the progress that has been made, community pharmacy’s contributions to the self-care support paradigm in the management of LTCs remain sketchy and its well-recognised potential to contribute more remains unrealised. It is apparent from this programme of work that community pharmacy has two choices in contributing to healthcare provision for LTCs: 1) to remain largely as a
dispenser of medicines and strengthen its position as a retailer and supplier of prescribed medicines to patients or 2) to join the self-care support movement in order to establish its place in the future as a clinical healthcare profession.

8.2 Key recommendations

The key recommendation from this programme of work highlights the need for major reforms and an evolution in how community pharmacy is currently organised and structured to deliver care of LTCs. While the call for major reforms and restructuring of community pharmacy is not a new call and is already well recognised in research literature and health policy, the recommendations from this programme of work contributes to this discourse and offers a different insight into the practical considerations for implementing the desired change in community pharmacy. Two important aspects of this programme of work set its recommendations apart from other recommendations; 1) the use of a theoretical framework of the core elements of self-care support of LTCs that underpinned the whole programme of work and; 2) the patient perspective that was taken which gave insights to how patients viewed the roles of community pharmacy and their unmet self-care needs which could potentially be addressed by community pharmacy. The recommendations from this programme of work on how community pharmacy can make its contributions to self-care support of LTCs are discussed under two broad areas, each with more specific recommendations.

1) Restructuring and reorganising community pharmacy’s strategy in the management of LTCs
2) Incorporating patients’ perspectives into community pharmacy’s LTCs strategy

8.2.1 Restructuring and reorganising community pharmacy’s strategy in the management of LTCs

Community pharmacy’s strategy for delivering care for people with LTCs is contained and structured in the community pharmacy contractual framework (CPCF). The CPCF also contains the terms and service specifications for individual services and interventions, as well as the remuneration and funding arrangements (both local and national). This programme of work showed that the current structure and remuneration arrangement of the CPCF in itself is an impediment for community pharmacy to harness its potential of providing self-care and being involved in the ongoing management of LTCs. The recent report of the commission on future models of care delivered through pharmacy recognised some of the deficiencies of the current CPCF and made some recommendations and suggestions on the way forward. Similarly, the way that community pharmacy is remunerated and funded to provide these services was found to restrict community pharmacists in meeting the self-care needs of patients. The main LTC services in England, the MUR and NMS and in Scotland, the CMS, were found to be medicines-focused and less responsive to the
needs of patients with LTCs. In addition, other services/interventions particularly those targeting lifestyles such as smoking, diets, exercising and alcohol consumption were found to be reactive and one-off interventions, rather than coordinated and systematic to meet individual patient needs. Moreover, community pharmacy’s potential to improve its contributions to self-care support can only be harnessed effectively if the pharmacists’ time is freed up from the dispensary to allow for more consultation and interactions with patients. This will require a review of the current skill-mix and the roles and responsibilities of community pharmacy team members; new roles and responsibilities may need to be created for team members such as medicines counter assistants and delivery drivers. In light of these, this programme of work makes the following recommendations to contribute to ongoing debate on how the CPCF can be restructured to become fit for purpose in meeting the self-care support needs of patients with LTCs.

**Recommendation 1: Community pharmacy should prioritise the development of a comprehensive package of care for LTCs based on self-care support, over single and separate interventions**

Current community pharmacy services and interventions for LTCs have been found to be separate, fragmented and one-off which are not suited to meet the needs of patients with LTCs. This programme of work evidently highlighted the need for community pharmacy to develop a comprehensive and coherent strategy to deliver self-care support for LTCs with clear roles and responsibilities for pharmacists in the ongoing management of individual patients. This comprehensive package of care should be structured and remunerated based on specific outcomes relating to patients’ overall outcomes rather than outcomes relating to the number of services and items of prescribed medicines dispensed. This could be achieved through a provision that requires patients to register with a community pharmacy of their choice to receive a comprehensive care package built around the core elements of self-care support. A move towards this is already being implemented in the Scottish CMS, where patients are encouraged to register with a specific community pharmacy of their choice to receive a pharmaceutical care package. The CMS was however found to be more medicines-focussed than holistic as the main outcome of the service was on the serial (repeat) dispensing of prescribed medicines, rather than on the patient’s overall health outcome. Hence, a requirement in the CPCF should be made to allow community pharmacy teams to be responsible for individual patients’ overall health outcomes, which will not only get them involved in the ongoing management of LTCs, but will also enable and promote collaborative partnerships with patients and other healthcare professionals to be developed which is prerequisite for effective self-care support. In addition, this will also bring together the fragmented services in the CPCF (e.g. LTC-specific services and a lifestyle/public health service) which will be delivered as a comprehensive care package to meet the individual needs of patients. Existing services such as the NMS in England which currently have a follow-up element built into it, should be re-examined and restructured as a
comprehensive self-care support package focused on patients’ overall health outcomes, as opposed to medicines use outcomes.

The remuneration structure for the provision of the comprehensive package of care and any other services and interventions in the CPCF is equally as important as the service and interventions themselves, as such should be given careful considerations. Community pharmacy’s comprehensive care package for LTCs should be remunerated and incentivised for the provision of services that reflect a contractual obligation of improving the overall health outcomes of patients alongside the reimbursements for dispensing prescriptions. This programme of work recommends that the CPCF should move away from the current fees-for-service model of remuneration as this leads to target-driven approach to the care of LTCs, to a capitation model\textsuperscript{201} of remuneration where community pharmacy is reimbursed for achieving specific self-care support outcomes and indicators similar to the Quality and Outcomes Framework (QOF) points in the GP General Medical Services (GMS) contract. The capitation model of remuneration in the Scottish CMS could be a potential model of remuneration that could be explored further. In addition, elements of the current CPCF that have been well-acknowledged as effective in achieving specific outcomes, such as the stop smoking service and the follow-up requirements in the NMS should be recognised and incentivised.

**Recommendation 2: Self-care support should underpin community pharmacy’s strategy in the management of LTCs**

While most of the services and interventions that target LTCs in the CPCF reflect the philosophy and practice of pharmaceutical care,\textsuperscript{170} there appears to be a lack of a theoretical underpinning of how community pharmacists operationalise and deliver care for people with LTCs. In addition to the lack of a proper theoretical underpinning in the CPCF, this programme of work also showed evidence that the approaches and opportunities taken by community pharmacists to provide self-care support were unidimensional and fragmented to meet the self-care needs of individual LTC patients. It was also evident that the current CPCF does not currently enhance community pharmacy’s capabilities to be involved in the ongoing care of patients with LTCs. The theoretical framework that emerged from this programme of work provides insights into how the principles and key elements of self-care support could underpin existing and new services and interventions for LTCs in community pharmacy. The framework consisting of the five core elements of self-care support will provide a theoretical foundation for grounding the design and development of current and new services and interventions. Additionally, the use of this framework as an underpinning philosophy in pharmacy will provide a platform for community pharmacy to align with the wider self-care support paradigm and allow for a better understanding and collaboration with other healthcare professionals and policymakers who are more familiar with the language of self-care support.
Services and interventions that target LTCs in the CPCF should build the principles of collaborative care planning at their hearts. Collaborative care planning is recognised as the building block of self-care support interventions because of the recognition of its potential to embed the principles of self-care support such as shared-decision making, patient partnership and patient involvement in the healthcare professional-patient consultation. Collaborative care planning incorporated into all community pharmacy’s LTCs interventions will extend community pharmacy’s roles in the ongoing management of LTCs as well as instil confidence in patients about community pharmacy’s professional roles as caregivers. Collaborative care planning in community pharmacy will also help in identifying whether and how the remaining elements of self-care support – self-care information and advice, self-care skills training and support, self-care technology and support networks are utilised, through tailoring and personalisation of individual patients’ needs. Community pharmacy should aim to deliver self-care information and advice and skills training and support to patients where appropriate, using the self-care education approach, rather than the more commonly-used traditional patient education approach. The self-care education approach should be embedded into all community pharmacy LTC interventions in addition to the use of behaviour change counselling techniques such as motivational interviewing and health coaching, which have been shown to improve patients’ self-efficacy and behaviour change.

Recommendation 3: The principles of self-care support need to be embedded into pre-registration pharmacy education and training and professional development programmes for practising pharmacists

This programme of work recommends the incorporation of the principles of self-care support into pharmacy undergraduate education and training to challenge the stereotype of the professional domain of pharmacy, as being predominantly focussed on drug therapy, particularly in relation to the management of LTCs. The principles of self-care support could be built and embedded into the undergraduate pharmacy curriculum by using the theoretical framework of self-care support from this programme of work, which reflects a wider, holistic and patient-centred philosophy of patient care, with the focus on drug therapy being one of its many dimensions. The stereotype of pharmacy as experts of medicines is typically and gradually engrained into the mind-set of the future generation of community pharmacists during undergraduate education, as well as at the early stages of their pharmacy career. Continuing professional development provides the opportunity for community pharmacists and pharmacy staff to learn and develop their professional knowledge and skills. Targeted education and training around the principles of self-care support will be needed to help change the unidimensional thinking and mind-set of practising community pharmacy professionals. This change in mind-set will not come easy as a finding from this programme of work suggested that many pharmacists find it difficult to give-up their traditional medicines-related roles and responsibilities, particularly around dispensing. The CPPE at the University of Manchester, which
currently provide educational and learning opportunities for pharmacists in England via a wide variety of learning programmes, could develop training programmes on self-care support of LTCs for community pharmacists to support change. Furthermore, the change in philosophy and culture will require a new generation of pharmacy leaders to champion this cause and provide a leadership direction that will embed the philosophy of self-care support into the cultural tenets and guiding principles of community pharmacy practice. This change in philosophy and culture will have to be gradual and incremental and will need to be backed up with a review of relevant regulations and legislation such as supervision and responsible pharmacy regulations.

**Recommendation 4: Self-care support of LTCs in community pharmacy should involve and mobilise the entire community pharmacy team**

In addition to the structural deficiencies in the CPCF, this programme of work highlighted a need for a reorganisation in the roles and responsibilities of the community pharmacy team in order to be repositioned to deliver and provide a holistic self-care support of LTCs. In particular, community pharmacists will need to become more visible to patients as a clinical healthcare professional that is able to provide ongoing self-care support of LTCs. A team approach to providing self-care support of LTCs in community pharmacy should be developed with the possible development of new roles and responsibilities such as ‘LTCs self-care champions’ for staff other than community pharmacists. In particular, community pharmacy team members that have more frequent contact and interactions with patients with LTCs such as medicines counter assistants and delivery drivers should be considered for these roles and responsibilities. In addition, community pharmacy staff that are members of the local community and have long-term employment in the community pharmacy could be considered for these roles as they are more likely to have established social relationships and developed good rapport and trust with patients/customers, which could be exploited in self-care support. The healthy living pharmacy (HLP) model \(^6\) that aims to maximise the skill mix in community pharmacy could be adapted to embed self-care support as a culture of practice among all community pharmacy staff. However, concerns about supervision, responsibility and accountability that have been raised in other studies will have to be addressed. \(^6\)

**8.2.2 Incorporating patients perspectives into community pharmacy’s LTCs strategy**

Patients’ perspective of community pharmacy was found in this programme of work to be a key determinant of how community pharmacy and its services and interventions were viewed and used by patients with LTCs for self-care support. Community pharmacy’s strategy for the management of LTCs should therefore proactively ensure that the patient ‘voice’ is heard and incorporated. A truly
patient-centred approach to the management of LTCs requires the perspectives and expertise that patients bring along to be shared and incorporated in the consultation with healthcare professionals. This programme of work found a very low level of awareness and uptake of current services and interventions targeting LTCs in community pharmacy, which may have resulted in the patients’ beliefs that community pharmacy has limited roles to play in self-care support of LTCs. In order to improve community pharmacy’s contributions to self-care support of LTCs, the following recommendation is suggested.

**Recommendation 5: The CPCF should incorporate patient and public perspective in planning, design and delivery of LTCs services and interventions.**

Any redesign and changes to the CPCF should proactively seek-out, involve and incorporate patients’ perspectives in order to ensure that their needs and concerns are addressed and incorporated into the service. NHS England recognises this as a key policy area and stated that it “will ensure that public, patient and carer voices are at the centre of our healthcare services, from planning to delivery.” Community pharmacy’s strategy for the management of LTCs should therefore ensure that patients and the general public contribute to the planning, design and implementation of its services and interventions. This will require a nationally led initiative by the leadership of the pharmacy profession to ensure that it is widely promoted and accepted. The NHS England policy document on transforming participation in health and care highlights a number of ways that healthcare services, including community pharmacy could involve patients and the public in services. The patient and public involvement (PPI) initiative being promoted in research and policy could be adapted and built into all aspects of service planning, design and development and implementation of all services and interventions in community pharmacy. This will also serve to meet the objective of promoting the awareness and uptake of the service when it is eventually rolled out. Furthermore, an NHS-led sustained campaign to increase patients’ and public awareness and uptake of community pharmacy services and interventions should be undertaken by community pharmacy. The impetus will however need to come from community pharmacy and its leadership to market and ‘rebrand’ itself to patients with LTCs and the general public about the benefits of community pharmacists and community pharmacy services in the ongoing management of LTCs. Other healthcare professionals particularly GPs and nurses also have a key role to play in publicising community pharmacy and will need to be engaged to achieve this recommendation.
8.3 Future research
This programme of work attempted to provide research evidence in the broad and largely underexplored area of self-care support of LTCs, and specifically in the roles and contributions of community pharmacy. The research process undertaken highlighted a number of research areas and gaps that could be given some more attention to allow further insights into how self-care support can be operationalised in policy and practice.

to provide data into these areas have been discussed, hence, the following are suggested as potential areas for future work;

- **Qualitative perspectives of other healthcare professionals, particularly GPs.** While there are some evidence in the research literature on the working relationship between community pharmacy and GPs, further insights into the perspectives of GPs (doctors and nurses) on the current and potential contributions of community pharmacy to self-care support of LTCs is important for change in policy and practice to happen. This should focus on how the recommendations that emerged from this programme of work could be operationalised, particularly around the multidisciplinary approach and implementation of collaborative care planning and other core elements of self-care support. The perspectives of GP practice pharmacists should also be explored particularly with recent policy agenda of employing more pharmacists in GP practices.

- **Exploration of the perspectives of other pharmacy staff.** This programme of work made recommendations for the mobilisation and engagement of the entire pharmacy team and optimal use of the skill-mix available in community pharmacy if self-care support of LTCs is to be embedded into routine practice. Future work will need to be undertaken to explore the perspectives of some key pharmacy team members such as pharmacy technicians, medicines-counter assistants and delivery drivers, who are mostly, well-known local members of the community and have frequent social contacts and interactions with patients with LTCs.

- **Further research into the use of self-care technologies in community pharmacy.** Limited research into how self-care support technologies can be supported by healthcare professionals in general, and more specifically by community pharmacy was highlighted in this programme of work. Future work should explore the different types of self-care technologies that exist and how these could be implemented and supported in routine practice in community pharmacy. This area could be potentially led by community pharmacy, particularly in improving adherence to medicines and improving communication and interaction with patients, if evidence of its benefits and practicability is available.
References


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437. Mathers, N., et al., *Care Planning: Improving the Lives of People with Long Term Conditions*. 2011, Clinical Innovation & Research Centre (Royal College of General Practitioners),.


McDermott, M.S. and A.E. While,


478. Year of Care, Year of Care: Report of findings from the pilot programme. 2011, NHS.


Krska, J., et al., Medicines-related services: do pharmacists see things the same way as the public?, in Health Services Research & Pharmacy Practice Conference, C. Bond, Editor. 2015, International Journal of Pharmacy Practice: Queen's University Belfast.


Appendices
Appendix 1: NHS REC Approval letters

Health Research Authority

NRES Committee West Midlands - South Birmingham
The Old Chapel
Royal Standard Place
Nottingham
NG1 6FS
Telephone: 0115 883 0300

12 December 2012

Mr. Oladapo Joseph Ogunbayo
1.136, First Floor Stopford Building
School of Pharmacy and Pharmaceutical Sciences
The University of Manchester
M139PT

Dear Mr. Ogunbayo,

Study title: Exploring the place and contributions of community pharmacy in providing self-care support of long-term conditions (LTCs).

REC reference: 12/WM/0427
IRAS project ID: 112407

Thank you for your letter of 12th December 2012. I can confirm the REC has received the documents listed below and that these comply with the approval conditions detailed in our letter dated 12 December 2012.

Documents received

The documents received were as follows:

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<tr>
<th>Document</th>
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Approved documents

The final list of approved documentation for the study is therefore as follows:

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<tr>
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<td>Oladapo Ogunbayo</td>
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<tr>
<td>Investigator CV</td>
<td>Ellen Schafheutle</td>
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A Research Ethics Committee established by the Health Research Authority
You should ensure that the sponsor has a copy of the final documentation for the study. It is the sponsor's responsibility to ensure that the documentation is made available to R&D offices at all participating sites.

12/WM/0427 Please quote this number on all correspondence

Yours sincerely,

Rebecca Morledge
Assistant Committee Co-ordinator

E-mail: NRESCcommittee.WestMidlands-SouthBirmingham@nhs.net

Copy to: Mrs Catherine Barrow,
Professor Rachel Georgiou, Manchester PCT
NRES Committee West Midlands - South Birmingham

The Old Chapel
Royal Standard Place
Nottingham
NG1 6FS

Telephone: 0115 883 9390

12 December 2012

Mr. Oladapo Joseph Ogunbayo
1.136, First Floor Stopford Building
School of Pharmacy and Pharmaceutical Sciences
The University of Manchester
M139PT

Dear Mr. Ogunbayo

Study title: Exploring the place and contributions of community pharmacy
in providing self-care support of long-term conditions (LTCS).

REC reference: 12/WM/0427
IRAS project ID: 112407

The Proportionate Review Sub-committee of the NRES Committee West Midlands - South Birmingham reviewed the above application on 11 December 2012.

We plan to publish your research summary wording for the above study on the NRES website, together with your contact details, unless you expressly withhold permission to do so. Publication will be no earlier than three months from the date of this favourable opinion letter. Should you wish to provide a substitute contact point, require further information, or wish to withhold permission to publish, please contact the Co-ordinator Heather Harrison, NRESCommittee.WestMidlands-SouthBirmingham@nhs.net.

Ethical opinion

The committee felt that there were no Ethical issues.

On behalf of the Committee, the sub-committee gave a favourable ethical opinion of the above research on the basis described in the application form, protocol and supporting documentation, subject to the conditions specified below.

Ethical review of research sites

The favourable opinion applies to all NHS sites taking part in the study, subject to management permission being obtained from the NHS/HSC R&D office prior to the start of the study (see “Conditions of the favourable opinion” below).
Conditions of the favourable opinion

The favourable opinion is subject to the following conditions being met prior to the start of the study.

Management permission or approval must be obtained from each host organisation prior to the start of the study at the site concerned.

Management permission ("R&D approval") should be sought from all NHS organisations involved in the study in accordance with NHS research governance arrangements.

Guidance on applying for NHS permission for research is available in the Integrated Research Application System or at http://www.rdforum.nhs.uk.

Where a NHS organisation’s role in the study is limited to identifying and referring potential participants to research sites ("participant identification centre"), guidance should be sought from the R&D office on the information it requires to give permission for this activity.

For non-NHS sites, site management permission should be obtained in accordance with the procedures of the relevant host organisation.

Sponsors are not required to notify the Committee of approvals from host organisations.

- The Committee felt that there should be a name on the free post envelope as there may be more than one study going on at this site.
- The Committee felt that people who do not wish to be audio recorded should not be included.
- The Committee felt that the sound files should be destroyed as soon as they are transcribed.
- The Committee felt that the anonymised transcriptions can be kept until the end of the PhD or University Policy.

It is the responsibility of the sponsor to ensure that all the conditions are complied with before the start of the study or its initiation at a particular site (as applicable).

You should notify the REC in writing once all conditions have been met (except for site approvals from host organisations) and provide copies of any revised documentation with updated version numbers. The REC will acknowledge receipt and provide a final list of the approved documentation for the study, which can be made available to host organisations to facilitate their permission for the study. Failure to provide the final versions to the REC may cause delay in obtaining permissions.
Approved documents

The documents reviewed and approved were:

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<td>Investigator CV</td>
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<td>112407/391210/1/12</td>
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Membership of the Proportionate Review Sub-Committee

The members of the Sub-Committee who took part in the review are listed on the attached sheet.

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.
After ethical review

Reporting requirements

The attached document "After ethical review – guidance for researchers" gives detailed guidance on reporting requirements for studies with a favourable opinion, including:

- Notifying substantial amendments
- Adding new sites and investigators
- Notification of serious breaches of the protocol
- Progress and safety reports
- Notifying the end of the study

The NRES website also provides guidance on these topics, which is updated in the light of changes in reporting requirements or procedures.

Feedback

You are invited to give your view of the service that you have received from the National Research Ethics Service and the application procedure. If you wish to make your views known please use the feedback form available on the website.

Information is available at National Research Ethics Service website > After Review

We are pleased to welcome researchers and R & D staff at our NRES committee members' training days – see details at http://www.hra.nhs.uk/hra-training/

With the Committee’s best wishes for the success of this project.

Yours sincerely,

Professor Simon Bowman
Chair

Email: NRESCommittee.WestMidlands-SouhtBirmingham@nhs.net

Enclosures:  List of names and professions of members who took part in the review

*After ethical review – guidance for researchers*

Copy to:  Mrs Catherine Barrow
Professor Rachel Georgiou, Manchester PCT
NRES Committee West Midlands - South Birmingham

Attendance at PRS Sub-Committee of the REC meeting on 11 December 2012

Committee Members:

<table>
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<th>Name</th>
<th>Profession</th>
<th>Present</th>
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<tr>
<td>Professor Simon Bowman</td>
<td>Consultant Rheumatologist</td>
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<tr>
<td>Rev’d Dr Barry Clark</td>
<td>Hospital Chaplain</td>
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<tr>
<td>Dr Yvonne Searle</td>
<td>Consultant Clinical Psychologist</td>
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Also in attendance:

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<tr>
<td>Miss Rebecca Morledge</td>
<td>Assistant Coordinator</td>
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Appendix 2: R&D Approval letter for Greater Manchester PCTs

NHS Salford+D Director: 
Professor Bill Ollier  
Rachel Georgiou  

R&D Associate Director: 

Enquiries: 
Email: Salford-Regroup-RD@manchester.ac.uk  
Tele: 0161 206 8343  
Fax: 0161 206 4205  

Salford+D web address: 
http://www.nhsafordrd.org.uk/  
http://www.gmregroup.nhs.uk/index.html  

ReGroup web address: 

14th February 2013  

Mr Oladapo J. Ogumbayo  
PhD Student  
School of Pharmacy and Pharmaceutical Sciences  
1st Floor, Stopford Building  
The University of Manchester  
M13 9PT  

Dear Oladapo,  

Study Title: Exploring the place and contributions of community pharmacy in providing self-care support of long-term conditions (LTCs)  

REC Reference: 12/WM/0426  
R&D Reference: 2012/251  

This letter confirms your right of access to conduct research through the following organisation for the purpose and on the terms and conditions set out below:  

- Ashton, Leigh & Wigan PCT  
- Bolton PCT  
- Bury PCT  
- Heywood, Middleton & Rochdale PCT  
- Manchester PCT  
- Oldham PCT  
- Salford PCT  
- Stockport PCT  
- Tameside & Glossop PCT  
- Trafford PCT  

This right of access commences on 14th February 2013 and ends on 3rd December 2014 unless terminated earlier in accordance with the clauses below.  

You have a right of access to conduct such research as confirmed in writing in the letter of permission for research from this NHS organisation. Please note that you cannot start the research until the Principal Investigator for the research project has received a letter from us giving permission to conduct the project.  

The information supplied about your role in research at the above mentioned NHS Organisation has been reviewed and you do not require an honorary research contract with these NHS organisations. We are satisfied that such pre-engagement checks as we consider necessary have been carried out.
You are considered to be a legal visitor to the Trust premises. You are not entitled to any form of payment or access to other benefits provided by the Trust to employees and this letter does not give rise to any other relationship between you and this NHS organisation, in particular that of an employee.

While undertaking research through the Trust you will remain accountable to your employer but you are required to follow the reasonable instructions of the heads of the relevant NHS Departments in this NHS organisation or those given on her/his behalf in relation to the terms of this right of access.

Where any third party claim is made, whether or not legal proceedings are issued, arising out of or in connection with your right of access, you are required to co-operate fully with any investigation by this NHS organisation in connection with any such claim and to give all such assistance as may reasonably be required regarding the conduct of any legal proceedings.

You must act in accordance with the Trust's policies and procedures, which are available to you upon request, and the Research Governance Framework.

You are required to co-operate with the Trust in discharging its duties under the Health and Safety at Work etc Act 1974 and other health and safety legislation and to take reasonable care for the health and safety of yourself and others while on the Trust premises. You must observe the same standards of care and propriety in dealing with patients, staff, visitors, equipment and premises as is expected of any other contract holder and you must act appropriately, responsibly and professionally at all times.

You are required to ensure that all information regarding patients or staff remains secure and strictly confidential at all times. You must ensure that you understand and comply with the requirements of the NHS Confidentiality Code of Practice (http://www.dh.gov.uk/assetRoot/04/06/02/54/04069254.pdf) and the Data Protection Act 1998. Furthermore you should be aware that under the Act, unauthorised disclosure of information is an offence and such disclosures may lead to prosecution.

You should ensure that, where you are issued with an identity or security card, a bleep number, email or library account, keys or protective clothing, these are returned upon termination of this arrangement. Please also ensure that while on the premises you wear your ID badge at all times, or are able to prove your identity if challenged. Please note that this NHS organisation accepts no responsibility for damage to or loss of personal property.

We may terminate your right to attend at any time either by giving seven days' written notice to you or immediately without any notice if you are in breach of any of the terms or conditions described in this letter or if you commit any act that we reasonably consider to amount to serious misconduct or to be disruptive and/or prejudicial to the interests and/or business of this NHS organisation or if you are convicted of any criminal offence. Your substantive employer is responsible for your conduct during this research project and may in the circumstances described above instigate disciplinary action against you.

The Trust will not indemnify you against any liability incurred as a result of any breach of confidentiality or breach of the Data Protection Act 1998. Any breach of the Data Protection Act 1998 may result in legal action against you and/or your substantive employer.

If your current role or involvement in research changes, or any of the information provided in your Research Passport changes, you must inform your employer through their normal procedures. You must also inform your nominated manager in this NHS organisation.

Yours sincerely,

Dayle Roberts
Research Governance Officer
Appendix 3: R&D Approval letters in Scotland; NHS Tayside, Lothian and Greater Glasgow and Clyde health boards

Coordinator: Dr Nathaniel Brittain
Telephone Number: 0141 211 8544
E-Mail: Nathaniel.Brittain@ggc.scot.nhs.uk
Website: www.nhsggc.org.uk/r&d

25th February 2013

Mr Oladapo J. Ogunbayo
The University of Manchester
School of Pharmacy and Pharmaceutical Sciences
1st Floor, Stopford Building
Oxford Road
Manchester
M13 9PT

NHS GG&C Board Approval

Dear Mr Ogunbayo

Study Title: Exploring the place and contributions of community pharmacy in providing self-care support of long-term conditions (LTCs).

Chief Investigator: Mr Oladapo J. Ogunbayo
GG&C HB site: NHS Greater Glasgow and Clyde
Sponsor: The University of Manchester
R&D reference: GN12PH560
REC reference: 12/WM/0427
Protocol no: Version 01 – 30/11/2012

I am pleased to confirm that Greater Glasgow & Clyde Health Board is now able to grant Approval for the above study.

Conditions of Approval

1. For Clinical Trials as defined by the Medicines for Human Use Clinical Trial Regulations, 2004
   a. During the life span of the study GGHB requires the following information relating to this site
      i. Notification of any potential serious breaches.
      ii. Notification of any regulatory inspections.

It is your responsibility to ensure that all staff involved in the study at this site have the appropriate GCP training according to the GGHB GCP policy (www.nhsggc.org.uk/content/default.asp?page=s1411), evidence of such training to be filed in the site file.

Delivering better health
www.nhsggc.org.uk

Page 1 of 2

NHS GG&C Board Approval GN12PH560
2. For all studies the following information is required during their lifespan.
   a. Recruitment Numbers on a quarterly basis
   b. Any change of staff named on the original SSI form
   c. Any amendments – Substantial or Non Substantial
   d. Notification of Trial/Study end including final recruitment figures
   e. Final Report & Copies of Publications/Abstracts

Please add this approval to your study file as this letter may be subject to audit and monitoring.

Your personal information will be held on a secure national web-based NHS database.

I wish you every success with this research study.

Yours sincerely,

[Signature]

Dr Nathaniel Brittain
Research Co-ordinator

Cc: NRS Permissions CC, R&D Office, Aberdeen
    Mrs Catherine Barrow, Head of Faculty Research Support Services, The University of Manchester
    Dr Ellen I. Schafheutle, Lecturer, The University of Manchester
    Prof Peter R. Noyce, Professor of Pharmacy Practice, The University of Manchester
    Prof Christopher Cutts, Professor of Professional Development and Practice, The University of Manchester

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Page 2 of 2   NHS GG&C Board Approval GN12PH569
25 February 2013

Mr Oladapo Ogunbayo
PhD Student
1.136 First Floor Stopford Building
School of Pharmacy and Pharmaceutical Sciences
University of Manchester
MANCHESTER
M13 9PT

Dear Mr Ogunbayo,

R & D MANAGEMENT APPROVAL – TAYSIDE

Title: Exploring the place and contributions of community pharmacy in providing self-care support of long-term conditions (LTCs).

Chief Investigator: Mr Oladapo Ogunbayo
Principal Investigator/Local Collaborator: Mr Oladapo Ogunbayo
Tayside Ref: 2012PN02 NRS Ref: NRS12/PH17
REC Ref: 12/WM/0427
Sponsor: University of Manchester
Funder: Unfunded

Many thanks for your application to carry out the above project here in NHS Tayside. I am pleased to confirm that the project documentation (as outlined below) has been reviewed, registered and Management Approval has been granted for the study to proceed locally in Tayside.

Approval is granted on the following conditions:-

- ALL Research must be carried out in compliance with the Research Governance Framework for Health & Community Care, Health & Safety Regulations, data protection principles, statutory legislation and in accordance with Good Clinical Practice (GCP).

- All amendments to be notified to TASC R & D Office.

- All local researchers must hold either a Substantive Contract, Honorary Research Contract, Honorary Clinical Contract or Letter of Access with NHS Tayside where required (http://www.nihr.ac.uk/systems/Pages/systems_research_passports.aspx).

- TASC R & D Office to be informed of change in Principal Investigator, Chief Investigator or any additional research personnel locally.

- Notification to TASC R & D Office of any change in funding.

Version 3 – 15/03/12
• As custodian of the information collated during this research project you are responsible for ensuring the security of all personal information collected in line with NHS Scotland IT Security Policies, until destruction of this data.

• All eligible studies will be added to the UKCRN Portfolio http://public.ukcrn.org.uk/. Recruitment figures for eligible studies must be recorded onto the Portfolio every month. This is the responsibility of the lead UK site. If you are the lead, or only, UK site, we can provide help or advice with this. For information, contact Charles Weller – (01382) 3 83822 – charles.weller@uhhs.net or Liz Livingstone – (01382) 3 83872 – elizabethliving@uhhs.net.

• Annual reports are required to be submitted to TASC R & D Office with the first report due 12 months from date of issue of this management approval letter and at yearly intervals until completion of the study.

• Notification of early termination within 15 days or End of Trial within 90 days followed by End of Trial Report within 1 year to TASC R & D Office.

• You may be required to assist with and provide information in regard to audit and monitoring of study.

Please note you are required to adhere to the conditions, if not, NHS management approval may be withdrawn for the study.

Approved Documents

<table>
<thead>
<tr>
<th>Document</th>
<th>Version</th>
<th>Date</th>
</tr>
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<tbody>
<tr>
<td>Ethics – Evidence of Compliance Letter</td>
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<tr>
<td>Ethics – Favourable Ethical Opinion Letter</td>
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<td>12/12/12</td>
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<tr>
<td>Protocol</td>
<td>01</td>
<td>30/11/12</td>
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<td>Appendix 1 – Letter of Invitation to GP Practices</td>
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<td>Appendix 2 – Letter of Invitation to Patients</td>
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<td>Appendix 3 – Participant Information Sheet (Patients)</td>
<td>01</td>
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<td>Appendix 4 – Patient Reply Slip (HCP)</td>
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<td>Appendix 5 – Participant Consent Form</td>
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<td>Appendix 6 – Letter of Invitation to HCP</td>
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<td>Appendix 7 – Participant Information Sheet (HCP)</td>
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<td>Appendix 8 – Topic Guide for Interview with Patients</td>
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<td>Appendix 9 – Topic Guide for Pharmacists and Other HCP</td>
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<tr>
<td>CV – Oluadapo Ogunbayo</td>
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<td>11/12/12</td>
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</tbody>
</table>

May I take this opportunity to wish you every success with your project.

Please do not hesitate to contact TASC R & D Office should you require further assistance.

Yours sincerely,

[Signature]

Elizabeth Coote
R&D Manager

Version 3 – 15/03/12
Tayside medical Science Centre (TASC)
Ninewells Hospital & Medical School
TASC Research & Development Office
Residency Block, Level 3
George Pirie Way
Dundee DD1 9SY
Email: liz.coote@nhs.net
Tel: 01382 563876 Fax: 01382 740122

cc. Dr Ellen Schafheutle
    Professor Peter Noyce
    Professor Christopher Cutts
    NRSPCC

Version 3 – 15/03/12
University Hospitals Division

Queen's Medical Research Institute
47 Little France Crescent, Edinburgh, EH16 4TJ

DENSS/Approval

19 December 2012

Mr Oladapo Ogumbayo
1.136, First Floor Stopford Building
School of Pharmacy and Pharmaceutical Sciences
The University of Manchester
Manchester
M13 9PT

Dear Mr Ogumbayo

Lothian R&D Project No: 2010/RG/12

Title of Research: Exploiting the role and contributions of community pharmacy in providing self-care support of long-term conditions (LTCs)

REC No: 12/WM/06427

Information Sheet (Patient, HCP): Consent Form: Version 1 dated 30 November 2012

Protocol: Version 1 dated 30 November 2012

I am pleased to inform you that this study has been approved for NHS Lothian and you may proceed with your research, subject to the conditions below. This letter provides Site Specific approval for NHS Lothian.

We note that this project includes researchers who will require a Clinical Research Access letter from NHS Lothian. The individuals concerned (Mr Oladapo Ogumbayo) should contact our offices with a view to applying for the necessary documentation. Please note all final paperwork will have to be signed and returned to our R&D offices before a researcher can commence work on the project.

Please note that the NHS Lothian R&D Office must be informed if there are any changes to the study such as amendments to the protocol, recruitment, funding, personnel or resource input required of NHS Lothian. This includes any changes made subsequent to management approval and prior to favourable opinion from the REC.

Substantial amendments to the protocol will require approval from the ethics committee which approved your study and the MHLRA where applicable.

Please inform this office when recruitment has closed and when the study has been completed.

I wish you every success with your study.

Yours sincerely,

[Signature]

Professor David E Newby
R&D Director

Cc: Paul Dearie, QA Manager
    Pamela Shand, NRS
Appendix 4: University of Manchester Confirmation of sponsorship and insurance sponsor

Tuesday, 27 November 2012

To whom it may concern

Sponsor Reference: www.manchester.ac.uk

Role of the Research Sponsor under the Research Governance Framework for Health & Social Care and the Medicines for Human Use (Clinical Trials) Regulations 2004 (S2004/1031)

I hereby confirm that the University of Manchester would be prepared to accept the role of research sponsor as currently defined in the Research Governance Framework for Health & Social Care Version 2 (DoH 2005) and the Medicines for Human Use (Clinical Trials) Regulations 2004 (S2004/1031), in relation to the study:

"Exploring the place and contributions of community pharmacy in providing self-care support of long-term Conditions (LTCs)"

I have been informed that this study will be led by Dr Ellen Schafheutle of The University of Manchester.

Sponsorship is subject to the following conditions:

1) The lead investigator for the study must be an employee of the University of Manchester. For student research the academic supervisor is considered to be the lead investigator.
2) An appropriate contract must be agreed between the University and the funding body.
3) The research must be reviewed and approved by appropriate ethics, NHS and regulatory bodies and registered in accordance with University insurance requirements.

To enable the sponsor to meet their responsibilities as listed in section 3.8 of the Research Governance Framework, Chief Investigators are asked to adhere to the responsibilities as outlined in section 3.6 of the Framework www.dh.gov.uk/research. In line with this requirement Dr Ellen Schafheutle must ensure that all involved in the research project understand and discharge their responsibilities in accordance with the agreed protocol and any relevant management, ethical and regulatory approvals.

Chief Investigators are also reminded that they must register NHS REC approval with The University of Manchester Research Ethics Office.

If you have any queries about sponsorship of this project then please address them to Professor Nalin Thakker, Associate Vice President for Research Integrity, The University of Manchester, Christie Building, Oxford Road, Manchester M13 9PL, or email research.governance@manchester.ac.uk

Yours Faithfully,

Catherine Barrow
Head of Faculty Research Office
Faculty of Medical & Human Sciences

Dated: 27/11/12

Sponsor's sign off arrangements v5 May 2011
The University of Manchester, Oxford Road, Manchester M13 9PL Royal Charter Number: RC000797
To whom it may concern

This is to confirm that, where appropriate, insurance policies held by the University of Manchester will cover the research project entitled “Exploring the place and contributions of community pharmacy in providing self-care support of long-term conditions (LTCs)” which we have been informed is being conducted by Oladapo Ogunbayo under the supervision of Dr Ellen Schafheutle.

The University has insurance available in respect of research involving human subjects that provides cover for legal liabilities arising from its actions or those of its staff or supervised students. The University also has insurance available that provides compensation for non-negligent harm to research subjects occasioned in circumstances that are under the control of the University.

Provision of this insurance cover in respect of a specific project may be subject to the acceptance of the project by the University’s insurers and is conditional upon the project receiving approval from an appropriate ethics committee.

Signed on behalf of the University of Manchester,

Catherine Barrow
Head of Faculty Research Office
Faculty of Medical & Human Sciences

Dated: 28/11/12

Version 3.1 July 2011
The University of Manchester, Oxford Road, Manchester M13 9PL Royal Charter Number: RC000797
Appendix 5: University Research Ethics Committee approval letter

Mr. Ogunbayo
Manchester Pharmacy School

4th August 2014

Dear Mr. Ogunbayo

Research Ethics Committee 3

Oladapo, Schaffheit: A survey study examining community pharmacists’ perception and engagement with the concept of self-care support of long-term conditions (LTCs)[ref 14252]

I write to confirm that the Chair is now satisfied that you have addressed the concerns of the Ethics Committee of the 16th July 2014 and has therefore given the above research project a favourable ethical opinion.

This approval is effective for a period of five years and if the project continues beyond that period it must be submitted for review. It is the Committee’s practice to warn investigators that they should not depart from the agreed protocol without seeking the approval of the Committee, as any significant deviation could invalidate the insurance arrangements and constitute research misconduct. We also ask that any information sheet should carry a University logo or other indication of where it came from, and that, in accordance with University policy, any data carrying personal identifiers must be encrypted when not held on a university computer or kept as a hard copy in a location which is accessible only to those involved with the research.

Finally, I would be grateful if you could complete and return the attached form at the end of the project or by July 2015.

We hope the research goes well.

Yours sincerely

Adrian Jarvis
Ethics Committee 3 Secretary
Appendix 6: GP Practices Introductory letter

Letter of Invitation to GP Practices_V.0 1 30/11/2012

Dapo Ogunbayo,
School of Pharmacy,
The University of Manchester,
1st Floor, Stopford Building,
Oxford Road, Manchester, M139PT.
oladapo.ogunbayo@postgrad.manchester.ac.uk

Dear (Named Practice Manager/GP lead),

Can you help to identify patients for a research study?

I am a PhD student at the School of Pharmacy in the University of Manchester. I am currently undertaking a research study to explore the roles and contributions of community pharmacy in supporting self-care for people with long-term conditions (LTCs).

Self-care is an important way that people with LTCs manage and live normal lives with their conditions. How they undertake this can improve or worsen the outcomes they will experience. The NHS encourages healthcare professionals to support patients with LTCs to undertake self-care. This has been shown to not only improve patient outcomes, but is also shown to reduce wastes of health resources.

While the choice and decisions of self-caring ultimately lies with the individual patient, evidence has shown that GPs and nurses can make a difference. The roles and contributions of community pharmacists are however, not yet well understood. This study will therefore explore the views of key stakeholders in self-care, which include patients and healthcare professionals.

I would like to recruit patients with LTCs into this study to understand how they undertake self-care in relation to their use of community pharmacy services. I will require the support of GP practices to help to identify suitable patients with LTCs for

Supervisors

Dr. Ellen Schaafheutle, Tel: 0161 275 7493, Email: ellen.schaafheutle@manchester.ac.uk, Professor Peter Noyce, Tel: 0161 275 XXXXX, Email: peter.noyce@manchester.ac.uk, Professor Chris Cutts, Tel: 0161 275 XXXXX, Email: chris@cppe.ac.uk
this study. I would simply require you to help identify and contact eligible patients based on the following criteria;

- That they have at least one of diabetes, cardiovascular diseases or chronic respiratory diseases (including asthma), and

- That they are aged at least 18 years old.

Once you have helped identify suitable patients, ready prepared envelopes containing letters of invitation and patient information sheets (enclosed) will be sent out to patients from your surgery.

I will contact you by telephone within the next couple of weeks to discuss the study in more detail, and to answer any questions you may have. I sincerely hope that you will be willing to help out in this study, and I look forward to speaking to you soon.

If you have any queries in the mean time, please do not hesitate to contact me by telephone or email. Thank you.

Yours sincerely

Dapo Ogunbayo (MPH, B.Pharm.)

Enclosed for your information;

- Letter of invitation to your patients

- Information sheet for your patients.

Supervisors
Dr. Ellen Schafheitle, Tel: 0161 275 7493, Email: ellen.schafheitle@manchester.ac.uk, Professor Peter Noyce, Tel: 0161 275 XXXX, Email: peter.noyce@manchester.ac.uk, Professor Chris Cutts, Tel: 0161 275 XXXX, Email: chris@cppe.ac.uk
Appendix 7: Letter of invitation to patients

Letter of Invitation to Patients_V.0 1  30/11/2012

Dapo Ogubayo,
School of Pharmacy,
The University of Manchester,
1st Floor, Stopford Building,
Oxford Road, Manchester, M139PT.
oladapo.ogubayo@postgrad.manchester.ac.uk

Dear (named patient),

Invitation to take part in a research study

I am a PhD student at the School of Pharmacy in the University of Manchester. I am writing to invite you to take part in a research project that is aimed at exploring the roles of community pharmacy in supporting self-care for people with long-term conditions (LTCs).

Self-care includes all those things that people with LTCs do to live better with their condition, and to reduce any symptoms and complications they experience. Community pharmacy already support self-care by supplying medications and helping people to get the best out of it, however, opportunity exists for them to do more.

I have included an information sheet which will provide you with further details of the study, and what will be required of you if you decide to take part. I have also included a reply slip to complete and return if you are interested in taking part in the study.

If you are interested in taking part in this study, or you have any questions, or need more information about the study, please do not hesitate to contact me. Thank you.

Yours Sincerely,

Dapo Ogubayo

Supervisors

Dr. Ellen Schafheutle, Tel: 0161 275 7493, Email: ellen.schafheutle@manchester.ac.uk, Professor Peter Noyce, Tel: 0161 275 XXXX, Email: peter.noyce@manchester.ac.uk, Professor Chris Cutts, Tel: 0161 275 XXXX, Email: chris@cppe.ac.uk
Appendix 8: Participant information sheet for patients

Participant Information Sheet – Patients

Study Title: Exploring community pharmacy's contribution to self-care of long-term conditions (LTCs)

We would like to invite you to take part in our research study. Before you decide, we would like you to understand why the research is being done and what it would involve for you. Please take time to read the following information carefully and discuss with others if you wish. We will be happy to go through the information sheet with you and answer any questions you have.

Why is the research study important?

Self-care is an important way that people with LTCs manage and live better with their condition. The National Health Service (NHS) has recognised that if healthcare professionals support people to better undertake self-care, they will experience better outcomes. Community pharmacists are valued healthcare professionals and play important roles for people with LTCs, such as supplying medications and undertaking medication reviews. However, their contributions and roles in supporting people to undertake self-care have not been well understood, hence, the necessity of this study.

What is the purpose of the study?

This research study is part of a postgraduate research project (PhD). The main purpose is to explore how community pharmacy can help and support people with LTCs to undertake self-care. We hope to initially, gain an understanding of what these community pharmacy self-care support roles are, or could be, and then to examine which will most benefit patient.
Why have I been invited?

We have chosen you to take part in this study because you have been identified by your general practitioner (GP) as living with a long-term condition. In addition, your GP surgery is located within [Named PCT, e.g. Manchester Primary Care Trust], where the study is being carried out.

Do I have to take part?

No. It is up to you to decide whether or not to take part. If you decide to take part, you are still free to withdraw from the study at any time, without giving any reasons.

What will happen to me if I take part?

If you decide to take part, you will be invited to discuss how you live and undertake self-care, and your views of using community pharmacy for self-care. The interview will be held at a convenient location and time agreed with you, and should not last for more than 1 hour. With your permission, the interview will be audio-recorded. All information and data collected from you will be held in such a way that you cannot be identified (i.e., it will be anonymous). If you do not wish to be audio-recorded, please indicate this to the researcher. You can still participate and the researcher will take notes during the interview.

Will my taking part in the study be kept confidential?

Yes. We will follow ethical and legal practice and all information about you will be handled in confidence. Information about your participation in the study will only be available to the research team and staff responsible for monitoring the conduct of the study at the University of Manchester. We may use quotes taken from your interview in reports or publications but you will not be identified.
What will happen to the results of the research study?

The findings from this study will be used to write-up my PhD thesis, and may also be used in internal seminars within the University of Manchester. The findings may also be published in peer-reviewed publications in various formats, conferences and other forms of academic and policy dissemination. The findings may also be used to help inform policy and/or further research.

What if there is a problem?

If you have a concern about any aspect of this study, you should ask to speak to the researchers who will do their best to answer your questions. If they are unable to resolve your concern or you wish to make a complaint regarding the study, please contact a University Research Practice and Governance coordinator on either 0161-2757583 or 0161-2758093, or by email to research-governance@manchester.ac.uk.

What do I do next?

If you are interested in taking part in the study, please fill out and send in the reply form included with this letter and information sheet. If you have any questions or want to discuss anything about the study, please contact us below.

Further information and contact details

Dapo Ogunbayo,
School of Pharmacy and Pharmaceutical Sciences,
1st Floor, Stopford Building,
The University of Manchester,
Oxford Road, Manchester, M139PT.
Telephone: 01612752415
oladapo.ogunbayo@postgrad.manchester.ac.uk
Appendix 9: Patient reply slip

Patient Reply Slip_HCP_V.01  30/11/2012

Reply slip

Exploring community pharmacy's contribution to self-care of long-term conditions

Please indicate your gender.

☐ Male  ☐ Female

Which of the following conditions do you have? (Please tick all those that apply)

☐ Diabetes  ☐ Cardiovascular disease (e.g. high blood pressure or any heart condition)
☐ Chronic respiratory condition (e.g. asthma, COPD)

Please indicate how you would prefer to be contacted to arrange your participation. Please provide your telephone number and/or email address:

☐ Telephone:________________________  ☐ Email:________________________
☐ Best time of contact:_____

Please indicate if you will prefer to have a family member or carer present at the interview

☐ Family member YES/NO (If yes, please specify who________________________)
☐ Carer YES/NO (If yes, please specify who________________________)

How would you describe your ethnic origin?

☐ White  ☐ Asian or Asian British  ☐ Black or Black British  ☐ Mixed  ☐ Other (please specify________________________)

Please return this slip using the stamped address on the envelope provided, thank you.
FREE POST, School of Pharmacy, The University of Manchester, Stopford Building, 1st Floor Oxford Road, Manchester M13 9PT.
Appendix 10: Minor amendment approval letter

Health Research Authority
National Research Ethics Service
NRES Committee West Midlands - South Birmingham
HRA NRES Centre Manchester
3rd Floor
Barlow House
4 Minshull Street
Manchester
M1 3DZ
Tel: 0161 825 7815
Fax: 0161 825 7299

17 June 2013

Mr Oladapo Joseph Ogunbayo
The University of Manchester
1.136, First Floor Stopford Building
School of Pharmacy and Pharmaceutical Sciences
The University of Manchester
M13 9PT

Dear Mr Ogunbayo

Study title: Exploring the place and contributions of community pharmacy in providing self-care support of long-term conditions (LTCs).

REC reference: 12/WM/0427
Amendment number: Minor Amendment 1
Amendment date: 10 June 2013
IRAS project ID: 112407

- The amendment proposes to change the recruitment procedures to include community pharmacists.

Thank you for your letter of 10 June 2013, notifying the Committee of the above amendment.

The amendment has been considered by the Chair.

The Committee does not consider this to be a “substantial amendment” as defined in the Standard Operating Procedures for Research Ethics Committees. The amendment does not therefore require an ethical opinion from the Committee and may be implemented immediately, provided that it does not affect the approval for the research given by the R&D office for the relevant NHS care organisation.

Documents received

The documents received were as follows:

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<thead>
<tr>
<th>Document</th>
<th>Version</th>
<th>Date</th>
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<tr>
<td>Notification of a Minor Amendment</td>
<td>Minor Amendment 1</td>
<td>10 June 2013</td>
</tr>
</tbody>
</table>
Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

12/WM/0427: Please quote this number on all correspondence

Yours sincerely

[Signature]

Dr Ashley Totenhofer
Committee Co-ordinator

E-mail: nrescommittee.westmidlands-southbirmingham@nhs.net

Copy to: Professor Rachel Georgiou - Manchester PCT
Mrs Catherine Barrow - University of Manchester
Dr Ellen Schaafheidte - University of Manchester
Professor Peter Noyce - University of Manchester
Professor Christopher Cutts - University of Manchester
Appendix 11: Patient pre-interview questionnaire

PREINTERVIEW QUESTIONNAIRE

Demography

Age

Gender

Ethnicity

Highest level of education

Employment Status

Post Code

Treatment/Medication use

Quantity of medications per day

Frequency of medication use per day

Frequency of visit to GP

Visit to A&E

Hospital Admission
Appendix 12: Participant consent form

CONSENT FORM

Title of project: “Exploring the place and contributions of community pharmacy in providing self-care support of long-term conditions”

Researcher: Oladapo Ogunbayo

1. I confirm that I have read and understand the information sheet dated 30/11/2012 (Version 1) for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.

2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, without my medical care or legal rights being affected.

3. I agree to the interview being audio-recorded and give permission for the researcher to have access to this information for analysis.

4. I agree to the use of anonymised quotes from the interview in publications arising from this study.

5. I understand that relevant sections of personal data provided for the purposes of this study may be looked at by individuals from the University of Manchester, from regulatory authorities or from the NHS Trust, where it is relevant to my taking part in this research. I give permission for these individuals to have access to my records.

6. I agree to take part in the study.

Name of participant __________________________ Date __________ Signature __________________________

Researcher __________________________ Date __________ Signature __________________________

There will be one copy for the researcher and one copy for the participant.
Appendix 13: Patient interview topic guide

1) Introduction to interview

- Thank you for participating.
- Introduction of investigator and others involved in the research (supervisors).
- Overview of research and purpose of the interview. Approximate duration of the interview is 45-60mins
- Verbal consent to participate and approval to audio-record the interview.
- Confidentiality, anonymity of interview data and right to withdraw at any time

2) Questions

<table>
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<tr>
<th>Broad question area</th>
<th>Specific questions/Probes</th>
<th>Rationale</th>
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</table>
| **Background: Living with a long-term condition (LTC)** | Can you tell me about your (named) LTC? Discussions here will cover;  
- How long have they been living with it?  
- Single or multiple morbidities  
- Exploring their understanding of their LTC  
- General idea of how it is managed?  
Use of health services  
- Frequency of visits to healthcare professionals  
- Type of health services/professional  
- Other sources of help  
- Management type; medications, physiotherapy, surgical procedures, counselling, etc.  
- Any perceived problems/challenges to managing the LTC | These questions aim to gain an insight into the lives of people with LTCs. This background will help to understand the participant’s LTC, knowledge of his/her LTC and use of healthcare services. |
| **Use of community pharmacy services to manage LTC?** | How often do you visit the community pharmacy and for what purposes?  
- Is there any particular pharmacy you like to visit and/or pharmacist you like to see? If yes, why? | Questions here are designed to explore how participants use community pharmacy for services to manage |
<table>
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<th>Topic Guide for interview with Patients V.01</th>
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<table>
<thead>
<tr>
<th>What kind of relationship, would you say exists between you and your pharmacist?</th>
</tr>
</thead>
<tbody>
<tr>
<td>- How did you develop this relationship/rapport?</td>
</tr>
<tr>
<td>Asides collecting your prescribed medications from the community pharmacy, what other services do you use (to manage your condition)?</td>
</tr>
<tr>
<td>- How did you hear about these services?</td>
</tr>
<tr>
<td>- How useful are these services? Who initiates discussions on the use of these services?</td>
</tr>
<tr>
<td>- How do you make any concerns known to your pharmacist?</td>
</tr>
<tr>
<td>- What type of questions do you ask?</td>
</tr>
<tr>
<td>- How useful are the answers you get?</td>
</tr>
<tr>
<td>and self-care for their condition.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Self-care attitudes and behaviours</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Brief definition of self-care: “self-care refers to all those things you do outside the doctors or pharmacists office, that you think helps you to get better and improve your condition”</th>
</tr>
</thead>
<tbody>
<tr>
<td>What are those things that you do or engage in, that make you feel better, or that reduces the symptoms you experience?</td>
</tr>
<tr>
<td>- How do you take decisions and what influences it?</td>
</tr>
<tr>
<td>- Knowledge of what to do?</td>
</tr>
<tr>
<td>- Any skills to do it?</td>
</tr>
<tr>
<td>- When to seek help; family, community, healthcare?</td>
</tr>
<tr>
<td>Asides taking your medication, what else do you do to maintain your health and reduce the impact of your condition on your living?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The definition here aims to help patients to think about how they live with their condition outside the health system.</th>
</tr>
</thead>
<tbody>
<tr>
<td>These questions aim to gain an idea of how patients generally develop and undertake self-care.</td>
</tr>
</tbody>
</table>

Please note that this document is for the Chief investigator and his research team only, and will not be given to participants.
- How do you engage in these things?
- What is your main source of advice or help?
- When and how do you decide to seek unscheduled medical help? – self-monitoring?
- Who’s involved in these things and how (HCPs, family, community service)?

Where do you get information about getting better and/or improving your condition?
- What is the most useful information about your LTCs you’ve ever received?

Do you use any tools, assistive devices or technology at home to care for your condition? (Named for condition, e.g., self-monitoring tools for diabetes)
- How do you get help and support with this?

Would you say you have developed any specific skills to manage your condition?
- If yes, what skills?
- How did you develop the skill?
- Who was involved in acquiring these skills?

Are you involved with any support network for your condition?
- Are you aware of any? If yes, how did you hear about it?
- How involved is your family in supporting your care of your LTC?

<table>
<thead>
<tr>
<th>Views and opinions on community pharmacy self-care support roles</th>
<th>The next series of questions are ways in which healthcare professionals support you to get better.</th>
<th>This set of questions aim to explore patients experiences and views on self-care support</th>
</tr>
</thead>
</table>

Please note that this document is for the Chief investigator and his research team only, and will not be given to participants.
engaging with these within the community pharmacy?  
(NB; Discussions here will use disease-specific scenarios and examples to get the participants’ responses.)

- Decision-making
- Problem-solving
- Developing care plans
- Goal-setting and follow-up
- Healthy lifestyle promotion
- Motivation
- Monitoring symptoms and know when to take actions
- Adhering to medications and treatment plan
- Managing psychosocial and emotional impact of LTC
- Involving family and community support networks

| roles of HCPs and the potential of community pharmacy’s involvement |

3) Conclusion

- Are there any other things you would like to add to these discussions?
- Thanks again for honouring the invitation and for your time.

Please note that this document is for the Chief investigator and his research team only, and will not be given to participants.
Appendix 14: LPCs introductory email

Subject: Community Pharmacy Research on Self-Care Support of Long-Term Conditions

Hello (named LPC contact/secretary),

I am a PhD student in the School of Pharmacy at the University of Manchester. My supervisors are Dr. Ellen Schafheutle, Professor Peter Noyce and Professor Chris Cutts (Centre for Pharmacy Postgraduate Education).

I am currently undertaking a study to explore the contributions of community pharmacy in supporting people with long-term conditions to self-care. This study will require me to interview community pharmacists within Greater Manchester area (including named PCT) and I have obtained NHS ethics and R&D approval to do this.

Can you please help me in identifying and recruiting potential community pharmacists participants within Bury and Rochdale area into my study?

I have attached a letter of invitation and information sheet about the study for community pharmacists.

I am happy to provide you with any more details about my study should you require it. I look forward to hearing from you soonest. Thank you.

Yours truly,

Dapo Ogunbayo

01612752415
Appendix 15: Pharmacist Letter of Invitation

Letter of Invitation to Healthcare Professionals_V.0 1  30/11/2012

Dapo Ogunbayo,
School of Pharmacy,
The University of Manchester,
1st Floor, Stopford Building,
Oxford Road, Manchester, M139PT.
oladapo.ogunbayo@postgrad.manchester.ac.uk

Dear (Named HCP),

Invitation to take part in a research study

I am a PhD student at the School of Pharmacy in the University of Manchester. I am writing to invite you to take part in a research study that is aimed at exploring the roles and contributions of community pharmacy in supporting self-care for people with long-term conditions (LTCs).

You have been invited because you are a healthcare professional involved in managing and supporting people with LTCs. Your views and opinions will be helpful in understanding how and what community pharmacy can do to support people with LTCs to self-care.

I have enclosed an information sheet which will provide you with details of the study, and what will be required of you. I will contact you soon by telephone or email to further discuss your participation in the study and/or to answer any queries you may have.

In the meantime if you have any further enquiries, please do not hesitate to contact me, or any of my supervisors. Thank you.

Yours Sincerely,

Dapo Ogunbayo

Supervisors
Dr. Ellen Schafheutle, Tel: 0161 275 7493, Email: ellen.schafheutle@manchester.ac.uk.  Professor
Peter Noyce, Tel: 0161 275 XXXX, Email: peter.noyce@manchester.ac.uk.  Professor Chris
Cutts, Tel: 0161 275 XXXX, Email: chris@cppe.ac.uk
Appendix 16: Participant information sheet for pharmacists

Participant Information Sheet – Healthcare Professionals (HCPs)

Study Title: Exploring community pharmacy's contribution to self-care of long-term conditions (LTCs)

We would like to invite you to take part in our research study. Before you decide, we would like you to understand why the research is being done and what it would involve for you. Please take time to read the following information carefully and discuss with others if you wish. We will be happy to go through the information sheet with you and answer any questions you have.

Why is the research study important?

The growing burden of LTCs and the rising challenges involved in managing it is now a major challenge for the National Health Service (NHS). Self-care is an important way that people with LTCs manage and live better with their condition. The National Health Service (NHS) has recognised that if healthcare professionals support people to better undertake self-care, they will experience better outcomes. Community pharmacists are valued healthcare professionals and play important roles for people with LTCs, such as supplying medications and undertaking medication reviews. However, their contributions and roles in supporting people to undertake self-care have not been well understood, hence, the focus of this study.

What is the purpose of the study?

This research study is part of a postgraduate research project (PhD). The main purpose is to explore how community pharmacy can help and support people with LTCs to undertake self-care. We hope to initially, gain an understanding of what these community pharmacy self-care support roles are, or could be, and then to examine which will most benefit patient.
Why have I been invited?

We have chosen you to take part in this study because you are involved in managing and/or supporting people with LTCs. In addition, your practice is located within [Named PCT, e.g. Manchester Primary Care Trust] where the study is being carried out.

Do I have to take part?

No. It is up to you to decide whether or not to take part. If you decide to take part, you are still free to withdraw from the study at any time, without giving any reasons.

What will happen to me if I take part?

If you decide to take part, you will be invited to discuss how you support people with LTCs, and your views around self-care support in community pharmacy. The interview will be held at a convenient location and time agreed with you, and should not last for more than 1 hour. With your permission, the interview will be audio-recorded. All information and data collected from you will be held in such a way that you cannot be identified (i.e., it will be anonymous). If you do not wish to be audio-recorded, please indicate this to the researcher. You can still participate and the researcher will take notes during the interview.

Will my taking part in the study be kept confidential?

Yes. We will follow ethical and legal practice and all information about you will be handled in confidence. Information about your participation in the study will only be available to the research team and staff responsible for monitoring the conduct of the study at the University of Manchester. We may use quotes taken from your interview in reports or publications but you will not be identified.
What will happen to the results of the research study?

The findings from this study will be used to write-up my PhD thesis, and may also be used in internal seminars within the University of Manchester. The findings may also be published in peer-reviewed publications in various formats, conferences and other forms of academic and policy dissemination. The findings may also be used to help inform policy and/or further research.

What if there is a problem?

If you have a concern about any aspect of this study, you should ask to speak to the researchers who will do their best to answer your questions. If they are unable to resolve your concern or you wish to make a complaint regarding the study, please contact a University Research Practice and Governance coordinator on either 0161-2757583 or 0161-2758093, or by email to research-governance@manchester.ac.uk.

What do I do next?

I will contact you by telephone or email in due time, to discuss your participation in the study, and/or to answer any queries you may have. In the meantime, please do not hesitate to contact me if you have any further queries.

Further information and contact details

Dapo Ogunbayo,
School of Pharmacy and Pharmaceutical Sciences,
1st Floor, Stopford Building,
The University of Manchester,
Oxford Road, Manchester, M139PT.
Telephone: 01612752415
oladapo.ogunbayo@postgrad.manchester.ac.uk
Appendix 17: Pharmacist interview topic guide

Topic guide for interview with pharmacists and other healthcare professionals

1) Introduction to interview
   - Thank you for participating.
   - Introduction of investigator and others involved in the research (supervisors).
   - Overview of research and purpose of the interview. Approximate duration of the interview is about 60 mins
   - Verbal consent to participate and approval to audio-record the interview.
   - Confidentiality, anonymity of interview data and right to withdraw at any time

2) Questions

<table>
<thead>
<tr>
<th>Broad question area</th>
<th>Specific questions and probes</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Background: Working within the community and/or primary care</td>
<td>Can you tell me about your education and years of experience in community pharmacy/primary care?</td>
<td>To gain an insight into professional background of pharmacists and other healthcare professionals</td>
</tr>
<tr>
<td></td>
<td>- Years of practice</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Type/area of practice</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Post-graduate (CPD) qualifications and other training</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Others</td>
<td></td>
</tr>
<tr>
<td>Background: Experience with managing/supporting people with long-term conditions (LTCs)</td>
<td>What LTCs do you encounter the most in your practice? Discussions will be around:</td>
<td>These questions aim to obtain an understanding of current practices of managing and supporting people with long-term conditions in daily practice.</td>
</tr>
<tr>
<td></td>
<td>- Single and multiple morbidities and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- The average amount spent on managing them.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>How do you support/manage people with LTCs? Discussions will be around:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Type of approaches taken to manage LTCs</td>
<td></td>
</tr>
</tbody>
</table>

Please note that this document is for the Chief investigator and his research team only, and not for study participants.
| Knowledge and understanding of self-care of long-term conditions | "Self-care refers to all those things that your patients do outside the NHS/healthcare professional consultation, either intentionally or unintentionally, that affects the health outcomes they experience."

How would you describe self-care as undertaken by your patients with LTCs?
- What activities?
- What resources are available to them?

How do you empower and/or encourage your patients to undertake and engage in self-care?
- Can you use an example?
- Who else is involved in engaging people in self-care? |

The brief definition/explanation of what self-care is aim to provide a broad overview of self-care. The questions here aim to gain insights into how healthcare professionals perceive and understand self-care in relation to their daily practice. |

| Supporting self-care for people with LTCs within the community and primary care | "Self-care support focuses on the way you work in partnership with your patients to help them manage and live better with their condition. This takes advantage of their existing knowledge, skills and expertise."

Questions here will focus on:
- Expectations from patients
- Nature of discussions with patients
- Relationship with patients
- Responsibility to patients |

These questions aim to explore how healthcare professionals engage in self-care support, or how they would engage in it. It also aims to identify any missed-opportunities there are to support self-care. Key components of self-care support include; information, self-care skills, support networks, tools and device/technology |

Please note that this document is for the Chief investigator and his research team only, and not for study participants.
Discussions will also focus on the key components of self-care support and how they go about it in their daily practices:

**Information**
How do/would you ensure that patients understand ALL the information you give to them?

**Self-care skills**
What skills do/would you like to see, or expect your patients to have in living with their conditions?

**Self-care support networks**
What support networks are you aware of, that are available to your patients with LTCs?

**Self-care tools, devices and technology**
Are you aware of any tools or devices that any of your patients with LTCs are using to self-care? E.g. for self-monitoring, e-resources, tele-health tools, mobile apps, etc.

<table>
<thead>
<tr>
<th>Elements of holistic self-care support of LTCs for community pharmacy</th>
<th>The following set of questions relate to specific interventions that have been used to support self-care of LTCs in primary care.</th>
</tr>
</thead>
<tbody>
<tr>
<td>If and where possible, please use specific examples based on your views and experience.</td>
<td>These questions relates to the holistic approach to self-care that was identified from the literature.</td>
</tr>
<tr>
<td>Can you think of, or share your experiences of, how and if these elements can be undertaken within</td>
<td>The questions aim to get the participants to think about how these approaches are or can be taken in community pharmacy practice.</td>
</tr>
</tbody>
</table>

Please note that this document is for the Chief investigator and his research team only, and not for study participants.
Confidence, willingness and barriers for community pharmacy to undertake a lead role in self-care support of LTCs

| Discussions here will focus on getting the views of participants on the possibility of community pharmacy playing a lead role in self-care support of LTCs? | The questions here aim to explore a general feeling of healthcare professionals’ attitudes and perceptions, and will avoid delving into complex issues such as contracts and professional boundaries |

| - Enablers | - Barriers | - Learning needs |

3) Conclusion

- Are there any other things you would like to add?
- Thanks you for your time.

Please note that this document is for the Chief Investigator and his research team only, and not for study participants.
Appendix 18: Pharmacist survey instrument/questionnaire

07/07/2015

Qualtrics Survey Software

Default Question Block

Self-care support of long-term conditions (LTCs) in community pharmacy

You have been invited to complete this questionnaire survey examining how community pharmacists perceive and engage with the concept of self-care support for long-term conditions (LTCs) and what you think are the important elements of self-care support in community pharmacy.

When answering the questions throughout, we want you to think about the community pharmacy where you most commonly work.

If you do not currently work in community pharmacy, please complete SECTION A ONLY, Thank you.

Everything you say in this questionnaire will remain confidential. Your responses will not be linked to you. All responses will be stored and analysed anonymously.

This questionnaire will take approximately 15 - 20 minutes to complete.

Thank you.

SECTION A: Background

Do you currently work in community pharmacy?

- Yes, full time (≥ 32 hours/week)
- Yes, part time (<32 hours/week)

https://eu.qualtrics.com/ControlPanel/Ajax.php?action=GetSurveyPrintPreview&T=1T29XcTP8AGXJ8MFTjKDXE
If you do not work in community pharmacy, which sector(s) do you work in?

- Hospital
- Primary care
- Industry
- Academia/education and training
- Other, please state

SECTION B: Supporting people with LTCs in community pharmacy

In this section, we want to know about the ways that you interact with people with single and multiple long-term conditions (LTCs) such as diabetes, asthma/COPD, cardiovascular diseases, etc. We also want to know how you support them in managing and living with their LTCs.

In the community pharmacy where you work, please estimate the proportion of patients with LTCs that receive their prescribed medications via the following means.

<table>
<thead>
<tr>
<th></th>
<th>None</th>
<th>About one quarter</th>
<th>About half</th>
<th>About three quarters</th>
<th>All</th>
<th>Don't know/Unsure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collection in person</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delivered to home</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Care/nursing home service</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

To what extent do the members of your community pharmacy team have face-to-face (direct) contact or interactions with people with LTCs?

<table>
<thead>
<tr>
<th></th>
<th>None of the time</th>
<th>A little of the time</th>
<th>Some of the time</th>
<th>Most of the time</th>
<th>Always</th>
<th>Not applicable (N/A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pharmacist(s) (including yourself)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-registration pharmacist trainee(s)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pharmacy technician(s)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accuracy checker(s)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dispensing/pharmacy assistant(s)</td>
<td></td>
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<td></td>
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<tr>
<td>Medicines counter assistant(s)</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

https://eu.qualtrics.com/ControlPanel/Ajax.php?action=GetSurveyPrintPreview&surveyID=1T2RcTP6AGXJ4KMDT50DXE
Which of the following activities are provided by the community pharmacy where you work, or where you most recently worked? (Please tick ALL that apply)

- Medicines Use Review (MUR)
- New Medicine Service (NMS)
- Medication review (full clinical review - not MUR)
- Stop smoking service
- Public health promotion
- Supervised administration of prescribed medicines
- Weight management service
- Inhaler technique checks
- Blood glucose testing
- Anticoagulant monitoring
- Blood pressure checks
- Care/Nursing home service
- Out of hours service (access to medicines)
- Other (relating to LTCs)

For this question, we want to know about the opportunities that you take to discuss with patients about how they live with, and care for their LTCs.

Given the time and resources available to you, how often do you speak with your patients about how they live with, and care for their LTCs:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Never</th>
<th>Seldom</th>
<th>Sometimes</th>
<th>Frequently</th>
<th>Always</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>When handing out a regular medication</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>When handing out a new medication</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>When undertaking a MUR consultation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>When undertaking a NMS consultation</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>When providing a lifestyle intervention e.g. stop smoking, weight management service</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>When providing a health monitoring service e.g. blood pressure check, blood sugar testing</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Please use this space to provide any additional comments you have about the opportunities you take to support people with LTCs in community pharmacy.
SECTION C: Understanding of self-care

In this section, we want to know about your understanding and perceptions of self-care as a concept in the management of patients with long-term conditions (LTCs).

Please indicate your agreement or disagreement with the following statements about self-care.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Agree nor Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-care is about patients taking overall responsibility for managing their own condition(s)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-care requires patients to take the lead role in their own care</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Self-care is about patients getting actively involved in consultations with their healthcare professional</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-care requires patients to tell healthcare professionals how to best support them in managing their LTCs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-care is about patients becoming more independent of healthcare professionals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-care is about patients making informed decisions through improved knowledge and understanding</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Self-care requires patients to seek out the information they need to manage their LTCs on their own</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-care is about patients making the necessary lifestyle changes to improve their health</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-care is about patients adhering to their medications and treatment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-care is about patients with LTCs developing the confidence to make desired changes</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Overall, I have an excellent understanding of self-care as a concept in relation to patients with LTCs</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

SECTION D: Self-care support activities in community pharmacy

In this section, we want to understand how and if you think it is important for you to provide the different elements of self-care support for your patients with LTCs, given the resources and time you have available in your daily practice.
For each of the following statements, please indicate if you think that it is important that you should be engaged in these activities in community pharmacy.

<table>
<thead>
<tr>
<th>Role for other healthcare professional</th>
<th>Minor role for community pharmacy</th>
<th>Major role for community pharmacy</th>
<th>Lead role for community pharmacy</th>
<th>Don't know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make an assessment of a patient’s needs before providing information and advice</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Provide patients with information and advice on:</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Taking medications as recommended</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Eating healthily</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>Being physically active</td>
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<tr>
<td>Maintaining a healthy weight</td>
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<tr>
<td>Stopping smoking</td>
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<tr>
<td>Consuming alcohol healthily</td>
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<tr>
<td>Dealing with the emotional needs associated with living with a LTC</td>
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<tr>
<td>Make an assessment of a patient’s needs after providing information and advice</td>
<td>☐</td>
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<tr>
<td>Utilise a behaviour change technique (e.g. health coaching or motivational interviewing) to help patients change behaviours</td>
<td>☐</td>
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<tr>
<td>Advise patients to know how to recognise deteriorating signs and symptoms of their LTCs</td>
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<tr>
<td>Advise patients to know how to act on the deteriorating signs and symptoms of their LTCs</td>
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<td>Recommend and/or supply self-testing devices (e.g. blood pressure monitors)</td>
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<td>Help patients to interpret the results from their self-testing devices</td>
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<tr>
<td>Provide support to patients to self-administer certain medicines (e.g. insulin injection, inhaler technique)</td>
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<td>Communicate or interact with patients through web-based social media and instant messaging applications</td>
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<tr>
<td>Inform patients about the use of mobile or internet-based applications (‘apps’)</td>
<td>☐</td>
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<tr>
<td>Signpost patients to local or national self-help groups</td>
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<td>Ask your patients how their LTCs affects their daily life</td>
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<td>Ask your patients to talk about any problems they might have with their medicines or their effects</td>
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Help your patients to make plans to achieve their LTC care goals
Help your patients make plans for how to get support from their friends, family or community
Encourage your patients to go to a specific group or class to help them cope with their LTCs
Contact your patients after a consultation with you to see how things were going
Coordinate patient care with the other healthcare professionals that your patient sees for their LTCs

Role for other healthcare professional
Minor role for community pharmacy
Major role for community pharmacy
Lead role for community pharmacy
Don't know

For each of the following statements, please indicate how much you engaged with these activities in the LAST DAY that you worked in a community pharmacy

<table>
<thead>
<tr>
<th>Activity</th>
<th>None of the time</th>
<th>A little of the time</th>
<th>Some of the time</th>
<th>Most of the time</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make an assessment of a patient’s needs before providing information and advice</td>
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<tr>
<td>Provide patients with information and advice on:</td>
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<td>Taking medications as recommended</td>
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</table>
### SECTION E: Factors affecting your ability to provide self-care support in community pharmacy

*In this section we want to know what you think are the main barriers and enabling factors affecting your ability to provide self-care support for people with LTCs.*

From the list below, which are the TOP 3 BARRIERS that most influence your ability to effectively support people with LTCs in community pharmacy?

*Please read through all the options before ticking 3 boxes that apply*

- [ ] Access to patient medical records
- [ ] Access to NHS IT infrastructure
- [ ] Availability of private consultation rooms
- [ ] Current community pharmacy contractual arrangement
- [ ] Working relationship and communication with GPs
- [ ] Supervision regulations in community pharmacy
- [ ] Remuneration for providing support of LTCs
- [ ] Skill mix and organisation of community pharmacy team
- [ ] Public trust and awareness of community pharmacy’s capabilities
Please provide a brief explanation of why you made your selections to the question above

From the list below, which are the TOP 3 ENABLING FACTORS that most influence your ability to effectively support people with LTCs in the community pharmacy?

Please read through all the options before ticking 3 boxes that apply

- Access to patient medical records
- Access to NHS IT infrastructure
- Availability of private consultation rooms
- Access to educational resources and training for supporting LTCs
- Ability to support and motivate patients to change behaviour
- Current community pharmacy contractual arrangement
- Working relationship and communication with GPs
- Supervision regulations in community pharmacy
- Involvement in continuity of care after patients’ hospital discharge
- Support from community pharmacy employers
- Remuneration for providing support of LTCs
- Skill mix and organisation of community pharmacy team
- Public trust and awareness of community pharmacy’s capabilities
- Support from pharmacy profession leadership
- Patients’ accessibility to community pharmacists/pharmacy

Please provide a brief explanation of why you made your selections to question above

SECTION F: About you

In this section we want to collect some information about you and your work place.

Gender
- Male
- Female
Age Group (Years)

- < 25
- 25 - 34
- 35 - 44
- 45 - 54
- 55 - 64
- >65

Additional qualifications

- None
- Clinical certificate/diploma or other postgraduate qualifications
- Supplementary or independent prescriber qualification
- Other

Length of time working in community pharmacy

Years

Month

Role in community pharmacy

- Pharmacy owner
- Superintendent
- Pharmacy manager
- Area manager
- Second pharmacist
- Relief pharmacist
- Locum pharmacist
- Other, please state

Type of community pharmacy practice

- Supermarket
- Multiple (200 outlets or more)
07/07/2015

- Large chain (more than 20 but less than 200 outlets)
- Small chain (20 outlets or less, but more than 5)
- Independent (5 outlets or fewer)

Location of community pharmacy practice

- High street
- Shopping centre
- Retail park
- Health centre/GP practice
- Other

Geographical location of community pharmacy

- Village/Rural area
- Suburban area
- Town
- City
- Other

Work Postcode

SECTION G: Additional comments

Please feel free to use this space to provide any additional comments you have about self-care support of LTCs in community pharmacy

Thank you for completing this survey, your contribution to this research is valued.

If you have any queries, please feel free to contact a member of the research team (oladapo.ogunbayo@manchester.ac.uk)
Appendix 19: Email invitation for pharmacist survey

Subject: Invitation to complete a survey on self-care support in community pharmacy

Dear Pharmacist,

Self-care support of long-term conditions (LTCs) in community pharmacy

We would like to invite you to take part in a research study being conducted by Manchester Pharmacy School at the University of Manchester. We are conducting a survey of community pharmacists to examine how they perceive and engage with the concept of self-care support for LTCs and what they think are the important elements of self-care support in community pharmacy. We are asking if you would be able to find time to complete the questionnaire in the link: https://manchesternursing.eu.qualtrics.com/SE/?SID=SV_81DY4NKA6rP5GLj

Also attached with this email is an information sheet outlining the study, what it would involve for you and how we will ensure participants’ confidentiality. Please take some time to read this information and please contact us if you have any further questions about the study. Once you have taken the time to read the information provided and if you agree to take part, we would ask that you complete the questionnaire via the link above.

The research team on this project are; Oladapo Ogunbayo (PhD student) and his supervisors: Dr. Ellen Schafheutle, Professor Peter Noyce and Professor Christopher Cutts. Professor Christopher Cutts, who is the director of the Centre for Pharmacy Postgraduate Education (CPPE), hopes that the findings from this research study will help to inform and develop learning programmes for the CPPE.

Your email address has not been shared with anyone in the research team and has only been used by CPPE to send this email. This study has received ethical approval from the University of Manchester Senate Ethics Committee.

Please feel free to contact us if you have any queries. Many thanks.

Yours sincerely,

Dapo Ogunbayo
Pharmacy Practice Division
Manchester Pharmacy School
Room 1.132 Stopford Building
University of Manchester
Oxford Road
Manchester M13 9PT

Tel: 0161 275 2415 (Int: 52415)
Email: oladapo.ogunbayo@manchester.ac.uk
Appendix 20: Participant Information Sheet (Cross-sectional survey)

A survey study examining community pharmacists’ perception and engagement with the concept of self-care support of long-term conditions (LTCs)

Participant Information Sheet

You are being invited to take part in a research study as part of a student project leading to a PhD degree. Before you decide it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Please ask if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part. Thank you for reading this.

Who will conduct the research?

A research team from the Manchester Pharmacy School, the University of Manchester, comprising of Oladapo Ogunbeyo (PhD student) and his supervisors. Dr. Ellen Schalteule, Professor Christopher Cutts and Professor Peter Noyce.

What is the aim of the research?

The overall aim of this research study is to investigate how community pharmacists perceive and engage with self-care support of long-term conditions (LTCs). The study aims to achieve this by examining the current practices of support people with LTCs in community pharmacy; examining how community pharmacists understanding of the principles of self-care support of LTCs; identifying the elements of what self-care support is, or could be in community pharmacy; and identifying the potential enablers and barriers for community pharmacy to provide self-care support of LTCs.

Why have I been chosen?

You have been chosen to take part in this study as you are one of a random sample of 10,000 pharmacists selected from a Centre for Pharmacy Postgraduate Education (CPPE) database, as representative of all community pharmacists in England.

What would I be asked to do if I took part?

We have included a link to a questionnaire which we have asked you to complete. This questionnaire contains sections asking you about how you currently support people with LTCs; your knowledge and understanding of self-care; the self-care support activities that you provide in your current practice and those that you think are important; and the factors that you think are enablers or barriers to providing self-care support in community pharmacy. There is also a section asking for some demographic details (e.g. age, gender). It will take you approximately 15-20 minutes to complete. If you are happy to take part, we would like you to complete the questionnaire at your earliest convenience. Please note that by completing the online questionnaire, you are consenting to it being included in our study.

What happens to the data collected?

All the information you provide will be stored anonymously on an electronic database. This database will then be analysed by the researchers to look for any statistical relationships. The findings will be used to write-up a PhD thesis and may also be published in a report, journal articles and/or conference presentations.
How is confidentiality maintained?

Confidentiality will be maintained at all times. This is of the utmost importance to us. Your email contact details have only been used by us for this mailing, and will not be revealed to anyone else. Each questionnaire link has been given a unique identifier only in order for us to monitor responses. We will remove this identifier as soon as your response has been logged and it will not be stored on the database with the information you provide. In this way it can no longer be linked with any individual. The database will be encrypted and stored on password protected and firewall computers. All findings reported in reports, articles and presentations will not be traceable back to individual respondents or the organisations they work for.

What happens if I do not want to take part or if I change my mind?

It is up to you to decide whether or not to take part. If you do decide to take part, the receipt of your questionnaire will be taken as proof of your consent to participate. If you choose not to take part, simply do not complete the questionnaire. Please note that once a questionnaire has been received by us it will not be able to be withdrawn from the study at a later date due to the anonymisation processes described above.

Who is funding the research?

The University of Manchester is providing the funding and sponsorship for this study.

Research Ethics

This study has received ethical approval from the University of Manchester Senate Ethics Committee.

Contact for further information

Oladapo Ogunbayo
Manchester Pharmacy School, The University of Manchester
1.132, 1st Floor, Stopford Building
Oxford Road Manchester M13 9PT
Tel: +44 (0)161 2752415
oladapo.ogunbayo@manchester.ac.uk

What if something goes wrong?

If there are any issues regarding this research that you would prefer not to discuss with members of the research team, please contact the Research Governance and Integrity Team by either writing to The Research Governance and Integrity Manager, Research Office, Christie Building, The University of Manchester, Oxford Road, Manchester M13 9PL, by emailing Research.Complaints@manchester.ac.uk or by telephoning 0161 275 7583 or 276 8093.
Appendix 21: Reminder email invitation for pharmacist survey

**Subject:** Reminder: Invitation to complete a survey on self-care support in community pharmacy

Dear Pharmacist,

**Re: Self-care support of long-term conditions in community pharmacy**

We wrote recently to invite you to take part in a questionnaire research study to examine how community pharmacists’ perceive and engage with the concept of self-care support for people with long-term conditions (LTCs) and what they think are the important elements of self-care support in community pharmacy. If you have completed the online survey via the link below, our sincerest apologies for sending you this reminder which you can ignore.

We are asking if you would be able to find time to complete the questionnaire in the link: [https://manchesternursing.eu.qualtrics.com/SE/?SID=SV_81DY4NKA6rP5GLj](https://manchesternursing.eu.qualtrics.com/SE/?SID=SV_81DY4NKA6rP5GLj).

Attached with this email is an information sheet outlining the study, what it would involve for you and how we will ensure participants’ confidentiality. Please take some time to read this information and please contact us if you have any further questions about the study. Once you have taken the time to read the information provided and if you agree to take part, we would ask that you complete the questionnaire via the link above.

If you have started the survey but have not yet completed it, we would be grateful if you could please complete it by clicking on the link above, thank you.

The research team on this project are; Oladapo Ogunbayo (PhD student) and his supervisors: Dr. Ellen Schafheutle, Professor Peter Noyce and Professor Christopher Cutts. Professor Christopher Cutts, who is the director of the Centre for Pharmacy Postgraduate Education (CPPE), hopes that the findings from this research study will help to inform and develop learning programmes for the CPPE.

Your email address has not been shared with anyone in the research team and has only been used by CPPE to send this email. This study has received ethical approval from the University of Manchester Senate Ethics Committee.

Please feel free to contact us if you have any queries. Many thanks.

Yours sincerely,

Dapo Ogunbayo

Pharmacy Practice Division
Manchester Pharmacy School
Room 1.132 Stopford Building
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Manchester M13 9PT
Tel: 0161 275 2415 (Int: 52415)
Email: oladapo.ogunbayo@manchester.ac.uk
### Table 1_ Information and advice

<table>
<thead>
<tr>
<th></th>
<th>Lead role</th>
<th>Major role</th>
<th>Minor role</th>
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<tbody>
<tr>
<td><strong>High</strong></td>
<td>Providing information and advice on taking medications as recommended</td>
<td>Providing information and advice on stopping smoking</td>
<td></td>
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<tr>
<td><strong>Medium</strong></td>
<td>Provide patients with information and advice on:</td>
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<tr>
<td><strong>Low</strong></td>
<td>Utilize a behaviour change technique (e.g. health coaching or motivational interviewing) to help patient’s change behaviours</td>
<td>Providing information and advice on dealing with the emotional needs associated with living with a LTC</td>
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</table>
### Table 2: Skills training and support

<table>
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<tr>
<th>Lead role</th>
<th>Major role</th>
<th>Minor role</th>
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</thead>
<tbody>
<tr>
<td><strong>High</strong></td>
<td>Provide support to patients to self-administer certain medicines (e.g. insulin injection, inhaler technique)</td>
<td>Help patients to interpret the results from their self-testing devices</td>
</tr>
<tr>
<td></td>
<td>Advise patients to know how to recognise signs and symptoms of their LTCs</td>
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<tr>
<td><strong>Medium</strong></td>
<td>Recommend and/or supply self-testing devices (e.g. blood pressure monitors)</td>
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<tr>
<td><strong>Low</strong></td>
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### Table 3: Self-care support networks

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<tr>
<th>Lead role</th>
<th>Major role</th>
<th>Minor role</th>
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<tbody>
<tr>
<td><strong>High</strong></td>
<td>Signpost patients to local or national self-help groups</td>
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</tr>
<tr>
<td><strong>Medium</strong></td>
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<td><strong>Low</strong></td>
<td>Help your patients make plans for how to get support from their friends, family or community</td>
<td>Encourage your patients to go to a specific group or class to help them cope with their LTCs</td>
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</table>
### Table 4: Self-care Technology

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<th>Role</th>
<th>Lead role</th>
<th>Major role</th>
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<td>High</td>
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<td>Inform patients about the use of mobile or internet-based applications ('apps')</td>
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</table>

### Table 5: Collaborative Care Planning

<table>
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<tr>
<th>Role</th>
<th>Lead role</th>
<th>Major role</th>
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<tbody>
<tr>
<td>High</td>
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