The organisation of care for people with multimorbidity in general practice: An exploratory case study of service delivery

Submitted to The University of Manchester for the degree of Doctor of Philosophy in the Faculty of Humanities

2014

RACHEL A. LEWIS
MANCHESTER BUSINESS SCHOOL
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Abbreviations

CCM    Chronic Care Model
GP     General Practitioner
HFN    Heart Failure Nurse
MCN    Managed Clinical Networks
NHS    National Health Service
P      Patient
P1     Practice 1
P2     Practice 2
P3     Practice 3
P4     Practice 4
PCT    Primary Care Trust
PM     Practice manager
PN     Practice nurse
QOF    Quality and Outcomes Framework
RCGP   Royal College of General Practitioners
Abstract

This thesis explores the provision of services for people with multimorbidity in general practice. It considers 3 broad research questions: how services are organised; why they are configured in this way; and the impact this organisation has on service delivery. At present, there is no formalised system for managing multimorbidity in general practice. Current arrangements reflect the wider organisation of care for chronic conditions which typically involves managing individual chronic conditions. The needs of people with multimorbidity are often complex and require a number of services from several providers. Coordinating these services is challenging, not least because of the fragmented system within which professionals and providers are situated. Different clinical, managerial and funding arrangements complicate this situation, creating as it does a number of parallel work streams. Effective healthcare for people with multimorbidity requires different providers to work collaboratively to promote linkage across professional and service boundaries. Information flows and administration play an important role in promoting continuity and coordination within and across work streams that span primary, secondary and tertiary care. In some instances, inefficiencies in services can be linked to the lack of integrative working between the clinical and administrative aspects of care. At present, fragmented systems are perpetuated by the lack of a whole systems approach that would align clinical, managerial and financial aspects of service provision across organisations.

This thesis demonstrates that, services in general practice are increasingly determined by factors external to it. Most notably the division of care across multiple providers and the financial and contractual arrangements which require an organisation of services that promotes a division of labour and a routinsation, aimed at optimising the daily through put of patients. If the present and future needs of people with multimorbidity are to be effectively met, changes to the way services are provided in general practice must be considered as part of a whole system of healthcare, whereby collaborations between different professionals and services are intentionally organised and actively managed. Although the evidence base for managing multimorbidity is limited, there is a growing recognition that in terms of improving outcomes for people with multimorbidity, improving clinical care alone is not as effective as simultaneously improving the organisation or design of services across the whole system of provision.
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Acknowledgements

I am extremely grateful to my supervisors Professor Ruth Boaden and Professor Heather Waterman. Without them this work would not have been possible. Both were very different in their approach but equally motivating and supportive. Ruth’s business background and knowledge of the NHS was invaluable as was Heather’s methodological expertise and her attention to detail, thank you both.

This thesis is the culmination of 4 years hard work, 3 of which I was fortunate enough to be able to undertake fulltime. This was largely due to the generous funding from the National Institute for Health Research Collaboration for Leadership in Applied Health Research and Care (NIHR CLAHRC) for Greater Manchester and Manchester Business School. I would like to express my gratitude to them both.

I would also like to express my thanks to Professor Martin P. Charns (DBA) the Director of the Center for Organization, Leadership and Management Research, Department of Veterans Affairs, and Professor at Boston University School of Public Health, Massachusetts. As a Harkness Fellow (2008/9) based at the Veterans Health Administration in Boston, Marti was the catalyst and inspiration for my growing interest in organisation theory and the delivery of healthcare services. This led to my enrolment into Manchester Business School’s PhD program and my ongoing interest in the organisation of healthcare.

Thank you to Roman Kislov, a serious intellectual who is an extremely entertaining and supportive fellow PhD candidate.

Last but not least I would like to thank my husband Dr David Lewis and my boys Matthew and Samuel. Undertaking a PhD is a solitary (and often selfish) challenge. Without their support, this extended period of study would not have been possible.
I have been a nurse for over 20 years, mainly working in a clinical setting with people with chronic kidney disease. I have a long standing interest in service delivery and spent a number of years at the Department of Health as a nurse adviser working on projects that involved bridging the policy-practice gap. This research emerged from my frustration as a nurse practitioner trying to organise care for people with chronic conditions in the community. Having recently moved from working in chronic care in the acute sector, it was surprising how disorganised care appeared to be in the community. Patients with complex care needs typically had numerous providers including, several secondary care consultants; district nurses; specialist nurses; GPs; intermediate care professionals, community matrons and active case managers. As a community matron I had a caseload of patients with an index condition of chronic kidney disease. This aspect of their care was managed through tertiary services at the city hospital. Other conditions were managed by specialists at two other local hospitals. Those with diabetes were also under the joint renal and diabetic service at the regional hospital. One gentleman who required dialysis, received services from 21 different providers on several different sites, as well as in his home and whilst he was at the extreme end of the spectrum, patients with multiple chronic conditions typically attend numerous appointments, often several times a week. The 20 complex patients on my case-load, were under the care of 17 different GPs based in 11 different practices. Problems associated with a particular chronic condition were usually managed in conjunction with the specialist nurse (if there was one for that particular condition) or the specialist consultant in secondary care. Problems associated with being elderly or frail, such as memory problems, incontinence, or mobility issues, were referred to the community geriatrician. Other problems such as acute illness, medication problems, or uncomplicated exacerbations of particular conditions, were the jurisdiction of the GP. Social care needs were referred to social services. All of these providers had their own patient records, which were only accessible by physically attending the organisation where the notes were stored. Even the GPs electronic record is only accessible within the practice. In my experience, there was no comprehensive plan of care that covered the range of patient needs and most activity was in response to an event as opposed to anticipating the likely trajectories of chronic care and proactively identifying services locally. Although there were some systems of care, these were disease specific and based around narrowly defined clinical needs as opposed to the individual needs of patients. An obvious exception to this approach was the provision of care for those patients who were dying.

The fragmentation of care across different providers in different settings made coordinating care very difficult and time consuming. The complexity of patient needs in this cohort of patients meant that each proposed change in patient management had to be agreed by the ‘overseeing’ physician, specialist nurse or GP, so if it was a problem with unstable blood sugars, the specialist nurse or diabetologist would be telephoned, if it was a problem with a patient’s urine
output, the kidney specialists would be contacted. Many of these nuances of patient care were particular to each patient, their individual mix and severity of chronic conditions, and what provision was available locally and so could not be managed with reference to standard practice protocols. Whilst community matrons were often experienced in managing multimorbidity, they did not have the authority to make decisions independently of other providers. Had they been based in a particular practice, they may have developed a working relationship with a circumscribed group of GPs. As it was, their patients were spread across a number of practices and various proposed changes had to be individually negotiated. Similarly, many of the services required by their patients were provided by others and community matrons were often unable to refer directly to these services in the same way as GPs or hospital consultants were able to. Consequently, a case had to be made to justify individual referrals to other services.

As much as it was part of my role as a community matron to coordinate care for people with complex needs, the logistics of this proved very difficult. Lots of providers contributed to particular aspects of care but not in any cohesive or structured way. Nobody was responsible for the ‘whole’ and there was an absence of mechanisms to work across professional and service boundaries. Patients and their families did not only bear the burden of chronic illness, they often shouldered an additional burden of a fragmented healthcare system, a burden often unseen and unacknowledged by providers. The practical reality of trying to meet the complex care needs of people with chronic conditions was the impetus for this research.
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CHAPTER 1 INTRODUCTION

1.1 Overview

This chapter provides an introduction to the research that follows on service provision in general practice for people with multimorbidity, the definition of which is the existence of two or more morbidities (Barnett et al, 2012) or chronic conditions (Boyd and Fortin 2010). Providing effective and sustainable services for people with multimorbidity is a global challenge and is of interest to a growing number of stakeholders, not least patients. The research is an exploratory study of general practice, based on three broad research questions: how services are provided for people with multimorbidity, why they are configured in the way they are, and the impact of these on the delivery of services. The aims of the study are to develop an understanding of the provision of services and the extent to which this provision is constrained and facilitated by factors both within general practice, but also in the wider organisation of care in the NHS. The chapter begins with an explanation of the relevance of this research and introduces a small number of key references. It outlines the reasons why interest in this area of healthcare is growing and its relevance, before explaining the practice context within which the research is situated. The societal challenges posed by the increasing incidence and prevalence of chronic conditions are identified as well as associated themes in health policy and service design, particularly the use of models in care. It goes on to explain why a case study approach seemed the most appropriate method of inquiry. The use of propositions are explained, as is the theoretical approach used in this research. It concludes with an outline of the thesis that follows.

1.2 Multimorbidity

Multimorbidity is a relatively new concept and incorporates different combinations of chronic conditions at different stages of advancement. It represents a spectrum of health states and associated needs. There is an evolving discourse around the concept and terminology used in this area (Mercer, Salisbury and Fortin, 2014). For the purposes of this research the term multimorbidity is mainly used. Due to the number of related terms used within the evidence base, the terms ‘chronic conditions’, ‘chronic illnesses’ and ‘multiple chronic conditions are sometimes referred to. In practice, these terms are increasingly used in preference to the term ‘chronic disease’ which typically refers to a more restricted biomedical interpretation of illness (Starfield, Shi and Macinko, 2005). Further discussion on terminology is included in the next chapter. The incidence and prevalence of multimorbidity is set to increase as the population ages (Boyd and Fortin, 2010). It is associated with functional disability and decline (Marengoni et al, 2011) as well as high mortality (Gisjen et al, 2001). It is also linked to an increased use of healthcare resources (Glynn et al, 2011; Salisbury et al, 2011) and presents a huge challenge to health systems globally. Healthcare services in the NHS are largely based on an acute care model (Rondeau and Bell, 2009) with chronic conditions being provided for within disease specific pathways, largely based on the biomedical model (Chew-Graham et al, 2013). These models of care are often unsuited to people with multimorbidity as provision by more than one
disease specific service can lead to duplication, fragmentation and omissions in care (Coleman et al, 2009). In addition, problems associated with multimorbidity can be due to manifestations of multimorbidity as opposed to any individual disease a person may have. So for instance, polypharmacy is often a consequence of multimorbidity and can be the cause of adverse events and hospital admissions (Boyd and Fortin 2010). In some people, care may become burdensome (Bower et al, 2011) and unsafe due to poor coordination (Wolff, Starfield and Anderson, 2002) or the absence of integrative practices (Naylor and Sochalski, 2010).

The acknowledgement of inadequacies associated with existing chronic care pathways has led to a focus amongst stakeholders on the redesign of delivery systems (Curry and Ham, 2006; DH, 2005) and the development of a number of chronic care models. Of which, the most well-known and used is Wagner’s (Wagner, Austin and Von Korff, 1996) Chronic Care Model (CCM). Key elements in the model, such as, supported self-management and proactive care teams, work together at patient-practitioner, organization and system level of care to improve patient outcomes and make more efficient use of healthcare resources (Coleman et al, 2009). At the last count, aspects of the CCM have been implemented in over 1500 physician practices both in the United States (US) and internationally (Coleman et al, 2009). Evaluations of its effectiveness are mixed (Asch et al, 2005; Gugiu et al, 2012), but on balance the evidence suggests that the model does have the potential to improve care provision and health outcomes (Pearson et al, 2005; Asch et al, 2005). The problem in stating this definitively is that most of the evaluations did not include the whole model with many sites implementing only one or two aspects of it. In addition, the complex settings of many of these studies meant the researchers had some difficulty in attributing particular outcomes to particular interventions (Nolte and McKee, 2008). The National Health Service (NHS) in England is increasingly redirecting the responsibility for a number of chronic conditions from secondary care to general practice and the community (DH, 2006). Whilst there is some evidence that a number of chronic care models have been implemented within the NHS (Curry and Ham, 2010) it is not clear to what extent they are in use within general practice.

1.3 Methods: Case study and propositions

Healthcare provision is complex as is multimorbidity and the organisation of services to meet the needs of this population. Therefore to achieve more than just a cursory overview of service provision, a case study approach was adopted whereby several sources of data were used to provide a rich and detailed account, from a number of different perspectives. This research is an empirical inquiry that explores ‘a contemporary phenomenon within its real-life context [a particularly useful form of inquiry when] the boundaries between phenomenon and context are not clearly evident’ (Yin, 1994:p13). The ‘case’ here is services for people with multimorbidity in general practice. Similar to Yin’s (2009) approach to case study, this research includes 3 propositions which are based on assumptions of how and why services are configured in
general practice. These were formulated by my experience of working in this field as well as the theory and practice associated with these themes in the literature:

1. How services are configured is dependent upon how practice staff make sense of what is needed and what is possible in the given context
2. In response to their increasing responsibility for chronic disease management in general practice, more integrated ways of working are emerging
3. Managing the care of patients with multiple conditions is constrained by the way services are traditionally structured and organised

These propositions guide and reflect the research process, they are iteratively reviewed, reanalyzed and modified throughout the research. Their development through this research is indicative of the emerging evidence that either challenged or supported the theoretical propositions and contributed to their final forms, which are located in the discussion chapter. Further discussions regarding the propositions can be found in the methods and discussion chapters.

In keeping with other organisations that share the same purpose, individual general practices are broadly similar in structure, processes and outcomes. They share a number of professional bodies, have similar contracts and are subject to the same litany of regulation and surveillance activities. However, they are likely to differ in the detail of how they function because they are ‘peopled’ institutions in which actors, independently and collectively, take action in response to their ‘perpetually’ changing context. In helping to explain the similarities (and differences) between practices, I draw on the work of Weick (1995) and his process of sensemaking. Sensemaking is often used by organisation theorists to understand organizational behaviour. Exploring how staff members understand their own actions in relation to their work and the wider provision of care, may help to explain at an individual and organisational level the perpetuation of particular healthcare behaviors and practices as well as identifying the barriers to more collaborative and integrative ways of working. Although a number of data sources were included in this research, it relies heavily on the narratives of the participants and how they rationalise or ‘make sense’ of their own activities and those of others in healthcare practice.

Given the ongoing rise in multimorbidity and the increasing responsibility ceded to general practice, the purpose of this research was to explore how services have adapted to meet these changes. In particular, how services are organised in general practice and the factors that influence their configuration. For instance, it was expected that contractual arrangements would have some bearing on service provision. Heart failure was chosen as an index condition to reduce the scope of the research into a manageable size. It is a common condition that is increasingly managed between secondary care and general practice and it facilitated an exploration of collaborative practices at the interface between these two areas.
1.4 Micro

A number of factors are likely to influence care delivery at a micro level including, patient and professional beliefs’ and attitudes’ and increasing demand on services. There is a growing recognition that most decisions and activities that impact on health occur outside of formal health care settings and are performed by patients. This ‘new’ paradigm is recognized as integral to optimizing patient outcomes (Bodenheimer, Wagner and Grumbach, 2002) and self-management support is included in many chronic illness frameworks. There are a number of barriers to self-care and many of these are directly related to multimorbidity (Bayliss, Steiner and Fernald et al 2003). The complexity of multimorbidity often requires a holistic approach. The Royal College of General Practitioners (RCGP), suggest that GPs are the only professional group providing holistic and patient centered care (RCGP, 2007); GPs know their patients, they often know their families, they treat people over time, and usually for several years. They understand the complexity of chronic conditions, the recommended treatments and the patients’ individual circumstances that mean a compromise of interventions are often necessary. However, whilst this may be a valid aspiration in general practice, the reality of delivering this can be difficult. In response to increasing demand, general practices have expanded in recent years to accommodate new roles and responsibilities. An increase in the numbers of GPs and nurses have often been accompanied by the employment of practice managers and health care assistants. A diversification and downward substitution of roles has allowed the nurses and doctors to spend time on more highly skilled activities. Despite this, rising demand, constricting resources and increasing expectations are challenging effective delivery; primary care delivers 90% of NHS activity with 7.5% of the budget (Gilbert, 2013). These difficulties may help to explain: the experience of (particularly elderly) patients with complex health needs in the community; the fragmentation (Boyd and Fortin, 2010; Bower et al, 2011) and variations in care between professionals and services (Gray and DaSilva, 2010).

1.5 Meso level

The limitations of existing arrangements for managing chronic conditions initiated an interest in how other health systems managed similar patients. The most widely used and evaluated model both in the UK and internationally is the Chronic Care Model (CCM). Developed and subsequently refined around the turn of the century, it aims to improve the quality of care as well as the health outcomes for people with chronic conditions and in doing so, help to contain healthcare costs. The model includes the following key elements: self-management support; health services and community groups working collaboratively; decision support; clinical information systems and delivery system design. Another model included in this research is the NHS Health and Social Care model which was introduced in 2005 (DH, 2005). Many aspects of this were drawn from Wagner’s model (Wagner, Austin and Von Kroff, 1996). A major strength of the model is its generic application across disease groups, which is in contrast to other chronic care models which, at the time of its introduction, were almost all disease specific. Similarly, the CCM extends beyond the traditional focus of the optimisation of biomedical
indicators to include the wider determinants of health outcomes such as decision support and service delivery. A key aspect of these models is the coordination of care across different providers aimed at improving the patient experience at the same time as promoting better outcomes and more efficient use of resources.

Rising health care costs and variations in health outcomes in relation to people with chronic conditions have prompted an interest in improving the effectiveness and efficiency of care for people with chronic conditions and has led to the development and implementation of a number of care models. Whilst initially these were disease specific, a number have evolved to incorporate a wider scope that includes the design of services. To date Wagner's Chronic Care Model is the one most widely used internationally. Many of these models originated in the North America (Nolte & McKee, 2008) and whilst the predominantly private healthcare context in the United States (US) is very different from that of the UK and most of Western Europe, it is pertinent to note that the needs of people with chronic conditions and multimorbidity are similar, irrespective of where they live. This is evident in the similarity of themes that typically characterise the various models and policy recommendations. Mainly that care should be: individualised, continuous, consistent and coordinated; collaborative with the sharing of information between providers. Healthcare professionals should involve patients in decisions regarding their care; and support patients in self-managing their conditions (Curry & Ham, 2010). An important part of continuity and care in general, is the flow of patient related information across providers. This research also explores the role of administration in service provision

1.6 Macro

General practice consists (mainly) of independent, privately owned businesses, most of whom derive all of their work from the NHS and as such are required to operate within strict operational, regulatory and contractual boundaries. To this extent a number of activities and work streams are determined at a regional and national level and mainly through health policy and funding.

Systems and Integration

Healthcare systems and organisations are some of the most complex and interdependent entities known in society (Charns and Tewksbury, 1993). Systems and organisations contain a number of separate but interconnected parts. For the system to be efficient and effective, these parts are required to work in a complementary way, however, the divisions, decentralization and specialization that characterize health systems, can often prevent them from doing so (Kodner and Spreeuwenberg, 2009). The solution to this ubiquitous problem, is to introduce and/or increase the levels of cooperation and collaboration within and across systems of care (Galbraith, 1973). Integrated care is a ‘burgeoning field’ and of increasing interest to commissioners, providers and researchers (ibid). Again the terminology in this area is varied,
but in the UK it is primarily used to mean ‘shared care’ across primary and secondary providers, the purpose of which is to promote more continuity in care through coordination (Shaw, Rosen and Rumbold, 2011). This role is increasingly linked to general practice.

1.7 The Research
This research included three ‘NHS’ general practices (P1, P2 and P3) and one owned by a private company (P4). All were situated within urban areas. The time spent in each practice ranged from 1-4 weeks and was spent observing (mainly) non-clinical and clinical activities, attending meetings in each practice and interviewing various members of staff. Additional days were spent interviewing patients with multiple conditions, all but one of these interviews were conducted in the patient’s home. In an attempt to reduce the scope of the research to a manageable study in the time available, heart failure was chosen as an index condition. The patients included in this study all had heart failure and at least one other chronic condition, their shared care across primary and secondary care facilitated an exploration of services at the interface between primary and secondary care. Interviews with the heart failure nurses and advanced nurse practitioners based in the community offered additional perspectives to those of the practice staff. A case study approach allowed for an in-depth and detailed, exploratory study of how services are provided in the context of 4 general practices.

1.8 Structure of the thesis
The thesis is structured around micro, meso and macro level influences on service delivery in general practice. Whilst not always discrete categories, this structure helps to identify the relative influence each area has on service delivery. The literature review in chapter 2 begins with an explanation of the literature search strategies, which used a number and combination of terms to locate the literature. A section on terminology describes an extensive typology used in this area and explains the terms used in this thesis. A number of broad themes and concepts are identified including: the context of care; the increasing focus on chronic conditions, and in particular multimorbidity. A review of the literature relating to heart failure follows this section and is organised under micro, meso and macro headings. The chapter concludes with an overview of sensemaking and its use in healthcare research. The methods chapter includes the aims and propositions of the research. It discusses the research paradigm and includes the rationale for choosing the methods used in the study. The choice of research design is considered before the case study approach is documented in more detail. The fieldwork schedule is outlined and some of the challenges that arose during the data collection are discussed. The findings chapter discusses the main findings of the research. It starts with an overview of the 4 practices and how they organise care. It includes a section on the organisation of heart failure services in the area, before reporting the main findings. The discussion chapter considers the findings in relation to what is already known and discusses the implication of findings in relation to further research, policy and practice. A section includes
the strengths and limitations of the research. The conclusion chapter summarises the research project.

The following chapter explores the literature around service provision for people with multimorbidity. Due to the relative newness of the term, research specifically using the term multimorbidity is relatively sparse. Consequently, where necessary, the review that follows draws upon the wider literature associated with managing chronic conditions and the associated provision of services for these. The review and the research that follows is guided by, but not limited to, the propositions.
CHAPTER 2      LITERATURE REVIEW

2.1   Introduction

This chapter reviews the literature that helps to explain how services for people with a number of chronic conditions are provided in general practice and why they are configured in the way that they are. It focuses on general practice as this reflects prevailing health policies which aim to move most of the responsibility for chronic conditions away from secondary care. The chapter begins with a description of the search strategy used to review the literature followed by a section on terminology which reflects the extensive typology related to multimorbidity and chronic care. The lack of consistency and the overlap of definitions in both theory and practice mean that pragmatically reviewing the evidence is difficult. The chapter explores the umbrella term, integration and related concepts such as fragmentation and continuity. A number of established care models cited in the literature and their use in practice are considered. Similar to the structure of the thesis that follows, the literature chapter acknowledges the multifaceted nature of chronic care provision and draws on those aspects of healthcare at a meso and macro level that influence service provision at a micro level in general practice. Heart failure was used as an index condition to circumscribe the scope of the research and to explore the arrangements for multimorbidity, particularly when management spanned a number of providers. An introduction to sensemaking is included and its use within healthcare research. Sensemaking is the theoretical approach used in this study.

In addition to the research questions, 3 propositions also helped to guide this study and literature review:

1. How services are configured is dependent upon how practice staff make sense of what is needed and what is possible in the give context.

2. In response to their increasing responsibility for chronic disease management in general practice more integrated ways of working are emerging.

3. Managing the care of patients with multiple conditions is constrained by the way services are traditionally structured and organised.

These propositions are used to structure the results of the literature review in this chapter and are discussed in more detail in subsequent chapters.

The complexity involved in studying services for people with multimorbidity further challenges researchers who are interested in establishing the effectiveness of interventions to manage multimorbidity (Gugiu et al, 2012; Singh and Ham, 2006). During this research, heart failure was used as the index condition, its inclusion illustrates the complexity and challenges of
providing services for people with chronic conditions in the context of the wider healthcare system.

2.1.1 Locating the literature
A number and combination of search terms were used to review the literature (Table 2.1). These were initially entered into a number of databases including, Ovid (Medline, Cochrane systematic reviews and Embase) and PubMed. The search period was 1995-2014, it was important to circumscribe the time frame for practical reasons, but most of the relevant research appeared to be located in this period. Whilst some of the more general search terms in some instances elicited thousands of results, combinations of terms were not always so successful. For instance, a search for multimorbidity [and] general practice [and] service delivery resulted in 1 study. Where there were thousands of articles, further qualifiers such as UK, England and NHS were used. Studies from other countries were included if comparable data was absent from the UK, and only if there was a degree of similarity in some aspects of managing chronic conditions. These were mainly from the US, Canada and Europe. Articles that included children and young people were excluded because services for this cohort of people are organised differently and were beyond the scope of this review.

Table 2.1: Search themes and terms

<table>
<thead>
<tr>
<th>Databases</th>
<th>Themes</th>
<th>Categories</th>
<th>Initial search</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ovid:medline; Embase; CINAHL; Cochrane database, systematic reviews Pubmed</td>
<td>Multimorbidity + (2233)</td>
<td>+ General Practice</td>
<td>186</td>
</tr>
<tr>
<td></td>
<td></td>
<td>+ Chronic conditions</td>
<td>263</td>
</tr>
<tr>
<td></td>
<td></td>
<td>+ Models and frameworks</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>+ Secondary/specialist care</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>General practice (24476) Healthcare organisation (284)</td>
<td>+ Organising of</td>
<td>143</td>
</tr>
<tr>
<td></td>
<td></td>
<td>+ Management of</td>
<td>4719</td>
</tr>
<tr>
<td></td>
<td></td>
<td>+ Administration</td>
<td>53</td>
</tr>
<tr>
<td></td>
<td></td>
<td>+ Chronic conditions</td>
<td>433</td>
</tr>
<tr>
<td></td>
<td></td>
<td>+ Systems of care</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>+ Primary</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td></td>
<td>+ Secondary care</td>
<td>321</td>
</tr>
<tr>
<td></td>
<td></td>
<td>+ General Practice</td>
<td>42</td>
</tr>
<tr>
<td>Chronic care model (1141)</td>
<td>+ NHS</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td></td>
<td>+ Multimorbidity</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td></td>
<td>+ Fragmentation</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Service delivery</td>
<td>+ Continuity</td>
<td>519</td>
<td></td>
</tr>
<tr>
<td></td>
<td>+ Coordination</td>
<td>597</td>
<td></td>
</tr>
</tbody>
</table>

The relative newness of the term ‘multimorbidity’ means there is a limited amount empirical data. As there is a degree of overlap between the management of chronic conditions and multimorbidity, in the absence of research specifically related to multimorbidity, the study draws on those related studies that consider chronic conditions.

The complexity of the subject area was reflected in a smattering of results that were varyingly located across a number of different disciplines. An additional strategy was employed whereby
the bibliographies of relevant studies were reviewed, enabling a snowball effect (Jupp, 2006) which helped to identify studies and authors not necessarily captured in the preliminary searches of the databases. Similarly, individual journal archives were also searched which broadened the scope of the search from clinical studies into other disciplines such as health services research, implementation science, medical sociology and organisation studies. Studies found incidentally often initiated an exploration of previously unknown sources such as publications by the Heart Failure Society. Similarly, in certain areas researchers’ names kept recurring in relation to certain themes for instance, Bayliss (Bayliss, Ellis and Steiner, 2007; Bayliss, Edwards et al, 2008; Bayliss, Ellis and Steiner 2009) and Fortin (Fortin, Bravo et al, 2005, Fortin, Dionne et al, 2006, Fortin, Stewart et al, 2012) are associated with research into multimorbidity; Guthrie (Guthrie and Wyke, 2006; Guthrie et al, 2010; Barnett et al, 2012), Checkland (Checkland, 2007; Checkland, Harrison et al, 2008, Checkland and Harrison, 2010) and McDonald’s (McDonald, Cheraghi-Sohi et al, 2013; McDonald, Jayasuriya and Harris, 2012; McDonald, Campbell and Lester, 2009) research interests focus on general practice in the UK and Ham (Ham, Imison et al 2011; Ham, Dixon and Brookes 2012) and Judith Smith (Smith, 2013; Smith, Holder et al, 2013;) with health care policy. The publication lists of these researchers were retrieved and their bibliographies searched for relevant studies. A number of academics with interests in these areas, when approached, kindly provided a list of references which were reviewed (Ruth McDonald, Kath Checkland and, Peter Bower). In addition, following the analysis of the data, a librarian experienced with the databases used, helped to develop a search strategy in relation to the research question and theme. This strategy (Table 2.1) was used to cross check the literature and to ensure no major areas of the literature were missed.

People with multimorbidity have typically been excluded from clinical trials (Kenning, Coventry and Bower, 2014; Campbell-Sherer, 2010). Similarly, the evidence base for organising health services to support this condition is somewhat sparse. In their systematic review of interventions for managing patients with multimorbidity in primary care, Smith, Soubhi et al (2012) found only 10 studies and concluded the evidence was limited. This is partly because the concept of multimorbidity is relatively new. It was introduced in the medical literature during the 1980s (Fortin, Mercer and Salisbury, 2014). Since then there has been a sustained interest in its use, not least because of its potential to challenge sustainable health care. Multimorbidity is capturing the interest of a number of stakeholders, including the government, commissioners, providers and researchers. Comprehensive evidence to support interventions and practice is nascent but growing. In lieu of the impending evidence from current studies in these areas, this review was guided by informed researchers and organisations prominent in their fields and reflects the multifaceted nature of managing complex needs in general practice. Much of the evidence on chronic condition management originates from North America and whilst this can be useful in some aspects, its relevance to the healthcare practice in the UK may be limited due to differences in resource allocation, health policy priorities and organisational structuring of
services. Despite this, a number of factors which mitigate against high quality care such as, fragmentation, lack of coordination and care based around individual conditions, are evident in both countries. These factors are widely cited in the literature and are the basis of many improvement recommendations. The empirical evidence base that actually quantifies and qualifies the extent of these issues is limited, particularly studies undertaken in the UK. Those citations that do exist, reflect a general agreement around the key issues associated with the challenges of providing effective services for people with multimorbidity and a number of these issues are informing current research, health policy and service design. However, in view of the limited evidence in this area and in lieu of impending empirical studies, the analyses and opinions of key academic, professional and policy commentators were also included in this literature search and some are included below.

Reviewing the literature was made more difficult by the confusing array of terminology used in this area of healthcare.

2.1.2 Terminology
The World Health Organization (WHO) defines a chronic condition as a health state requiring “ongoing management over a period of years or decades” (World Health Organization, 2002:p11). Chronic conditions is an umbrella term that includes conventionally understood chronic diseases such as heart disease and asthma, but also some communicable diseases such as the human immunodeficiency virus and acquired immunodeficiency syndrome, where advances in medical technology have changed the progression of the disease from rapidly fatal to being effectively controlled over a number of years. Other health states, not typically defined as a disease, are also included under the umbrella of chronic conditions, these include, depression, defined disabilities, for instance blindness, musculoskeletal problems and some forms of cancer (Nolte and Mckee, 2008). In practice, the term ‘chronic disease’ is widely used both to clinically describe conditions and to organise care accordingly (Tinetti and Fried, 2004). Professional understanding of disease states relates to the widespread use of the International Classification of Diseases (ICD) whereby individual chronic diseases are determined by an agreed biomedical definition. A ‘long term condition’ is a term recently adopted by the Department of Health and is used collectively to refer to a number of chronic diseases, aspects of which may be managed generically (DH, 2005).

To complicate things further the terms chronic illness, chronic disease, chronic condition and long term condition are varyingly defined, often used interchangeably and, in some contexts, conflated to mean the same thing. In contrast to the connotations associated with a chronic disease label, the term ‘chronic illness’ encourages us to look beyond the narrow, medically defined aspects of diseases to encompass more patient reported manifestations (Starfield, 2008). Acknowledging the differences between these terms, promotes a more patient centric approach and encourages a more holistic response to chronic illness management. Whilst the
terms ‘chronic illness’ and long term condition can more aptly be used to capture the experiences of people with multiple chronic conditions, the use of discrete disease classifications continue to predominate in the organisation of services (Starfield, 2008). A number of terms are currently in use to indicate the presence of more than one chronic condition: co-morbidity; multiple chronic conditions; multi-morbidities; multimorbidity, co-terminus conditions and multiple coexisting diseases. In general, co-morbid conditions tend to be those that are physiologically related, for instance kidney disease can cause hypertension and hypertension can cause kidney disease. However, many people have a number of individually defined and unrelated, medical conditions, the particular combination and severity of which make standardised healthcare responses (around individual chronic conditions) ineffectual and possibly harmful (Barnett et al, 2012).

For the purposes of this research, whilst the focus is multimorbidity a number of terms will be used to reflect the prevailing terminology evident within the literature, but also in practice. Multimorbidity, will primarily be used because this typically reflects emerging trends in the research literature (Bower et al, 2011; Smith, Soubhi et al, 2012; Sinnott et al, 2013). However, much of the existing research predates the term and its use is not yet ubiquitous in clinical practice. For these reasons, where appropriate the term chronic conditions will be included.

2.2 Concepts and themes

2.2.1 Context of care

The structure of current systems of care are largely a legacy from the Victorian era where hospitals were built to care for people with acute infectious diseases such as smallpox and tuberculosis. In the absence of a cure, the primary purpose of healthcare in hospitals at this time was to diagnose and isolate people, providing comfort to the patient until they died. Although a number of infectious diseases still exist, at present the biggest challenge to effective and sustainable healthcare is the increasing prevalence of chronic conditions and the rise in patients with multimorbidity. Of the 17.5 million people in the UK who have a chronic condition, 45 per cent have more than one (Carrier, 2009). The impact of multimorbidity on individuals and society as a whole is high and multi-faceted. The evidence that having a chronic condition adversely affects a person’s quality of life, is well established within the literature, irrespective of where they live (Eurich et al, 2006; Fortin, Soubhi et al 2007; Marengoni et al, 2011). In their large multi-centred study of quality of life in multimorbid patients (n3189), Bretschneider et al (2013) found that health related quality of life decreases in relation to an increasing number and severity of chronic conditions. In addition, patients with chronic conditions are more likely to suffer postoperative complications; longer stays in hospital; and are more likely to die prematurely (Fortin, Bravo et al, 2007). As well as the associated higher costs of multimorbidity, they contribute to a number of significant professional and organisational challenges including: polypharmacy (Brilleman and Salisbury, 2013; Hughes, 2004); inapplicability of guidelines...
(Fortin, Bravo et al, 2007); fragmentation of care (DH, 2005); and variable demand on services (Silvester et al, 2004).

Starfield et al (2003) suggest that in people with chronic conditions, it is the degree of multimorbidity that determines the patients’ use of healthcare resources rather than the diagnoses. So for instance, each chronic condition encompasses a spectrum of health states and although people may have the same combination of chronic conditions, their position on each spectrum may be different, creating variations of need. At one end of the spectrum a patient with diabetes may be managed through routine yearly monitoring, at the other end, an individual with many of the complications associated with diabetes, may require a high level of care such as case management due to poor eyesight, reduced mobility and inadequate blood sugar control. The clinical heterogeneity inherent within the population of people with chronic conditions is an increasing concern for health care providers; the different combinations and severity of conditions as well as functional limitations make generic approaches to management problematic (Boyd and Fortin, 2010). Consequently, patients with multimorbidity do not easily slot into existing treatment pathways or guidelines. This situation has evoked an interest in this area and there are a number of stakeholders and organisations globally who recommend and are working on the development of guidelines that encompass services for people with a number of chronic conditions. These include, the National Institute for Health and Care Excellence (NICE, 2014), Guidelines International Network (2014), American Geriatrics Society (2012), Scottish Intercollegiate Guidelines Network (2012). These guidelines are in the early stages of development.

Despite the changing concept of ill health, healthcare services in many developed countries continue to be organised around acute illness, episodic care (Nuño et al, 2012; Barnett et al, 2012) and single condition pathways. Provision for people with chronic conditions are primarily based around the International Classification of Diseases (ICD) resulting in a narrow focus on disease specific symptoms. This classification continues to influence how doctors are trained and the fields in which they practice (Starfield, 2008). The widespread reliance on the ICD provides the basis for the reigning healthcare paradigm (Starfield, 2008), whereby, patients with chronic conditions may be inadvertently exposed to ‘under-treatment, over-treatment, or mistreatment’ (Tinetti and Fried, 2004:p179). Patients with signs and symptoms that are not obviously disease specific are ‘short changed’ as services are organised around a particular diagnosis (Starfield, Lemke et al, 2005). Tinetti and Fried (2004:p179) suggest that continuing to focus care around these narrow, disease specific definitions is, ‘...at best out of date and at worst harmful’. Kane, Priester and Totten’s (2005) analysis of healthcare provision in the United States suggests it is fundamentally flawed because it is based on the ‘wrong model,’ focusing as it does on an acute care model that is primarily concerned with preventing, identifying and treating acute illness. There is some acknowledgement in the literature that services are skewed towards the provision of acute care and whilst this is plausible, particularly when
viewing the structure of the NHS, the evidence base is somewhat elusive. Many studies commenting on organisation of healthcare confirm the need for a paradigm shift away from the predominant acute care model, but typically cite data collated in North America (Nuño et al, 2012; Barnett et al, 2012; Coleman et al, 2009). The largely privately funded and independently organised provision of care in the US can make it difficult to establish its relevance and applicability to other systems elsewhere.

In response to the care needs of people with chronic conditions, services organised to meet these needs have also become increasingly complex. Even for patients with a single disease, provision is often dispersed across a number of different professions and specialities resulting in the fragmentation of care (Boerma, 2008). In addition to the effects of sub-optimal management of chronic conditions on individual patients’ wellbeing, a systems effect is evident whereby a large proportion of inpatient activity in acute trusts involves patients with chronic diseases (DH, 2004a). Majeed and colleagues (2000) undertook a large study of 66 group practices in London (8 million patients) the purpose of which was to review hospital admission rates for people with asthma and diabetes. A major finding of their research was that admission rates were highly correlated with chronic conditions and deprivation, particularly for patients who qualified for disability allowance which suggests a higher level of health and/or social needs. Conversely, they found admission rates in relation to practice variables were much weaker. A number of other studies have confirmed a correlation between practices with a relatively high proportion of people with chronic conditions and higher attendance in accident and emergency departments (Bottle et al, 2008; Ambery and Donald, 2000). Intuitively, it would seem that pre-emptively identifying and optimally managing chronic conditions in primary care could reduce the number of acute exacerbations and crises that lead to hospital admissions. The evidence base in support of this supposition is, as yet, inconclusive, however, it is recognised that people with chronic conditions are high consumers of healthcare resources (van Oostrom et al, 2014; Glynn et al, 2011).

2.2.2 Increasing focus on chronic conditions

Formalised management of chronic care is typically disease specific within the NHS (Smith et al, 2012; Feeley, 2007). For people with single organ disease who are functionally fit, access to care services may not be too onerous. For those with multiple conditions, numerous appointments with geographically scattered providers can add to an already high disease burden as well as accentuating discontinuity and fragmentation of care (Nolte and McKee, 2008). The design of services and where they are delivered are important factors in considering the effectiveness and sustainability of services both currently and in the future. The configuration of services suggests that there is a rising risk of duplication, fragmentation and omissions in care, the more chronic conditions an individual has (Shih et al, 2008). A number of stakeholders suggest that strengthening primary care is central to improving the care of people with multimorbidity (NHS England, 2013; Starfield, Shi and Macinko, 2005; Schlette,Lisac and
Blum, 2009; Freund et al, 2010). Typically, this refers to its relative strength in the wider healthcare system. Since the NHS was founded, demand on services in primary care has continued to grow leading to increases in the size and workload of general practice (Peckham and Exworthy, 2003). The number of general practice consultations in England in 2006 was estimated at 289.8 million, an increase of nearly 20 million in 10 years (Hippsley-Cox, Fenty and Heaps, 2007). In the UK, general practitioners have traditionally been the cornerstone of the NHS and continue to play a pivotal role in managing an increasing number of chronic conditions. As well as managing care, GPs operate as gatekeepers to other (more expensive) services, providing large benefits at low costs (Exworthy and Peckham, 2003). In recognition of this, health policies since the 1980s have sought to increase the influence of GPs in determining appropriate services for their patients’ locally, mainly through allowing GPs more financial control (ibid). This has culminated in the publication in 2010 of the white paper, *Equity and Excellence: Liberating the NHS* (DH, 2010), which gives GPs a central role in determining which services are commissioned.

Traditionally, chronic conditions were variably managed between primary and secondary care. Diagnosis and treatment initiation would often occur in secondary care and follow up care provided in general practice. In some instances, such as with respiratory and vascular conditions general practice has been increasingly responsible for the long term management, with attendance at specialist services only necessary if patients were acutely unwell, required more intensive support or when a specialist review was required. A succession of government policies have reflected and initiated the ongoing shift in responsibility for chronic conditions to general practice (DH, 2004; DH, 2005; DH, 2012). To date, since its inception, each year a number of additional conditions have been included in the Quality and Outcomes Framework (QoF), most recently a responsibility for learning disabilities (NHS England, 2014a). There is some evidence to support the claim that many of the interventions stipulated by the initiation of the QoF were already established practice in some areas of primary care (Campbell, McDonald and Lester, 2008).

The literature suggests that prior to the QoF, in some areas of disease management there was widespread variability between who provides what in general practice. For instance, a study of 21 general practices in Wales sought to review their activities in relation to the prevention of Type II diabetes. The researchers found a polarisation of views within and across practices, between those who thought this an inappropriate activity in primary care and those who already undertook this role (Williams et al, 2004). More recent studies indicate that the quality of care for particularly chronic conditions continues to vary across general practice. For instance, in their study of managing cardiovascular risk in general practice, Heneghan et al (2007) surveyed over 400 GPs and whilst awareness of hypertension guidelines was high, implementation and adherence to them was often much lower, mainly because many of the GPs did not agree with them. Similarly, an analysis of the QoF data relating to the study of blood pressure
management in patients on the at risk register from a transient ischaemic attack or a stroke, demonstrated an achievement of the target blood pressure in 80% to 90% of cases. However, the unit of analysis (PCTs) and the use of averages obscured a wide variation at a practice level. In one practice only 20% of patients achieved the desired target (Goodwin et al, 2011).

One of the early initiatives to improve consistency in chronic care was the introduction of National Services Frameworks (NSFs), the first of which was for people with heart disease (DH 2000). The main impetus for these frameworks in care was the recognition that the incidence of chronic disease was higher and outcomes poorer in areas with high levels of deprivation. Conversely, care and treatment was better in more affluent areas (ibid). The NSFs were aimed at reducing variation in practice, standardising care and providing equitable treatment irrespective of where in the country patients received their care. Multiple providers, under coordination and the lack of integration can result in a reduced quality of care and risks to patient safety (Øvretveit, 2011) as well as higher healthcare utilization costs (van Oostrom et al, 2014). Primary care and the shift in focus from secondary care for the management of chronic conditions remains an important aspect of current healthcare reforms, and in recent years there has been a move to reiterate the importance of collaborative approaches between primary and secondary organisations (Curry and Ham, 2010). Whilst this has been a policy priority supported by successive governments since the 1990s, the widespread provision of integrated and responsive care for people with chronic conditions has largely failed to materialise (Goodwin et al, 2011). Patient centric care, supported self-management (Greaves and Campbell, 2007) and improved continuity and coordination of care (Kringo et al, 2008) have all been identified as key principles in improving care for people with chronic illness, however, the way services are traditional organised and funded suggests that re-organising them to reflect these principles will be challenging (Saltman, Rico and Boerma, 2006).

2.2.3 Index condition: heart failure

The treatment of heart failure represents a large and increasing burden on the NHS. Admissions to hospital for people with heart failure accounts for one million inpatient bed days which constitutes 2% of the NHS total and 5% of all emergency admissions (NHS England, 2014a). Heart failure also incurs a large symptom burden for patients and their families, encompasses as it does a number of underlying aetiologies and comorbidities. Once diagnosed, heart failure usually requires ongoing monitoring and treatment for the duration of the patient’s life (Nieminine and Harjola, 2005). Heart failure is used as an index condition throughout this research to explore how services are provided within and across sectors of care. It is a common condition in the general population although the exact prevalence is unknown (Sutherland, 2010). The British Heart Foundation’s data (2012) suggests that heart failure affects over 900 000 people in the UK, 0.9% of whom are men and 0.7% women. The incidence increases significantly with age and over the age of 75, 13.1% of men and 11.9% of
women are affected (ibid). Heart failure is associated with increased morbidity and mortality (Lloyd-Jones et al, 2009) and a poor prognosis (De Guili et al, 2005)

Multimorbidity is increasingly considered the norm in chronic care (Barnett et al, 2012) and patients with heart failure are likely to have a number of other long term conditions (see table 2.2) which complicates their clinical management (Flynn, Dumbreck and Guthrie, 2003) and often involves a number of providers within and across organisations (Browne et al, 2014).

**Table 2.2: Additional chronic conditions of patients admitted with primary diagnosis of heart failure**

<table>
<thead>
<tr>
<th>Chronic condition</th>
<th>Percentage (n43 894)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypertension</td>
<td>55%</td>
</tr>
<tr>
<td>Ischaemic heart disease (IHD)</td>
<td>47%</td>
</tr>
<tr>
<td>Arrhythmia</td>
<td>42%</td>
</tr>
<tr>
<td>Acute myocardial infarction</td>
<td>31%</td>
</tr>
<tr>
<td>Diabetes</td>
<td>31%</td>
</tr>
<tr>
<td>IHD and hypertension</td>
<td>27%</td>
</tr>
<tr>
<td>Chronic kidney impairment</td>
<td>24%</td>
</tr>
<tr>
<td>Valvular disease</td>
<td>23%</td>
</tr>
<tr>
<td>Chronic obstructive pulmonary disease</td>
<td>17%</td>
</tr>
<tr>
<td>Asthma</td>
<td>9%</td>
</tr>
</tbody>
</table>

*Source: adapted from British Society for Heart Failure (2013)*

Heart failure is an area widely studied in medicine and whilst there are a number of evidence based national and international resources to aid the clinical management of the condition (NICE, 2010; Canadian Cardiovascular Society (McKelvie et al, 2012); the American College of Cardiology and the American Heart Association (Ahmed, 2003)), these mainly focus on the clinical markers and the pharmacological aspects of the condition (Cowie, 2002). Similar to the management of other chronic conditions, models of service delivery for heart failure are evolving to incorporate more proactive and preventative aspects of chronic care (Takedi, 2012). In addition, there is a growing emphasis on the importance of service re-design (Coulter, Roberts, Dixon, 2013). At the turn of the century, the National Service Framework for Coronary Heart Disease (DH, 2000) provided a set of national standards for diagnosing and treating heart failure. Included in this was a recommendation for the adoption of a number of service models, the intention of which was to systematise the approach primary care and hospitals used to manage heart failure. Services were required to include mechanisms that would:

- identify people at high risk of heart failure
- assess and investigate those with suspected heart failure
- provide appropriate advice and treatment, which is documented
- offer people with heart failure regular reviews.

*(Bernard, Brody and Lohr, 2007)*
Since the publication of the NSF, there is evidence to suggest there has been some improvement in the delivery of services for people with heart disease, however, levels of improvement were variable across services and further work was indicated to meet all the recommendations of the NSF (Leatherman and Sutherland, 2008). As with most chronic conditions heart failure represents a spectrum of health states and services are typically divided into 3 areas: diagnosis and initiation of treatment; chronic care management; and management of acute exacerbations (usually secondary care). General practice focuses on the preliminary diagnosis (subject to secondary care confirmation), treatment and management of heart failure, with varying input from specialist services over time.

In their review of service models, the Health Foundation found that whilst there was research evidence to support the use of chronic care models for people with heart failure, the quality of this evidence was variable and its applicability to practice in the UK limited (Bernard, Brody and Lohr, 2007). In addition, the research ‘…does not support a single, specific healthcare delivery model’ (ibid). As with other long term conditions, managing heart failure effectively requires a change in the delivery of care and may include: self-management support (Coulter and Ellins, 2006); complex medication management; shared decision making; and regular interaction with a primary care provider. Patients with heart failure, not appropriately managed in primary care, often resort to the excessive use of emergency secondary care services; in their study of heart failure admissions Ojeda et al (2005) suggested as many as 50% of heart failure inpatient admissions may be preventable. It is not clear from the research relating to the NHS the extent to which hospital admissions could be prevented with more appropriate support for heart failure patients in primary care. Similarly, there does not appear to be data which explores the relationship between patient adherence to treatment regimes and hospital admissions.

There is some evidence to suggest that GPs do not follow the guidelines relating to the management of heart failure. In their study of heart failure management, Fuat, Hungin and Murphy (2003: p2) cited three main reasons:

1. A number of uncertainties existed regarding the clinical practice of diagnosing and managing heart failure. These included a lack of confidence in the diagnosis, even when they had open access to echocardiography locally, but also included reservations about using the medications recommended for many of their patients who were elderly, frail, multimorbid and already taking a number of medications

2. GPs were unfamiliar with relevant research evidence and perceived heart failure to be situated in a complex therapeutic field that was changing rapidly.

3. GPs management choices were often the result of individual preferences as well as the availability of cardiology services locally.
In a retrospective study of routine data collect from 163 practices in Great Britain (Calvert, et al, 2009) the researchers found that there was a large variation in the use of recommended treatment for people with heart failure: less than a third were receiving both an ACE inhibitor and beta-blockers; and of those prescribed a beta-blocker only two thirds were prescribed one recommended by the European Society of Cardiology (2008). Of these patients who were prescribed a recommended treatment less than 17% were prescribed the target dose (Calvert, Shanker et al, 2009). The Health Care Commission’s (2007) review of adherence to the NICE recommendations in primary care found that only 49% of organisations had guidelines that met the minimum requirements for monitoring people with heart failure. In contrast to the recommendations, the Healthcare Commission could find no definitive evidence to the extent that patients did actually receive a review. Another important aspect in the treatment of heart failure is secondary prevention and cardiac rehabilitation and this has been an internationally recommended treatment for some time (World Health Organisation, 1993). The National Audit of Cardiac rehabilitation in 2006/7 stated that only 1% of its heart failure population had rehabilitation (British Heart Foundation 2009) which suggests that many of those patients who might have benefited from this treatment did not receive it. In some instances, this was because these services were not available in some areas (Sutherland, 2010), whether or patients were refusing them, is not clear from the literature. At the time of the Health Care Commission’s review (2007) 80% of communities had access to specialist nurses in heart failure in primary and secondary care.

The NHS Institute for Innovation and Improvement (2009) made some recommendations on the provision of high quality and value services for people with heart failure. Whilst some recommendations were aimed at acute services and intermediate care provision, included here are those that relate to primary care and some macro and meso level characteristics necessary for optimal service provision:

Overarching characteristics

- Executive teams across different sectors of care are committed to the development of heart failure services
- Appropriate information sharing across relevant points of care
- Service improvement is focused across whole systems of care
- Heart failure services are fully integrated and seamless
- Investment in the development of leaders

Self-care

- Peer support for patients and carers with good access to information and support groups
Primary care
- GPs are key professionals for the long term management of patients with heart failure
- Heart failure nurses work collaboratively with GP practices
- Access to timely echocardiography services

Sutherland (2010:p104)

Heart failure services continue to be a key challenge to health care providers both nationally and internationally. In recent years various stakeholders have produced recommendations to improve the management of heart failure (WHO, 1993; DH, 2000; European Society of Cardiology, 2008; NICE, 2010). An evaluation of heart failure services in secondary care is richly captured each year in the annual Heart Failure Audit which in 2012/13 received data from 95% of hospitals providing services. At present this comprehensive audit does not extend to primary care and evidence related to service provision for heart failure patients is somewhat sparse and inconsistent. In summary:

- The quality of the literature is variable and direct comparisons between studies can often not be made
- There is a high and rising incidence and prevalence of heart failure in the UK
- Treating and managing heart failure uses a large amount of healthcare resources
- Care is typically shared across sectors of care
- There is variable adherence to best practice guidelines related to heart failure in primary care
- Patients sub-optimally managed in primary care can impact adversely on acute care resources
- Recommendations for improvements to services reflect generic characteristics underpinning the chronic care model such as more collaborative working, supported self-management and coordination

The recommendations for particular models of care in the management of heart failure reflect a wider, more generalist approach to managing chronic conditions. The rationale of this approach is based upon the recognition that many patients share similar experiences of living with a chronic illness and have similar needs which extend beyond the characteristics of a particular condition. In addition, multimorbidity is common (Barnett et al, 2012) and is increasingly viewed as a condition in its own right, presenting as it does, a complex mix of challenges to providers and commissioners of healthcare (Shadmi, Kinder and Weiner, 2014). With current services focused on disease specific pathways, providers risk duplication of services, polypharmacy and omissions in care which can be burdensome to patients and risk their safety due to lack of coordination and integration of care (Wolff, Starfield and Anderson, 2002; Starfield, Shi and Macinko, 2005; Brillemann and Salisbury, 2013). Research in chronic care typically reflects clinical practice and is largely based on individual chronic conditions, the findings of which may
not be relevant for those with multimorbidity. Fortin, Soubhi et al (2007) suggest traditional clinical trials tend to emphasise efficacy over effectiveness and consequently exclude patients with multiple conditions thus compromising the relevance of many of these trials for this population. Mercer, Smith et al (2009), found that most of the studies to date have focused on the impact of multimorbidity on individuals and the healthcare systems as opposed to examining interventions that may improve outcomes. Smith’s (Smith, Soubhi et al, 2012) recent review of strategies (n10 studies) to manage multimorbidity in general practice concur with this finding. It illustrates the paucity of research in this area and the difficulty in aggregating findings due to the heterogeneity of approaches used. These are accentuated by the absence of a comprehensive theoretical framework with which to structure effective interventions and evaluations.

The following section explores the background to current services in chronic care provision and the growing challenge of multimorbidity. It starts with the micro level as this research is focused around the organisation and delivery of services in general practice.

2.3 MICRO
2.3.1 Challenges to service delivery
General practice does not operate in a vacuum and changes elsewhere in the system for instance, in health policy and/or funding arrangements, can necessitate changes in service delivery. The terms macro, meso and micro can be useful in conveying the vertical organisation that characterises most advanced healthcare systems. Although definitions vary within the literature, typically: macro refers to the regional or national level; meso encompasses individual facilities or organisations and micro relates to activity at a practitioner-patient level (Van Velden, Severens and Novak, 2005). None of the levels are mutually exclusive and decisions on policy and finance made at a macro level can be evident at a micro level, for instance within the NHS, the national initiative to introduce case management and community matrons had a direct impact on service delivery at a micro level (Sheaff et al, 2009). Similarly, activity at a micro level can influence initiatives at the meso level for instance, the community matron programme evolved from the recognition that care for people with chronic conditions was often lacking in coordination (DH, 2006).

Services for patients with chronic conditions are traditionally configured around individual conditions whereas many older people have more than one. This focus is reflected in evaluations of chronic care which also tend to focus on process and outcome measures for single conditions (Pillay, Dennis and Harris, 2014). A number of studies suggest that patients with multimorbidity receive a lower quality of care than those with single conditions (Bartels et al, 2011; Lagu et al, 2008). In the NHS Atlas of Variation in healthcare (Gray and DaSilva), the evidence indicated a wide variation in the implementation of recommendations for a number of chronic conditions. In parallel to concerns about the clinical aspects of chronic condition management, there is an increasing interest in the organisation of care and the non-clinical
aspects of service provision, particularly in relation to patient experiences. In their study of general practices, the authors found that respondents were most dissatisfied with access, continuity and interpersonal care (Campbell, 2011). Similarly, a recent study of multimorbidity in primary care found that the more chronic conditions a patient had, the more dissatisfied they were likely to be with their care. This dissatisfaction was mainly directed at non-clinical aspects of care such as poor communication, insufficient information and inadequate access to specialist care (Adenij et al, 2014).

As yet, the evidence base for best practice in managing multimorbidity is still evolving (Salisbury et al, 2011) and whilst general practitioners report extensive experience in practice (Luijks et al, 2012) the details of how they manage multimorbidity is generally limited and tends to be self-reported and characterised under broad themes such as patient-centred, comprehensive and holistic (Van Royen et al, 2010). Other than the QoF, there is little evidence to suggest any widespread use of a formalised approach to chronic care management or the organisation of care around the needs of patients with multimorbidity (Bower et al, 2011). In their study of GP attitudes towards using a holistic approach to patient management in Scotland, Hasegawa et al (2005) found that many GPs felt severely constrained by time restrictions and organisational arrangements in general practice.

2.3.1.1 Time and workload

General practice accounts for around 90% of NHS activity and of this 80% of consultations are attributed to people with chronic conditions (DH, 2005). With an aging population (AgeUK), an associated rise in multimorbidity and increasing responsibility for chronic conditions being transferred to primary care, the workload in general practice is set to rise. The increasing workload in primary care is reported anecdotally in the literature (Kings Fund and Nuffield Trust, NHS England, 2013). Research that quantifies this increased demand is limited however. A comparison of consultation rates between 2005-2006 and 2007-2008, in 122 GP practices suggested that in England the overall crude consultation rate per patient per year rose from 3.9 consultations (QRESEARCH, 2009) to 5.3. This amounted to an estimated rise in overall consultation rates for the average practice in England from 21,300 in 1995-1996 to 34,600 in 2008-2009. Of the consultations undertaken in 1995-1996, 75% involved GPs, 21% nurses and 3% other clinicians (there was no accounting for the remaining 1%). In 2008-2009, the number of GP consultations had fallen to 62% with nurses accounting for 34% and 4% attributed to other clinicians (ibid). The study notes an obvious change in the proportion of consultations undertaken by nurses and the related reduction in those completed by GPs. The absence of data subsequent to this study has led to a straight line extrapolation and an assumption that the upward trend of demand in general practice has continued with the number of consultations now estimated to be around 340 million (QRESEARCH, 2009).
The increasing workload, time constraints and contractual arrangements all affect the consultation. Much of the debate around consultations in the literature is the need for longer consultations for people with chronic conditions. There is some evidence that shorter consultation time restricts the scope and depth of what can be discussed (Bodenheimer, 2005; Dugdale et al, 1999). Patients’ awareness of time pressures in general practice can create an anxiety which limits their ability to discuss their problems freely (Pollock, 2002). However, most studies regarding the length of consultation in relation to the changing demography, suggest people with multimorbidity require longer appointments (Smith, Kelly and O’Dowd, 2010; O’Brien et al, 2011; Bower, McDonald and Harkness, 2011). A systematic review of interventions used in managing multimorbidity in primary care suggested that patients with a number of chronic conditions affected GP consultations in a number of ways:

- the information required to review a single patient is extensive, particularly when conditions and stability vary over time
- information, clinical priorities and management plans are continually changing
- informational continuity requires enhanced communication between the numerous health and social care providers

The lack of time was common to other studies (Smith et al, 2010; O’Brien et al, 2010). In her study of 32 GPs and the effort to ‘control’ time MacBride-Stewart (2012) provides an interesting insight into competing demands whereby doctors try to ‘do their best’ for individual patients, at the same time as remaining financially viable. There is some evidence from the UK and elsewhere to suggest that doctors’ time has been commodified into a resource and that activities that are incentivised are prioritised over those that are not (ibid; Bower et al, 2011; Doran et al, 2011). The prioritising of the QoF is noted in several studies whereby services are organised around disease specific clinics to facilitate productivity (Deery, 2008; Bower et al, 2011). MacBride-Stewart (2011) found that the time available often determined what activities were undertaken and that doctors were adept at prioritising and fitting their workload into the time available. A number of studies in recent years, have demonstrated the delegation of a number of tasks and roles from GPs to nurses and other practice staff (Proctor et al, 2012; Charles-Jones et al, 2003; Laurant et al, 2009; Campbell, McDonald and Lester, 2008). In their review of new models of general practice, Smith, Holder et al (2013) confirm the increasing strain that general practices are under and that whilst they struggle to meet patient demand, they have little time to reflect on how they organise and provide care. Whilst this position is plausible, the authors offer no evidence in support of this. As owners of their practice and as members of a professional elite, many GPs are considered to enjoy a high degree of control over their work and those of others within the practice. The suggestion in some areas, is that this clinical and organisational freedom of doctors in being eroded by external factors such as contractual arrangements and health policy and that this is leading to changing roles within general practice.
2.3.2 Changing roles and responsibilities

Freidson's (1970, 1983, 1984) work on professional autonomy relates almost entirely to US healthcare however, more recently his work has been used to explore the impact of changes within the NHS (Causer and Exworthy, 1999; Harrison, 1999). The new General Medical Services (nGMS) contract led to substantial reorganisation in English general practices (McDonald et al, 2009) and ‘restratification’ of medical staff (Sheaff, Smith and Dickson, 2002). Data pertaining to centralised targets were collated across practices with individual doctors responsible for the self-monitoring of their work. Some adopted a surveillance role that involved ensuring the collective performance of the practice was optimised; colleagues not achieving expected target levels were 'chased' by their peers with a consequent ‘naming and shaming’ and ‘being told off’ (McDonald, 2009;p120). The ‘chased’ and the ‘chasers’ represent new informal hierarchies within general practice, but in contrast to Freidson's predicted effect on professional autonomy, McDonald et al suggest that the ‘chasers’ in general practice focus on targets as opposed to physicians’ individual clinical decisions, so largely preserving professional autonomy (Ibid,p120). Most GPs eventually accepted the nGMS contract, even those critical of it were persuaded to concede a degree of autonomy in exchange for the financial incentives and other rewards offered by the contract (McDonald et al, 2009). For the most part, GPs did not perceive the re-organisation of their practice in response to the QOF as unduly disruptive to their normal clinical activities (Checkland, McDonald and Harrison, 2007). Most of the work generated by the new contract was protocol-determined and routine and could therefore be delegated to the practice nurses (McDonald, Campbell and Lester, 2009). Complex activities that required decision-making were retained by the GPs (Luijks, Loeffen et al 2012).

Recent changes to the way GPs work, in particular their opt out of providing out of hours services, created an unmet need and NHS management introduced other occupational groups with which to substitute GPs (Sheaff, 2009). The appointment of nurse practitioners in particular allowed a proportion of work previously undertaken by GPs to be transferred, albeit under the control of GPs. Despite the obvious changes in general practice, many GPs claimed their work remained largely unchanged. This was probably due to the bulk of responsibility for chronic care being ceded to the nurses both within (and outwith) the practice. In meeting the QOF targets and contractual agreements, there is evidence to suggest “a marked convergence of organisational forms” in general practice in terms of division of labour and authority in decision making (Huby et al, 2008:p79). More nurses, administrative staff and health care assistants were employed and roles were redesigned and assigned accordingly. Some tasks originally undertaken by the doctors, such as chronic disease clinics, were devolved to qualified nurses, who in turn relinquished some of their roles to health care assistants. A number of studies have reviewed the evolving role of practice nurses identifying a number of common themes such as roles and incentives, workload and the effect on patient care (McGregor et al, 2008; McDonald, Harrison and Lester, 2009).
The introduction of the QoF into general practice has been met with mixed reviews from nurses and doctors. The ‘downward substitution’ of roles necessitated by the introduction of the GMS contract in 2004, in some respects, in terms of improving their professional status and increasing their autonomy, was viewed favourably by many nurses (O’Donnell, Jabareen and Watt, 2010). However, their increased autonomy was only evident at a micro level, located as it was, within the patient-nurse consultation. It did not extend to organising their own work which remained within the GPs’ control (McGregor et al, 2008). In McGregor’s study, many of the nurses interviewed felt that the organisational changes dictated by the contract added extensively to their workload, particularly in relation to data collection and that the ‘tick box’ approach was detrimental to patient care (ibid). The researchers concluded that their findings possibly reflect the current tension in nursing whereby healthcare is more medicalised which is at odds with a holistic, patient centred approach (McGregor et al, 2008). This finding is supported in other studies whereby nurses often feel under pressure to prioritise population and disease based activities over other ones such as caring (McDonald, Harrison and Lester, 2009; Bower et al, 2013). A number of studies confirm the link between pay-for-performance schemes, such as the QoF, and the focus of clinical behaviour on activities that are linked to incentives (Busse and Mays, 2008). Although there is evidence of performance improvements in general practice subsequent to the QOF, there is some evidence that the care for people with chronic conditions was already improving steadily prior to its introduction (Campbell, Reeves et al, 2005). Moreover, quality performance in some diseases groups not linked to incentives, actually deteriorated (Doran and Roland, 2010).

2.3.2.1 Professional influence in general practice

A number of important stakeholders (Nuffield Trust, 2013; Monitor, 2013; NHS England, 2013; RCGPs, 2012) are advocating more collaborative and integrative care, many emphasise the importance of context and in adapting models to suit local circumstances (Nicholson, Jackson and Marley, 2013; May, 2011). The independent status of general practice and the historical difficulty in influencing the behaviour of GPs (Peckham and Exworthy, 2004) is a recognised barrier to improving collaborative practice. Much of the evaluation research around the successful adoption of integrative practices identifies the engagement of stakeholders, particularly physicians, and their willingness and ability to collaborate across traditional boundaries as a key component of successful integration (Lewis, Vaithianathan and Wright, 2013; Suter et al, 2009). Compared to other professional groups, doctors are a powerful body at all levels of healthcare organisation: micro, meso and macro. Their prevailing, although some would suggest weakening (Harrison and Ahmad, 2001; McCauley, 2003; Walinsky, 1998) authority is often attributed to their professional status (Mintzberg, 1979). General practitioners also occupy a position of power and influence, but perhaps more so due to their own and employer status in general practice. A key feature of Mintzberg’s ‘professional bureaucracies’ is the degree of control professionals have in relation to other stakeholders, such as managers and politicians (1979). Professional power within the NHS is traditionally derived from specialist
knowledge which doctors share and to which others have limited access. As with other professional ‘bureaucracies’, the NHS characteristically values professional autonomy, which has effectively restricted the influence of ‘non-professionals’ on decision making in healthcare (Dickinson and Ham, 2008). Until the 1980s managers within the NHS were primarily employed to facilitate the work of professionals by organising support services and resources (Harrison and Pollitt, 1994). Since the Griffiths report (1983), their numbers and responsibilities have increased dramatically, the purpose of which was to ensure the organisation of healthcare became more business-like (Ham, 2009). In particular, the clinical autonomy of the medical staff required a counter balance of management responsibility, whereby leadership, continual change, improved efficiency, effectiveness and motivation would all be promoted (Peckham and Exworthy, 2003).

Despite external incursions into general practice that seek to influence professional behaviour, there is some evidence to suggest that GPs continue to retain a large degree of discretion over how they spend their time in general (Checkland, 2007) and to what extent external influences are allowed to impinge on this. For instance, there are a number of studies that review GPs adherence to certain treatment recommendations, which show a wide variation in adoption (Gray and Da Silva, 2010). Even when GPs report to endorsing recommendations in principle they may choose to ignore certain aspects in practice. There are a number of ‘legitimate reasons given for this which may include individual patient need and disagreement with the actual recommendations (Lugtenberg et al, 2009; Carlsen, Aakvik and Norheim, 2008). A number of other studies suggest it’s a matter of personal choice for individual GPs. Williams and colleagues’ study was aimed at exploring the perceptions of GPs with regard to prevention of coronary heart disease, and whilst GPs appeared to endorse it in principle, their involvement in it was variable. Two of their key findings were that doctors found “health promotion and prevention tedious, dull and boring” and its attention “detracted from curative medicine” (Williams and Calnan, 1994:p372). Doctors resolved the tension between the need to provide health promotion and prevention support by “delegating much of this work to new and relatively low status member of the primary health care team: the practice nurse” (ibid:p387). There is evidence that general practice has expanded and ‘diversified’ in response to changing responsibilities initiated by factors external to the practice. Health policy, regulation and contractual arrangements in recent years have led to increased workloads, the employment of more practice staff and the expansion of roles. However, this expansion and diversification of roles seems mainly to have affected the nursing staff. Doctors, whilst reporting an increase in the volume of their work, continue to practice as they have always done, namely by focusing on the doctor-patient consultation.

The increasing fragmentation of chronic care has led to a focus on promoting continuity and coordination of care. The following section explores how fragmentation and the experiences of people with chronic conditions, is driving the development and use of a number of models and
frameworks. It includes the theoretical and empirical evidence in support of these models which promote more collaborative working around chronic condition management.

2.4 MESO

2.4.1 Fragmentation

Fragmentation of care is a concept commonly associated with multimorbidity due to the need for multiple providers and some commentators cite the issue of fragmentation as a challenge to effective healthcare provision, in most instances there is a general absence of any significant trial based data. There is some acknowledgement that it is an inevitable, unintended consequence of necessary advances in medicine (Ahgren, 2010) and that improved coordination will effectively address this issue. As medicine has become increasingly specialised, so too has healthcare provision and many people with a chronic condition require inputs from a range of professionals and services, usually over several years. Key challenges in the organisation of chronic care, is the involvement of patients in self-management and the coordination of care across providers (Nolte and Mckee, 2008). In some instances, the traditional organisation of services within the NHS runs counter to aspirations of increased coordination, in particular the financial and structural barriers that can divide providers, for instance at the interface between primary and secondary care (Glasby, 2006). Fragmentation of care is often accentuated in patients with multimorbidity (Luijks et al, 2012; Boyd and Fortin, 2010) and continuity of care through coordination is frequently cited as a means by which to reduce the effect of multiple providers.

2.4.2 Continuity

As care for people with chronic conditions typically crosses a number of boundaries between disciplines and organisations, an increasing number of stakeholders cite continuity as an important factor in reducing fragmentation of care and as an indicator of quality (Haggerty et al, 2013; Björkelund et al, 2013; Guthrie, Saultz et al, 2008). Continuity in managing multimorbidity is often associated with primary care (Mason et al, 2013; Price and Lau, 2013; Haggerty, et al, 2013). In their review of the literature, Haggerty et al (2003) identified 2 core elements that distinguish continuity from other aspects of healthcare. The first is that continuity is something experienced by an individual patient as a result of the integration and coordination of care, the second is that continuity of care occurs over time. The time frame may be short for instance, a hospital stay, or may represent the ongoing experience of a patient’s relationship with their GP or chronic care service. A number of prominent authors in this field (Guthrie, Saultz et al, 2008) suggests there are 3 types of continuity: managerial, relational and informational:

Management continuity refers to consistency, coherence and flexibility in managing a patient’s condition which is likely to change over time. Management continuity is facilitated by shared care plans and treatment protocols which allocate ongoing responsibility for aspects of care.
Relational continuity is typically a therapeutic relationship between a patient and their practitioner/s which develops over time. It is based on an accumulation of knowledge regarding patient preferences and circumstances. This information is rarely recorded in the patient's records.

Informational continuity is the use of documented information regarding patient care that is complimented by the tacit knowledge the practitioner has gained from knowing the patient over time.

(Guthrie, Saultz et al, 2008; p867)

In their review of the evidence, Haggerty, Roberge et al (2013) found that patients value the security and confidence provided by continuity of care and that this was typically provided by a key practitioner who helped the patient navigate the system. Doos et al (2014) found that in patients with multimorbidity being discharged from hospital, continuity was an important factor regarding patient safety, particularly in relation to informational continuity and medication management. Other studies have indicated a relationship between continuity in general practice and reduced use of emergency and secondary care (Chauhan et al, 2012). Roland and Paddison (2013) suggest that whilst GPs recognise the importance of continuity in care (Ridd, Shaw and Salisbury, 2006; Stokes et al, 2005), they do not organise their practices to reflect this (Reeve et al, 2013; Barnett et al 2012). Several studies across Europe have linked a number of health policy modernisation initiatives to the ‘enforced’ discontinuity of care (Freeman and Hughes, 2010; Gill and Freeman, 2007). Guthrie, Saultz et al (2008) suggest the current policy response to fragmentation is a renewed focus of managerial and informational continuity, but ‘lip service’ to improving continuity between patients’ and their practitioner.

Care continuity has been defined as, ‘the extent to which a person experiences an ongoing relationship with a clinician and the coordinated clinical care that progresses smoothly as the patient moves between different parts of the health service’ (Hill and Freeman, 2011:p5). Haggerty describes these aspects of continuity as relational and managerial (Haggerty et al, 2003). These two aspects of care are related but not interchangeable, patients with complex needs typically want individualised care from a clinician who knows them (Hill and Freeman, 2011; Coulter, Robert and Dixon, 2013) but also require their care to be joined up and coordinated. Continuity is an important aspect of general practice:

Continuity of care remains an essential element of modern general practice and is a prerequisite for high-quality consultations and effective management. There is also evidence that personal continuity, as opposed to organisational continuity, is associated with greater patient satisfaction with care and more efficient use of resources. (The Future Direction of General Practice (RCGP, 2007:p20)
At a meso level, care can be distributed across a number of providers. For instance, people with heart failure are often managed in secondary care during the acute phases of their condition, and in the community and general practice for monitoring and titration of medication when they are more stable (Heart Failure Audit, 2012). Patients whose care is divided across a number of providers and across a range of healthcare facilities are more likely to experience fragmentation of care (Goodwin et al, 2013) and those with multimorbidity often experience lack of continuity (Salisbury, 2011). Care coordination and integration are often used interchangeably. Care coordination has long been established within mental health care, but is a relatively recent phenomenon within more general health arenas. A range of definitions exist, the Agency for Healthcare, Research and Quality recently identified over 40 (Agency for Healthcare Research and Quality, 2008) but settled on a working definition that includes several key elements (see Table 2.3).

**Table 2.3: Care coordination definitions**

<table>
<thead>
<tr>
<th>Common element</th>
<th>Phrase from our working definition</th>
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<tbody>
<tr>
<td>Coordination has a purpose or goal</td>
<td>“the deliberate organization...to facilitate the appropriate delivery of health care services”</td>
</tr>
<tr>
<td>Numerous participants involved in a patient's care</td>
<td>“organization of patient care activities between two or more participants involved in a patient’s care”</td>
</tr>
<tr>
<td>Adequate knowledge about available resources and participants’ roles</td>
<td>“organizing care involves the marshalling of personnel and other resources needed to carry out all required patient care activities”</td>
</tr>
<tr>
<td>Information exchange among participants</td>
<td>“managed by the exchange of information among participants”</td>
</tr>
<tr>
<td>Coordination is necessary when participants are interdependent</td>
<td>“participants responsible for different aspects of care”</td>
</tr>
</tbody>
</table>


Care coordination is:

*a process that occurs most often during and in response to care transitions (e.g., transitions across settings, within care teams, among care participants, between encounters or care episodes, as patient needs change) and that involves activities*
or approaches that bridge gaps arising from those transitions (McDonald, Schultz et al, 2014:p5).

Although most health systems confer the responsibility of coordination to a particular role or team, many countries identify primary care as the most appropriate base from which to coordinate care (Hofmarcher et al, 2007). Care coordinators are ideally placed to assess their patients’ often complex needs, but to be successful, they also require a degree of authority or influence to be able to mobilise other providers around a plan of care. Goodwin, Peck et al (2004), suggests this can be problematic due to the relative power position of most coordinators. More recently, GPs have been identified as key to care coordination for people with complex needs (RCGP, 2013; NHS England, 2013).

Infrastructural arrangements and artefacts are increasingly used to assist with coordination across different providers at different levels. Shared care plans can promote continuity over a number of providers, and encourage patient engagement in self-management (Curry and Ham, 2010). However, tensions can occur when different providers require different information systems to manage the same patient across different sectors of care. For instance, Granlien and Simonsen’s (2007) research in shared care for people with diabetes highlights the problems associated with the way different sectors organise their care. The hospital consultants manage a large cohort of patients, the aim of which is to biomedically manage diabetes, whereas a relatively small number of patients are registered in each individual practice and GPs are not expected to treat diabetes in isolation from the other problems patients with diabetes present with. Consequently, infrastructural arrangements that (usually) stem from specialist secondary care, are often not fit for purpose in general practice. Similarly, GPs also argue that clinical pathways or guidelines that originate in secondary care often do not consider the context of primary care or take account of the complexity of patients managed in general practice (Lutgenberg et al, 2009; Mutasingwa, Ge and Upshur, 2011). The current programme of recommendations and change underway in the NHS suggests that these issues are well known to providers and policy makers who are seeking ways to effectively address them (NHS England, 2013; Goodwin, Smith et al, 2012; RCGP, 2013).

2.4.3 Administration and management

Care provided across different sectors of care requires a sharing of information within and across individuals and services. Informational continuity means that accurate and up to date information regarding the patient is available to those who need it in a timely manner. The administrators play an important role in organising, sending and receiving information across care system. The effectiveness of this role is often challenged by the lack of a centralised electronic record, interoperability between different data systems and a continuing reliance on hospital discharge letters that are sent through the post (McMurray et al, 2013). Despite their role in the continuity of care, it was difficult to find information on how the administration of chronic care influenced the organisation and delivery of care. There was relatively little
research found that directly studied the relationship between the clinical and non-clinical aspects of organization in general practice apart from a few notable exceptions discussed below. Swinglehurst’s research (Swinglehurst, 2011) suggests that administrative staff make an important contribution to aspects of patient care beyond those activities included in their job description. Using the example of administering repeat prescriptions, Swinglehurst demonstrates an (informal) extension of their role which involves reviewing repeat prescriptions and making a judgment as to whether they can process them or whether a GP is needed to confirm any changes. Their assumption of this extended role reduces the medical workload and impacts positively on patient care and the overall functioning of general practice. It was, however, largely unknown to the clinicians in the practice and not accounted for in any of the practice protocols or research prior to their study (Swinglehurst et al, 2011). In their survey of GPs following the introduction of the nGMS contract, the doctors reported a rise in administrative activity in relation to increased clinical activity (Whalley, Gravelle and Sibbald, 2005), however, the administrative activity in general practice is largely unreported, except anecdotally and usually in relation to GPs workload. Swinglehurst’s study touches on the suggestion that in general practice, the clinical staff are not always aware of how the administrative aspects of the system work and how this influences the overall functioning of the practice (Swinglehurst et al, 2011).

In those studies where administrative involvement was alluded to, the studies suggested a fundamental divide between the clinical and administrative staff which, undermined improvement efforts, limited effective communication and reduced the opportunities of staff to work more collaboratively (Flett, Curry and Peat, 2008; Crabtree et al, 2008; Crabtree et al, 1998). The empirical evidence in this area is again, somewhat limited and difficult to locate, particularly in relation to service delivery for people with multimorbidity in general practice. It reflects a growing area of interest to researchers and other stakeholders and is considered a key component to effective coordination and continuity of care (Lanham, McDaniel et al, 2009; Flett, Curry, 2008; Haggerty et al, 2013). In their study of 84 primary care practices in the US, Crabtree, Miller et al (1998) confirmed the complexities inherent in community healthcare provision, not only evident in the autonomy of individual clinicians, but in the organization of general practice such as the clarity of staff roles, communication patterns between clinical and non-clinical staff and the use of office protocols. In their smaller study of general practices, Flett, Curry and Peat (2008) found that whilst the practice staff considered themselves to work as a team, there was an obvious divide between the clinical and administrative staff. This resulted in poor communication channels and missed opportunities for operational discussions. GPs were categorized as patient managers rather than business managers and strategic planning did not include the practice manager, whose role was limited to the management of the administrative staff as opposed to the practice as a whole. Crabtree, McDaniel et al (2008) found a similar division in their study of newly formed medical homes whereby all the practices operated as ‘dual’ organisations in which a federation of autonomous and independent
physicians were ‘paralleled’ by an organisation of support staff. The support staff’s primary role was to process the patients to optimise the physicians’ efficiency. The practice manager was often “minding the gap” (ibid, p20) between these dual organisations, controlling information flows and protecting the doctors from unnecessary disturbances from the support organisation. Whilst the researchers considered there to be some useful elements of the dual organization, communication and collaborative teamwork were severely inhibited by the separation and isolation within the sub-organisations.

2.4.4 Chronic care models and frameworks
There are a number of causes of fragmentation including fragmented organisational structures that can disrupt professional relationships and information flows and misalign incentives (Cebul et al, 2008). Meso level integration refers to health systems that are organised around population characteristics such as older people or a chronic condition. Early disease management programmes in the United States initially focused on individual conditions, patient education and adherence to medication, this was largely because the programmes were mainly funded by the pharmaceutical industry. Second generation programmes evolved to include patients’ with multiple health needs and co-morbidities (Bodenheimer, Wagner and Grumbach, 2002) and many introduced data systems with which to manage population health. Despite the complex overlap in terminology and concepts, care integration is generally associated with links between health and social care, whereas disease management programmes (DMP) link health providers (Nolte and McKee, 2008)

In practice, many of the examples of meso level integration involve older people (Curry and Ham, 2010) a significant proportion of whom have complex health and social needs which require access to multiple providers. Traditional systems of health and social care have been unable to keep pace with the increasing demands made upon it (Saltman, Rico and Boerma, 2006). Unresponsive and inadequate supply of services, unmet demand and under management of care have led to the development and introduction of a large number of different models and frameworks with which to encourage closer integration between providers, patients and carers. Wagner’s ‘Chronic Care Model’ (Wagner, Austin and Von Korff, 1996) and variations of, is perhaps the most widely used and evaluated of the models.

2.4.4.1 The Chronic Care Model
A major impetus for the widespread adoption of the chronic care model was the United States Institute of Medicine’s seminal report ‘Crossing the Quality Chasm’ (Institute of Medicine, 2001) which suggested the quality of care for people with chronic conditions in North America was extensively deficient. The two reasons given for this were: the increasing demands placed on the health care system from the rising incidence and prevalence of chronic conditions, associated with the aging of the population; and a health care system organised to respond to acute illness and injury:
Many chronically ill persons wrestle with the physical, psychological and social aspects of their illness without much help or support from medical care. More often than not the medical care, while well intentioned, fails to afford optimal clinical care or meet the persons’ needs to be effective self-managers of their illness. (Wagner et al, 2001:p65).

The key to improved chronic care was to fundamentally change healthcare delivery systems. The chronic care model includes 6 key elements:

1. Health care organisation and leadership
The promotion of an organisational culture that appreciates and supports chronic care through leadership and quality improvement activities.

2. Linkage to community resources
Forging links with the community can provide additional cost effective access to services not always available in the patient’s main provider organisation e.g. exercise classes, peer support groups or counselling.

3. Self-management support
Promoting and supporting self-management encourages patients to engage with their care and has been shown to improve outcomes.

4. Coordinated delivery system design
Innovations in the design of delivery systems, such as care coordination across multiple providers has led to improved patient satisfaction and improvements in health care utilisation.

5. Clinical decisions support
The inclusion of evidence based guidelines into processes of care can be effective in positively influencing provider behaviour.

6. Clinical information systems
Clinical information systems can encourage proactive organisation of care and the generation of management plans and the facilitation of self-care.

(Adapted from CCM Website: www.improvingchroniccare.org)
The chronic care model was built on the premise that chronic care outcomes can be improved by the 6 key elements working together to promote productive interactions between patients, who are well informed regarding their condition, and a proactive healthcare team. Since its introduction during the 1990s, the model has been extended to reflect the increased knowledge and experience of managing chronic illnesses. Most of the initial evidence on the chronic care model originates from the United States, however, its subsequent adoption in several other countries, including the UK, has led to an expansion of the evidence base. The widespread adoption of the CCM in recent years reflects the shared challenge of chronic conditions to healthcare providers globally. The model itself is not intended as an explanatory theory but instead represents a dynamic synthesis of best available evidence, subject to modifications as the evidence base improves (Fields, 2014).
2.4.4.2 Evidence relating to the chronic care model

Whilst the chronic care model, and variations of, is extensively used and recommended globally (World Health Organisation, 2002) the evidence for its comprehensive use and effectiveness remains largely elusive (Nolte and McKee, 2008a) with ‘...most of the evidence [...] produced [and] derived from poorly designed and executed studies’ (Gugiu et al, 2012:p36) The most recent review of its implementation globally suggests that a number of its elements have been implemented in over 1500 practices both in the US and internationally (Coleman et al, 2009). A recent metaevaluation of 28 healthcare studies that used the chronic care model (Fields, 2014) concluded that the quality of the studies was rated good in only 5 cases and that the others were either fair (n20) or poor (n3). The study used the ‘accuracy metaevaluation rating’ which includes 8 accuracy standards with which to determine the quality of a study:

Justified Conclusions and Decisions
Valid Information
Reliable Information
Explicit Program and Context

Descriptions
Information Management
Sound Designs and Analyses
Explicit Evaluation Reasoning
Communicating and Reporting

(Stufflebeam, 2011):

Study rating
Very good – per standard if 5 items affirmative
Good – if four items affirmative
Fair – 2 or 3 items affirmative
Poor if only one or two items affirmative

This metaevaluation illustrates how difficult it is to assess complex interventions in complex systems of care (Fields, 2014). Despite this, a number of studies report positive results with regard to outcomes, for instance in patients with diabetes (Vargas et al, 2007) and heart failure (Asch, 2005; Vargas et al, 2007). Other, larger studies of the chronic care model have only been able to show improvements in relation to process measures (Landon et al, 2007; Chin, Cook, Drum et al, 2004). A meta-analysis of a number of studies by Tsai et al (2005) concluded that the redesign of the delivery system was key to improving processes and outcomes of care, rather than any single element of the model.
The starting point of the CCM (Appendix 16) is its critique of existing care systems that are largely based around acute and episodic aspects of care. In comparison to other integration models, the extensive implementation and durability of the CCM hints at its usefulness, but its strength has been in identifying those factors which are key to delivery design. Its weakness is the lack of guidance around operationalising the model in the context of complex and fragmented health systems (Degeling et al, 2008). At the turn of the century, a national quality improvement programme introduced the chronic care model into 104 practices in the US, the aim of which was to improve the care of a single condition such as diabetes or asthma. A key finding of this study was that improvements in chronic illness management require a comprehensive system change and that incentivised activities can prevent new ways of working (Wagner, Glasgow et al, 2001). Bodenheimer’s review of 39 studies related to diabetes management, suggested that in 32 of these studies, successful implementation of the CCM was linked to favourable factors external to the practice (wider healthcare system) as well as internal (such as physician behaviour) (Bodenheimer et al, 2002). In addition to the redesign of delivery systems, the only other element shown to improve outcome measures is self-management (Tsai et al, 2005). This involves a patient and/or their family working with their practitioner to improve or maintain aspects of their well-being. It requires an element of support from their physician or practice and was found to be missing in those practices that organised care around acute illness (Wagner, Austin and Von Korff, 1996).

2.4.4.3 Self-Management

Although patients with chronic conditions consume high levels of health resources, 80-90% of care for these people is undertaken by themselves and their families (Vickery et al, 1983). Self-care involves people eating a healthy diet, taking regular exercise, taking medications as prescribed, recognising when their health is deteriorating and knowing where and when to seek help. At a micro level, chronic care models, disease management frameworks, health policy initiatives and best practice recommendations emphasise the importance of empowering patients and supporting self-management (Reddy and Gupta, 2014; DH, 2005; Mitchell et al, 2014). There is strong evidence to suggest that supporting self-care improves patients’ understanding of their condition, improves experiences of care and facilitates the appropriate use of healthcare services (NHS Voices, 2013). Self-care has been shown to be effective in the management of a number of chronic conditions including asthma (Ram and McNaughton, 2014; Hall et al, 2014) heart failure (Currie et al, 2014; Lowrie et al, 2014) and diabetes (Hall et al, 2014; Vedhara et al, 2014). Support involves sharing information and encouraging patients to exert more control over their condition. This is done by optimising their understanding of their condition, monitoring it and knowing when to make changes in treatment (Heisler, 2010).

A recent systematic review confirms the effectiveness of self-management support, although a survey commissioned by the Care Quality Commission suggested that most people with a chronic condition felt they did not receive enough support either from secondary or primary care
(NHS Voices). There are a number of established self-management initiatives within the UK, but support for such programmes is patchy and largely limited to particular conditions. For instance, in a study of people with diabetes, less than 50% were engaged in discussions about self-management (British Heart Foundation, 2010). The evidence of self-management support in general practice is also limited and de Silva (2011) suggests this reflects the gap between the rhetoric of self-management and its implementation in practice. Traditional models of self-management support focus on individual conditions, (NHS Improvement, 2013; Gillett et al, 201; Effing et al, 2012; Connock et al, 2007) which continues to be the prevailing model in chronic care management. In a recent study of implementing self-management support in primary care, the researchers found time and competing organisational demands major barriers to professional engagement in the project (Kennedy et al, 2013). Many practices in the US continue to be funded on a fee-for-service basis which, at present, does not include support for self-management. Bodenheimer’s study (Bodenheimer, Wagner and Grumbach, 2002) noted external factors, such as ‘ring fenced’ funding facilitated the implementation of the CCM.

Whilst the chronic care model could be used for any chronic condition, many countries simultaneously and subsequently have developed disease specific programmes of care organised around a number of, mainly, single chronic conditions such as heart disease, diabetes and depression. In the UK, these programs included the National Service Frameworks (NHS England) and managed clinical networks (Scotland). The heterogeneity of these disease management programs (DMP) make them difficult to compare, in particular the multiple definitions of ‘disease management’ and the wide variation in programme constituents (Curry and Ham, 2010). A systematic review of disease management programmes (Ofman et al, 2004) identified some common characteristics: patient education (79%); multidisciplinary team work (57%), education for providers (37%); and feedback (37%). Most disease management programmes consist of a number of components and increasingly include an element of self-care (Bodenheimer, Wagner and Grumbach, 2002). In general, many have demonstrated some positive outcomes, however these have been largely limited to processes of care and interim outcomes as opposed to patient reported outcomes. Few have demonstrated or presented data on the cost effectiveness of programmes (Bodenheimer, Wagner and Grumbach 2002;) although there has been an increasing inclusion of financial data in more recent evaluations (Mason, Goddard and Weatherly, 2014; Turner et al, 2008; Chan et al, 2008) that suggest being able to demonstrate positive returns on investment is an important consideration for both commissioners and providers of these programmes. Krause’s (2005) review of the cost effectiveness of DMPs suggests those that include seriously ill patients and coordinate services according to disease severity, are economically more successful.

Despite the predominance of the CCM there are a number of other established chronic care frameworks in existence (Singh and Ham, 2006) which detail various approaches. These frameworks are strategic approaches that identify the interlinked elements necessary in
effectively managing care and include a range of delivery designs that are in current use, in the UK and internationally (Appendix 15). The evidence to support new and emerging models of care is, as yet, patchy and incomplete (Gugiu et al, 2012; Zwar et al, 2006) and there is a growing recognition that solutions to the challenge of chronic care will involve numerous models, differently configured to suit individual groups of patients and the local context of healthcare (Goodwin, Smith et al, 2012).

2.4.4.4 NHS and social care model

Although rather dated now, an evaluation of the growing number of models used in practice suggest a number of problems associated with their implementation into complex systems (Degeling, Close and Degeling, 2008). In 2005, the Department of Health (DH, 2005) launched their NHS Health and Social Care Model (Figure 2.2) which drew upon a number of other models including Wagner’s CCM (Wagner, Austin and Van Korff, 1996).

**Figure 2.2:** The NHS and Social Care Long Term Condition model

![The NHS and Social Care Long Term Conditions Model](image)

The NHS model focuses on the identification and stratification of people with chronic conditions, the role of community matrons in supporting patients with complex needs and the need for integrated service delivery. The model (Figure 2.3) is stratified into 3 levels of need and care: self-management, care management and case management.
Degeling, Close and Degeling (2008) identify several shortcomings of the NHS model. Fundamentally, that chronic conditions are considered primarily from a clinical perspective and that this predominant focus on the medicalised, disease specific manifestations of illness does not promote the (widely successful) co-production (self-management) of health evident in Wagner's model. Second, the model is differentially detailed in definitions and specificities across continuums of care, ranging from ‘highly specific’ in case management to ‘not specified’ in self-management. The structures and methods required for the integration of services is varyingly defined with large areas of the model, namely the self-management stream, devoid of any detail (ibid). There is growing evidence to suggest that the lack of detail in the models and their implementation strategies, has a detrimental impact on the extent to which potentially helpful programs are utilised and the degree to which individuals and organisations collaborate to achieve a shared goal (May et al, 2011), namely effective and equitable healthcare for those with chronic conditions.

2.4.4.5 Use of models in practice
Singh and Ham’s (2006) large survey in the use of chronic care models within the NHS showed a wide variation in practice, with most regional health authorities not advocating a particular model to guide services (Singh and Ham, 2006). Consequently, a wide range of different models are used, with a third of health authorities reporting the use of Wagner’s CCM or a modified version of the population management approach used by Kaiser Permanente (Nolte,
Knai and McKee, 2008). Locally, a range of different delivery systems exist, however many house similar core components such as self-management, coordination and integration, nurse-led clinics and care closer to home. Various aspects of the CCM have been widely adopted in many countries and chronic care policies in most of these draw upon the model to some extent (Singh and Ham, 2006). But whilst the evidence base on its effectiveness is growing, this mainly involves evaluations of different aspects of the model as opposed to the effectiveness of the model as a whole (Nolte and McKee, 2008), which makes comparisons between studies difficult. In general, the studies relating to the evaluation of the chronic care model in practice are not comprehensive, key limitations included, low statistical power, the absence of ‘true’ control groups, violation of the intention to treat principle and low dosage (Gugiu et al, 2013).

Although there are a number of studies that suggest integrated care programs improve the quality and coordination of care (Vijayaraghavan, 2011; Coleman et al, 2009; Hung et al, 2008; Tsai et al, 2005), comprehensive evaluations of these models and frameworks are limited, few have been validated and even less have been tested across whole systems (Strandberg-Larsen et al, 2010). Similarly, whilst many studies reported some areas of improvement, either in the organisation of care or clinical outcomes, most had some reservations about the effectiveness in all dimensions of the variable models used (Gage et al, 2013; Nuño et al, 2012; Scanlon et al, 2008).

The CCM, ‘is a multi-dimensional solution to a complex problem’ (Shoeni and Lindahl, 2002:p3) in which the influence of the different individual components on outcomes is largely unknown and variable in different settings (Singh and Ham, 2006). It illustrates the importance of delivery systems in the provision of care and the need for more effective coordination and integration across different providers. How this is to be achieved is debatable and to a large extent dependent upon how existing services are organised. Nolte and McKee (2008) suggest that health systems typically exhibit ‘path dependency’ in which options regarding potential changes are contingent upon previous arrangements. Healthcare systems are individually characterised by different patterns of relationships between professionals and organisations delivering care, the extent to which these systems can be effectively influenced is variable and change agents must work within the realm of what is realistic in any given context. The wider context of care and the linkage between different professionals and organisations at an individual and a systems level, has been cited as a barrier to effective chronic care (Naylor, Immison and Addicott, 2013; Kendall et al, 2010; Rechel, Wright and McKee, 2009; Benedetti, Flock et al 2004). Despite the limited evidence on the outcomes of the chronic care model in practice, a large number of healthcare systems internationally have adopted a number of aspects of it. There is some emerging evidence that new organisational forms are evolving in general practice in response to changing demand on their services, but not specifically in relation to chronic conditions (Smith, Holder et al, 2013).
2.5 MACRO

2.5.1 Health policy

Macro level factors affecting service delivery, are external to general practice and typically originate from central government. Health policy and the structuring and funding arrangements of healthcare have implications for the organisation and delivery of care at a meso and micro level, for instance the Quality and Outcomes Framework. Similarly, the structuring of services across professionals and organisations has led to a fragmentation of care for people with multimorbidity. In many countries this has led to an increased interest in the integration of care. This section explores the current discourses that reflect the organisation of care across services. Health policy is an important driver in determining how services are organised. In recent years, the concept of integration has had an increasing influence on European healthcare (Schiotz and Standberg-Larsen 2008; Boerma, 2006). Integrated systems, such as Kaiser Permanente (California) and the federally funded and mandated Veterans’ Health Administration, bring physicians, hospitals and commissioners together into one system. However, here too the different forms that integration take, make it difficult to ascertain which aspects have what effect on particular outcomes (Ham, 2010).

A key characteristic of the Kaiser Permanente model is the organisation of care around population management as opposed to organisational structure. People with chronic conditions are stratified into risk groups and managed according to need. The system includes strategies for prevention, self-management support, disease management and case management. In their case study review of high performing health systems (n16), the Commonwealth Fund found that within Kaiser Permanente, medical staff were recruited on the basis of their commitment to whole systems healthcare and are professionally and financially obliged to work collaboratively across the spectrum of healthcare sectors (McCarthy et al, 2009). This contrasts with the prevailing structure of the NHS in which physicians are segregated and (increasingly) alienated by different sectors, funding streams and organisational arrangements (Goodwin, Smith et al, 2012; Light and Dixon, 2004). In their systematic review of primary research exploring GP perspectives on the management of patients with multimorbidity, Sinnott et al (2013) found disorganisation and fragmentation of the healthcare system a major barrier to patient centred care. In evaluations of different care models, a common characteristic considered key to the successful improvement of services, was the need for different parts of the wider health system to work together (Benedetti et al 2004; Feifer et al, 2001; Hupke et al, 2004).

2.5.2 Healthcare systems

Healthcare consists of a system whereby a number of units, such as organisations, institutions and resources work towards the common goal of improving health. At a macro, meso and micro level, health systems include personnel, finance, communication, information, supplies, direction and guidance (WHO, 2005). Different aspects of systems are variably required to work together to provide efficient and effective healthcare services. Integrated and ‘whole system’
strategies are increasingly employed to facilitate coordinated systems of care, particularly in relation to services for people with chronic conditions (Kodner, 2006). Working within systems of care helps to improve the quality of care by reducing unwarranted variation. Healthcare is increasingly viewed as an interconnected multidimensional system (Crabtree, Nutting et al, 2011). In trying to understand successful delivery systems, it is useful to note the literature that helps to explain the development of general practice in relation to systems and complexity sciences (Stumberg et al, 2014). However, the purpose here is not to provide a comprehensive overview of these related theories as much as to acknowledge the complex and interrelated connections inherent in general practice and the wider health system. The whole is more than just the sum of the parts and increasing our understanding of the whole can only be realised through exploring individual parts at the same time as recognising the influence of the interdependencies, between these parts.

Hatch and Cunliffe (2006) suggest that this is because the interdependencies present in subsystems create characteristics and artefacts that are particular to that system. In patients with heart failure, certain aspects of care, such as diagnosis and treatment of exacerbations, occur in specialist settings, but the identification and ongoing monitoring of the condition often occurs in general practice. Some aspects of care, such as medication titration, can be a product of shared care. A collaborative approach between specialists and generalists in the management of certain groups of patients has been shown to optimise patient outcomes. Consequently, to understand how a system works requires a holistic perspective which includes how the different subsystems relate to each other and to the whole as opposed to just analysing its parts. Integrative working does not ‘just happen’ but requires (often extensive) organisation (Duquemin, 2011).

At the meso level, in trying to understand how heart failure is managed in general practice, requires some insight into what happens in secondary care, who is responsible for what and how information is shared and relayed. Hatch uses the example of car manufacturing to illustrate this point in that whilst it is important to know how the sub-systems of a car work (i.e. the fuel system and the brakes), unless there is an understanding of how the different parts relate to each other and to the performance of the car, it is unlikely that a functioning car will result. Similarly, at a micro level heart specialists are primarily concerned with the patient’s heart whereas GPs, are more concerned with the patient as a whole. Decisions made in secondary care may affect those taken in primary care and vice versa. Optimising a patient’s heart failure treatment may adversely affect their kidney function and so to promote continuity in patient management and to avoid adverse outcomes, it is important that information between providers is appropriately shared in a timely manner. These individual and organisational ‘interdependencies’ are discussed in more detail below. The evidence suggests improving healthcare is likely to be multifaceted and is more successful when it occurs within and across a number of levels thus promoting a ‘whole systems’ approach (Ferlie and Shortell, 2001).
2.5.2.1 Interdependencies and linkages

General practice is characterised by, and situated within, a number of inter-related social systems; a number of interdependent elements interact to facilitate its functions. Managing interdependencies can be difficult and costly; of course, not managing these interdependencies effectively is also costly. Interdependence can be described as 3 levels, pooled, sequential and reciprocal (Thompson, 1967). At the lower end of the scale pooled interdependence includes individuals or units whose activities have only an indirect effect on each other. For instance, hospital outpatient clinics often only have pooled interdependence, what happens in one does not directly affect another. Pooled interdependence can normally be managed through organisational rules, protocols and procedures. Sequential interdependence describes a higher interdependence than pooled and is present when activities between two elements are sequentially interdependent so that activity in A directly affects B, but not the other way around. Charns and Schaefer (1983) give the example of a recovery room in an operating department, the work of the recovery room is directly affected by the activities in the operating theatre, but not vice versa. This type of interdependence can be managed through sharing operating schedules and specifications. Programming as much activity as possible will provide an indication of timing and an idea of what can be prepared for. Reciprocal interdependence is the most complex and common form of interdependence in healthcare and not surprisingly the most difficult to manage. It is obvious in the management of multiple chronic conditions for instance when the treatment for one condition may adversely affect the effectiveness of another and vice versa (Charns and Schaefer, 1983). Managing reciprocal interdependence would be easier if one person could be responsible for all of the person’s care. In modern health systems this is impossible due to the way care is typically organised around individual conditions and providers are geographically dispersed. Alternatively, co-locating providers organisationally into a unit or a group is considered a useful compromise (Charns and Schaefer, 1983). There is some evidence to suggest that developing systems in primary care is difficult, partly due to the prevailing ethos of autonomous decision making processes, but also due to the lack of experience of ‘whole systems’ approaches in this context (Elwyn et al, 2002).

A ‘whole systems’ approach recognises the interdependencies between professionals and services and the need to facilitate linkages. A number of studies cite the importance of service redesign (Degeling and Erskine, 2009; Bower et al, 2011). In recent years a common criticism of reforms within the NHS is the preoccupation with structure and restructuring as opposed to optimising function (Appleby, Galea and Murray, 2014; Ham, 2009; Smith, Walshe and Hunter 2001). In their review of approaches to improve the management and coordination of care for people with chronic conditions in Europe, Gress et al (2009) found that almost without exception, linkage between healthcare services, community resources and policies are missing. Leutz (2009) describes linkage as the ‘intentional’ connections between different individuals and services, both simultaneously and/or sequential which aid the coordination of care. In their comparative analyses of 5 care coordination programmes for people with multimorbidity in the
UK, Goodwin, Sonola and Healy (2013) also identified linkage as an important feature of coordination, but at a non-clinical level. Essentially, that coordination requires full alignment across the organisational, professional, regulatory and political spectrum to prevent over reliance on local leaders to ensure change occurs.

2.5.2.2 Variation in provision

Whilst much of the debate surrounding healthcare policy has been overly concerned with issues such as the structure and management of health care, many of the problems and challenges cited by stakeholders are those associated with healthcare delivery (Gray, Degeling and Colebatch, 2008; Rechel, et al, 2013; Knowles et al, 2013). Within the NHS there continues to be significant variation in healthcare provision (Gray and DaSilva, 2010; NHS Confederation, 2004) and outcomes including those associated with the management of chronic conditions in primary care (Degeling and Erskine, 2009). A degree of variation is expected and acceptable in instances where this is consistent with the patient’s illness or preference, or when scientific evidence dictates it (Wennberg and Wennberg, 2003). However, most of the variation evident within the NHS is ‘unwarranted’ and extends beyond clinical practices to the wider systems of care where variations are evident in access and utilisation, patient outcomes, quality and value. For instance, in the NHS Atlas of Variation in Healthcare (Gray and Da Silva, 2010), the authors note a 35-fold variation in people with diabetes receiving all 9 of the key care processes recommended. For people with chronic conditions, systematising care processes has the potential to reduce inequities in health by reducing the severity of the disease and identifying early any progression or complications associated with the condition. The needs of people with a chronic illness present similar challenges to individuals, their families and health systems, irrespective of the specific biomedical aetiology. As such, comparable ways of organising care are likely to be equally effective across a number of chronic conditions (Webb, 2005).

“If all variation were bad, solutions would be easy. The difficulty is in reducing the bad variation, which reflects the limits of professional knowledge and failures in its application, while preserving the good variation that makes care patient centre. When we fail, we provide services to patients who don’t need or wouldn’t choose them while we withhold the same services from people who do or would, generally making far more costly errors of overuse than of underuse.” (Mulley, 2010:p11).

The systematisation of certain aspects of care is known to have a number of benefits across the healthcare economy, one of which is the potential to be more cost-effective. Systematisation of care is discussed in the section below.

2.5.2.3 Systematisation of care provision

Within general practice work is increasingly technically systematised and embedded (Checkland, McDonald and Harrison, 2007). A large part of the clinical component of the
contract focuses on improving the care of people with specific chronic conditions and whilst there was a recognition that the changes to some extent, improved the consistency of care to these specific groups, many doctors were concerned about the reduction in holistic care and the loss of focus from non-incentivised activities (Maisey et al, 2008). Interestingly, Checkland et al's study of change in general practice concluded that, at the same time as those GPs studied, continued to make ‘discursive claims that they provided holistic care’, care delivery was increasingly biomedical presenting a rhetoric-reality gap (Checkland et al, 2008;p799). Many of the researchers involved in this study had current and previous experience of working in general practice including Checkland who is a practising GP, which adds a particular perspective and credibility to their research.

There is evidence to suggest that the technical systematisation of care (including scientific bureaucracy) is simplifying and reducing clinical issues to a number of discrete parts that are more easily measurable and quantifiable (Bower et al, 2011). The electronic data systems used to support the QOF, encourage a movement away from the holistic management of patients, in which tacit knowledge and reflective practice are used to provide individualised care, to a system of population management whereby patients are grouped through biomedical characteristics which are more easily electronically codified than softer data (Checkland, McDonald and Harrison, 2007). The result is a disease management programme driven by the data collection template as opposed to reflecting it (Checkland, McDonald and Harrison, 2007).

In recent years, policy initiatives by the Department of Health and NHS management, such as the Quality and Outcomes Framework, have been increasingly influential in determining a number of activities of clinical staff in general practice, not least because of the reimbursement schemes offered. To address the ongoing specialisation and fragmentation in healthcare, including the increasing division of care processes into discrete tasks, there has been a rapid growth in the literature relating to integration.

2.5.3 Integration

An increasing number of stakeholders suggest that, to be effective and sustainable, care provision needs to be more integrative, particularly for people with multimorbidity (Price et al, 2014; Smith et al, 2012; Erler et al, 2011). Change agents often present healthcare as an integrated system whereas the evidence suggests this is not the case:

‘...operational goals are not always shared, the division of labour is far from perfect and, due to lack of coordination, the various elements of health care lack coherence’ (Van der Zee et al, 2004:p5).

The ongoing specialisation and fragmentation of medicine and healthcare has created and perpetuated divisions in care: increasing the interdependencies between providers (Nolte and McKee, 2008). In response to these issues, healthcare organisations, professionals, academics
and policy makers are designing new models and systems of healthcare delivery that work across traditional boundaries. The triple aims of integrated care are to promote positive user experiences; to improve the outcomes of care and to increase the cost-effectiveness of services (Goodwin, Smith et al, 2012). Coordination and continuity of care are two key characteristics associated with high quality healthcare for people with chronic conditions (Agency for Healthcare Research and Quality, 2008). Some commentators differentiate between integration and integrated care (Kodner and Spreeuwenberg, 2002). Typically, integrated care refers to the orchestrated delivery of care as conceived and experienced by the patient (Lloyd and Wait, 2005) whereas integration is the processes and methods used to link the different sectors of healthcare, i.e. primary and secondary care, with other service systems such as, long term care (Leutz, 1999). Aside from the limited empirical evidence in support of particular care delivery models, a major challenge in formulating chronic care provision is the lack of consistency in definitions and “underlying concepts and boundaries” (Smith et al, 2012; Nolte and McKee, 2008). A large number of initiatives aimed at coordinating and/or integrating care have been introduced, however the terminologies associated with these initiatives i.e. “integrated care”, “coordinated care”, “collaborative care”, “managed care”, “disease management”, “case management”, “chronic (illness) care” and so on, are often vague and unspecific. Definitions have hampered any widespread consensus as to what integrated care actually is (ibid). Disease management and integrated care can be considered as two polar ends of the same spectrum of approaches, although over time the 2 concepts have increasingly converged resulting in a degree of overlap (ibid). Whilst the overall aim of both approaches is to ultimately improve outcomes for people with chronic conditions through coordination and integration of services, disease management programs are often limited through being structured around a specific condition and the biomedical model (Martin, 2007). Integrated services tend to encourage a more holistic programme of care by forging links with providers, particularly social care. Integrative approaches to care management are usually founded upon the needs of identified sub-populations, in particular those with complex needs, such as the severely disabled or the frail elderly. As such, many require access to a number of health and social care providers. Kodner and Spreeuwenberg state that the aim of integrated approaches is to provide:

...a coherent set of methods and models on the funding, administrative, organizational, service delivery and clinical levels designed to create connectivity, alignment and collaboration within and between the cure and care sectors...[to]...enhance quality of care and quality of life, consumer satisfaction and system efficiency for patients with complex problems cutting across multiple services, providers and settings. The results of such multipronged efforts to promote integration...is called integrated care.

(Kodner & Spreeuwenberg, 2002:p3)
Integrative approaches to care management extend beyond the narrow focus of disease specific programs to include the wider, administrative and organisational factors that provide linkage over different disciplines, services and organisations. Leutz (2009) suggests that collaborative practices require different sorts and levels of integration if they are to meet the diversity of needs. In his earlier work Leutz (1999) identified 3 broad levels of integration: full integration; coordination; and linkage. Full integration is required for a small number of people at the top of the ‘needs’ pyramid who have complex conditions and may be medically unstable and will often require long term or continuing care. At the other end of the pyramid or spectrum ‘linkage’ is a more suitable model whereby populations with emerging health and care needs are identified and linked with services that, at this level, provide support for self-management.

In the abstract, Leutz’s work provides a useful framework of organising principles for managing different populations of people who represent different risk pools. Although ‘integration’ is a widely cited term in the literature, there is as yet little empirical evidence to support its adoption on any notable scale.

2.5.4 Evidence of integration

Despite the various definitions, most integrative systems are focused around the processes of bringing professionals and organisations together to improve the outcomes for their patient populations (Curry and Ham, 2010). A number of mechanisms can be used to facilitate integrative working some of which are conceptually initiated through policies and professional guidance and others through more concrete mechanisms such as commissioning and contractual arrangements or through the physical merging of organisations and/or services. The evidence to date suggests that integrating organisations alone, does not invariably lead to increases in clinical and service integration (Curry and Ham, 2010). Burns and Pauly (2002) suggest, structural changes aimed at integrating providers, did not alter the way physicians practiced or related to other professionals or services. A more recent study of ‘integrated’ providers of elderly care in the US and Canada, illustrated that although there was some evidence of integrated care, in the form of coordinated delivery, in nearly half of those organisations studied, integration was varying evident in form only (McAdam, 2008). In practice, factors at different levels of care organisation work independently and in combination (not always intentionally), to determine how services are actually delivered. Consequently a variety of conceptual, structural and relational configurations exist, mainly as a consequence of the historical and organisational complexities inherent within the wider healthcare system (Nolte and McKee, 2008).

In practice most advocates and implementers of integration support a ‘pick and mix’ approach to integration in which integrative mechanisms are chosen according to contextual factors such as local needs and priorities (RAND Europe, Ernst and Young LLP, 2012; Ling et al, 2010; Waddington and Egger, 2008). A number of Department of Health and NHS initiatives draw upon particular aspects of available models such as: the expert patient program; National
Service Frameworks; the community matrons’ service; and health checks, rather than trying to implement whole programmes. Different local priorities, fragmented systems and funding streams, in addition to the rigid interpretation and application of health policies (Bernard et al, 2008), all emphasise the difficulties of applying a ready-made model into such a diversified setting. The Integrated Care pilots (n16) were a nationally funded project aimed at improving integrated care, in particular: improving access to care; improving the patients’ experience of continuity; identifying patients with complex needs and supporting them; and moving care from hospitals where possible. Each pilot organised to suit local circumstances but were encouraged to be innovative and so there were diverse differences in structure and purpose. But generally, integration was horizontally focused and aimed at primary care services, e.g. general practice, community nurses and social services, working more closely (Bardsley, Smith and Car, 2013). The collective results of the pilots have been mixed (RAND Europe, Ernest & Young, 2012). In general, the staff found the experience very positive and reported improved ways of working, patients and service users did not report any noticeable improvement in their care (pilots). The evaluation of the pilots listed process measures such as the increased use of care plans and the development of new roles as positive outcomes of the pilot. At the time of the evaluation, whilst the service users did feel their care was better coordinated particularly on discharge from hospital, they found it more difficult to see a nurse or doctor of their choice, felt they were listened to less and were not fully involved in decision making regarding their care (ibid). In their evaluation of the North London pilot, Bardsley, Smith and Car (2013) felt the duration of the pilot (2 years) was perhaps too soon to elicit favourable results in terms of patient experience. Goodwin, a policy analyst with the King’s Fund, suggests that the evaluation findings are a common unintended consequence of integration whereby the process of integration can overshadow the purpose of it, which is primarily to improve the patient’s experience of continuity of care (2012). Other commentators on integration support this view (Singh and Ham, 2006). The launch of the ‘Integrated Care Pioneers’ in 2013, denotes the ongoing importance the government attaches to patient centred, and system supported care for people with chronic conditions.

2.5.4.1 Evidence of integration for chronic conditions

The empirical evidence to date suggests that where integrative practices have been introduced, they typically focus on individual conditions (Fortin, Soubhi et al, 2007). The community matron programme in primary care in England is one of the few exceptions to this. However due to their interdependency on other parts of the healthcare system, such as secondary care which remains disease focused, at some level they too have to work within multiple disease specific pathways of care. In their small study of diabetes care across primary and secondary care Procter, Wilson et al (2012) found that patients managed by community matrons continued to experience fragmented care which was dictated by their diagnoses rather than need.
Much of the evidence relating to the management of chronic conditions originates from North America and whilst patients may experience ill health in similar ways in different countries, the differences in the organisation of healthcare mean research findings are not necessarily transferable. Despite this, fragmentation of care is a commonly occurring theme associated with chronic conditions internationally (Agency for Healthcare Research and Quality, 2008; Improvingchroniccare, 2011; Shaw, Rosen and Rumbold, 2011; Vrijhoef and Wagner, 2009). Most of the studies attribute this to the wider healthcare system (Smith et al, 2010). In their review of studies that considered the views of GPs on the barriers to managing chronic conditions (275 GPs in 7 different countries) Sinnott et al (2013) found a major barrier was the disorganisation and fragmentation of healthcare. Although not specifically related to chronic conditions, a study of 79 general practices in Scotland identified the fragmentation between health and social care to be a major barrier to implementing a programme of anticipatory care (O'Donnel, MacKenzie et al, 2012). Under coordination is an issue in most advanced health care systems (Boeckxtaens and De Graaf, 2011; Björkelund et al, 2013; Roland, Guthrie and Thomé, 2012).

The introduction of the Quality and Outcome Framework (QOF) led to many practices restructuring, expanding and standardising aspects of their services to meet the nationally determined targets. Whilst these changes increased capacity and improved the consistency in some aspects of chronic care, there is little evidence to indicate any widespread improvement in chronic illness management in general. Part of the solution to the ‘crisis’ of chronic disease management was the need for specialists and generalists to work together across healthcare sectors (Lakhani, et al, 2008). In their study of models in the management of heart failure, Bernard et al (2007) identified a number of international studies, including some from the UK, which suggest multidisciplinary, multifaceted care management programmes are the most effective, however, they could find no evidence to suggest how these programmes can be optimally delivered. In their evaluation of the ‘Year of care model’ for people with diabetes in the north east, 39 general practices were included, 80% of patients with diabetes in this area were already managed in primary care. The focus of the improvement project was to improve patient outcomes through clinical staff working more closely with patients, incorporating a care plan and enhancing shared decision making (Duquemin, 2011). Learning from the project was intended to inform commissioning arrangements and the long term intention was to expand the programme to incorporate other chronic conditions. Data collected showed that an increasing number of patients had been involved in a care planning consultation, unfortunately the data did not include the extent to which practices followed the year of care approach. Those patients who were interviewed during the study, did not report any significant improvements in their care. The author of the report suggests that this was because care for diabetes prior to the introduction of the model, was already of a high standard. Several of the improvements noted in the evaluation were process measures such as increases in the number of patients who received test results in writing (ibid). The Year of Care project demonstrated the need for a
considerable amount of organising within and across providers and that working collaboratively across sectors was an important factor in the success of the project. Interestingly, specialist diabetes services in secondary care were evolving to reflect the provision in primary care (Duquemin, 2011).

Disease management programmes for particular chronic conditions have been ongoing in general practice for some time (Roberts, Green and Kadam, 2014; Goodwin, Curry and Naylor, 2010; Griffin, 1998). Many of these programmes are disease specific and the responsibility for a number of aspects has been devolved or transferred from medical staff to other professionals, particularly to nurses employed in a number of different roles (Salisbury, 2013; Fortin, Soubhi et al, 2007). To be effective, these programmes are required to work as a system whereby different individuals involved in care delivery have access to information, communicate and coordinate activities, thus preventing the underuse or overuse of services and to promote the likelihood of a positive patient experience. The plurality of providers of chronic care (both within and across organisations) has been implicated in undermining the quality of care, much of this relates to the transfer of information between providers. Whilst most of the evidence on coordination is data from the United States (Agency for Healthcare Research and Quality, 2012; Øvretveit, 2013) the NHS Alliance’s annual survey of 500 GPs stated that over 70% of reported delays in information was due to ‘often’ or ‘very often’ delayed discharge summaries from secondary care (Øvretveit, 2011). The NHS Modernisation agency (Øvretveit, 2011) implicated primary care in its assertion that 250 000 emergency admissions could have been prevented with improved care for people with chronic conditions, although they did not substantiate their claim with any strong evidence. Recently published policy documents make recommendations for more integrative working and enhanced coordination of care (NHS England, 2013; RCGP, 2012) and GPs are identified as having a central and ongoing role to play in these changes (Goodwin, Curry et al, 2010; DH 2010; Curry and Ham, 2010). Indeed, the changes to commissioning arrangements currently underway (DH, 2010) are indicative of the government’s confidence in GPs ability to effectively commission, organise and coordinate care.

Data, mainly from the US and Canada, has shown integrating care can reduce the use of secondary care, improve quality of life, overall functioning and patient satisfaction (Curry and Ham, 2010). The PACE (Program of All-Inclusive Care for Elderly People) study, used a ‘whole systems’ approach to encompass various providers in a programme to improve care services for the frail elderly. This federal demonstration programme ran for 10 years from 1987-1997 and is now a permanent provider of acute and long term services nationally. The model was deemed to be a successful integrative mechanism (Kane et al, 1997; Zimmerman et al, 1998) and key attributes were identified as their particular focus on elderly care needs, a day centre facility where a number of providers travelled to review the patients, the programme’s team approach which was considered the main driver behind the ongoing coordination and continuity.
of care in this group; and their ‘highly individualised’ patient care (Kodner, 2006). The ‘Integrated care programme for frail elders’ (SIPA) is a similar model used in Quebec in Canada. Some of the features deemed successful in the PACE model, have proved equally so in the SIPA programme, in particular: the focus on elderly care needs; a multidisciplinary, collaborative team; and funding responsibility for a range of interventions (Belánd et al, 2006). Key aspects of the model are now mandated in Canadian healthcare of elderly, frail people. Although these studies focused on the care of older people these outcomes would appeal to most providers and receivers of chronic care. Despite the nuances associated with different chronic conditions, the general aims of most chronic healthcare programs are similar if not the same. Consequently, successful systems designed to provide these integrated services often exhibit similar characteristics; Kodner (2009) lists the following key features of integrated health and social care:

- **overarching organisational structures** to facilitate integration at various levels (strategic, managerial and point of care)
- **case management involving multidisciplinary team** coordinated packages of care and single point of contact
- **organised provider networks** systematisation of referral pathways, service level agreements, shared information networks and educational programmes
- **financial incentives** to encourage the downward substitution of care, rehabilitation and prevention

(Kodner, 2009:p11)

Implicit in these characteristics is the need for effective linkage and coordination and not just clinically, but administratively and organisationally as well, with high level leadership and funding across individuals and organisations.

More recent chronic care models include the ‘House of Care model’ (NHS England, 2014b) and its predecessor ‘Year of Care’ (Diabetes UK, 2008). Initially the ‘Year of Care’ was a programme introduced for people with diabetes, whereby the authors of the programme recognised that most people with a chronic illness managed it themselves and that routine appointments were typically unrelated to real life events or the needs of individuals (yearofcare website). The programme used care planning as a mechanism to facilitate continuity and care that was more relevant and effective (Bardsely, Smith and Car, 2013). The year of care model has now extended and is closely associated with the House of Care model which is not limited to individual diseases or people with high levels of need. The House of Care is a metaphor aimed at promoting a whole systems approach that recognises the interdependencies of providers and works at adopting integrative practices (Coulter, Roberts and Dixon, 2013). Whilst there are currently some government sponsored pilots of integrative care models (DH, 2013) and evidence of new ways of working in several areas across the NHS (Primary Care
Commissioning), these are in the early stages of development and have yet to be fully evaluated. It is difficult to know how extensive the use of models in the NHS currently is.

Multimorbidity is of growing interest to a number of stakeholders, particularly with regard to organising services. At present the evidence base is sparse, but increasing at pace. Stakeholders advocate a move away from disease specific management of chronic conditions, towards a more generalist approach which includes more integrative and collaborative working. Current healthcare systems are largely based on an acute care model, at a time when the biggest challenge to healthcare providers globally is the growth in chronic conditions. In recognition of this challenge a number of care models have been developed. The extent of their use within the NHS is largely unknown. A whole systems approach requires improvements to service provision to be accompanied by managerial, financial and organisational support, effective linkage across professionals and services including more collaborative working.

2.6 Sensemaking

2.6.1 A sensemaking approach

In researching general practice, it was important to reflect a number of perspectives. The assumption was that different people in similar roles, both individually and collectively, do not behave in similar ways given similar situations. This is evident in the data linked to individual practices that reflect prescribing trends or readmission rates for certain chronic conditions and the variability between individual practices (Goodwin, Dixon et al, 2011). In considering a number of theoretical approaches, the aim was to choose one that could most effectively help to explain behavior in general practice. Social constructionism is concerned with meaning that manifests itself through behaviours. It employs a holistic approach whereby individuals are studied within their social context (Reason and Bradbury, 2008). Understanding is not enhanced when subjects are abstracted from their social context and individuals can only be ‘known’ when we see what they become in response to certain situations (Weick, 1995; p24). The way people behave and the context in which they do so creates a form of ‘reciprocity’ whereby society influences how people behave at the same time as the way people behave can change society (Giddens, 2004). Giddens’ theory of ‘structuration’ has been used ‘to explain how individuals absorb unconscious, tacitly understood routines of behaviour that generally remain unquestioned as long as they continue within accepted bounds’ (Gabbay and Le May, 2011: p71-72). Critics of structuration theory cite it’s over ambitious scope and the absence of any detail in explaining the relationship between individuals (agents) and society (structure) (ibid). Sensemaking (Weick, 1995) and structuration theory (Giddens, 2004) are often considered ‘complimentary’ and in some instances are used simultaneously to explain behavior in organisations (Jensen, Kjaergaard and Svejvig, 2009; Ghosh, 2007;). As a theoretical approach, sensemaking is similar in its focus on the relationship between individuals and their environment. For the purposes of this research a sensemaking approach was chosen because it was deemed to be more ‘accommodating’ of multiple perspectives and can often provide
insightful knowledge of the (complex) reciprocity between individuals (with multiple selves) and the (ever changing) context.

The sensemaking literature is predominantly located across 2 broad themes: Information Science (Dervin and Nilan, 1986) and the study of organizations (Weick, 1995). Of these, Weick is the most widely referenced. In contrast to Dervin and Nilan’s work, which focuses on how individuals make sense across time and space, Weick’s approach centralises on a collective sensemaking whereby the primary question is how something becomes an event for members of an organisation, followed closely by the question of what that event means (Weick et al, 2005). It is a useful approach particularly when levels of complexity and uncertainty are high (Rutledge, 2009), both of these factors are inherent in care provision for people with multimorbidity in general practice. Weick suggests sensemaking is pervasive in all social contexts and situations and occurs largely sub-consciously (Weick, 2005). It involves actors in the ongoing appraisal of an environment that is perpetually changing. Individuals continually act and adapt in response to new data and impressions. Exploring how individual practice members understand their own activities in relation to their practice and the wider provisions of care will help to explain why services are configured and delivered in the way they are. For these reasons, this research uses Wieck’s approach to sensemaking to improve our knowledge of care organisation in general practice. An overview of sensemaking is provided below.

This section draws heavily on the work of Karl Weick (1995) who describes sensemaking as a process by which people literally make sense of their experiences. It is an area of study that is increasingly used to help explain behaviour in particular contexts (Thomas, Clark, Gioia, 1993; Battles et al, 2006) and plugs several gaps in organisational theory and is a key activity in all organisations:

..sensemaking is central because it is the primary site where meanings materialise that inform or constrain identity and action (Weick, Sutcliffe and Obstfeld, 2005; p409).

Weick (1995) suggests that organisations primarily exist in the minds of their members; individuals create images or ‘mindmaps’ through which they attempt to find order in their experiences. These maps do not pre-exist experience and are constructed retrospectively to help individuals navigate the social world (Gabby and Le May, 2011). Sensemaking is literally to make sense of something it is ubiquitous, on-going and often subconscious. It requires a sensemaker (we are all sensemakers) and suggests that the way in which we understand our self, influences how we understand our world. In turn, our perceptions of the world affect how we understand ourselves. Sensemaking is thus an ongoing, iterative dynamic.
Whilst the term ‘sensemaker’ suggests a singular operative, individuals consist of multiple identities constituted from the process of interaction. So for instance, GPs may be male or female, a parent, a partner in a practice, a principal investigator in a trial and so on. All these (and more) contribute to multiple identities and will influence how they behave in certain situations. Similarly, individuals experience different interactions and shifting between them requires shifts in identities. The self is therefore continually redefined in relation to where we are and what we are doing. How we make sense of the world depends on our temporal definition of self which informs our interpretation of it: when the self is known, our sense of the world is enhanced. Equally, our sense of self is often informed by our situation (Weick, 2005). The meaning attributed to a situation is derived from the self as the situation is being dealt with, and the identity that is invoked, rather than from the situation itself. Multiple identities mean the individual has a catalogue of meanings on which to draw upon and apply to a situation. Large numbers of identities or selves reduce the possibility of being surprised but increase the likelihood of being confused by the abundance and equivocality of options (ibid). Multiple identities and a constantly changing environment helps to explain why people can behave differently in similar situations. The retrospective nature of sensemaking is derived from ‘a meaningful lived experience’ (Schulz, 1967) whereby individuals can only understand what they are doing once they have done it: ‘Any intellectually conceived object is always in the past and therefore unreal. Reality is always the moment before intellectualisation takes place. There is no other reality’ (Pirsing, 1974;p24). In this way, actions in organisations often occur first and are then made sense of. A fuller explanation of sensemaking is given in the next chapter.

2.6.2 Sensemaking in healthcare

Sensemaking has been increasingly used within studies of healthcare (Checkland et al, 2013; Anderson et al, 2009; Davidson, 2010). Donaldson’s (2012) recent review of the literature suggests these studies typically fall into one of two categories clinical and managerial. Clinical studies that include sensemaking have mainly used it to help understand communication within healthcare practices (Brown, Stacy and Nandhakumar, 2008; Waring, 2009; Jordan et al, 2009) or as a means through which to study implementation and change (Jordan et al, 2006; Davidson et al 2010; Currie and Brown, 2003). There are also a significant number of studies that use sensemaking as a lens through which to interpret aspects of clinical and patient safety (Battles, Dixon et al, 2006; Weick and Sutcliffe, 2003). Managerial studies that use sensemaking often relate to policy implementation and the adoption of new systems and complex adaptive systems (Reuben and McDaniel, 2008). Many of these managerial studies constitute a subset of the management and business literature related to sensemaking, the setting within healthcare is largely incidental. Checkland et al used (2013) sensemaking to explore how commissioners of healthcare ‘made sense’ of their day to day practice. In their study of general practice following the introduction of the nGMS contract, Huby et al report a number of practice narratives whereby the staff use sensemaking to rationalise and explain the behavior of co-workers within the practice as well as to the researchers studying their
organisation (Huby et al, 2008). Sensemaking is often used in clinical situations, where the information required is not always complete and time constraints require the staff to prioritise actions (Gabbay and Le May, 2011).

Chapter summary
Multimorbidity is widespread and increasingly common. Meeting the needs of this population is challenging healthcare systems globally and there has recently been a significant rise in the number of stakeholders researching in this area. Locating the literature has been challenging, not least because of the extensive terminology used both in the study of multimorbidity and in the theory and practice of care provision in this area. Few empirical studies were found that explicitly related to the management of multimorbidity in general practice, or to the organisation of care for this cohort of patients. The research to date has largely explored the incidence of multimorbidity and its effect on individuals and healthcare systems and very few studies have considered interventions to improve outcomes in this patient cohort. Consequently, in lieu of results from impending studies, the broader literature around the organisation of care for people with chronic conditions and related concepts was reviewed. The recurring themes fit somewhat loosely into different levels of care organisation. At a micro level in GP practices, chronic care provision is challenged by the increasing demand on services and the changing roles and responsibilities of practice staff in their attempts to meet this demand. Increasingly, quality in chronic care provision includes non-clinical measures such as the organisation of care and the patient experience. At a meso level, care provision is fragmented across multiple providers which has implications for continuity and quality of care. Several providers internationally use models of care in recognition of the multifaceted nature of chronic illness and to promote self-management and coordination of care. Integration is a mechanism aimed at linking providers and improving the patient’s experience as well as enhancing healthcare efficiency. The organisation and administration of services is probably central to high quality healthcare but is largely unreported in the literature. Evidence in the literature suggests that promising and successful aspects of services for people with multimorbidity require a multifaceted, ‘whole systems’ approach with high level managerial support and financial alignment that ‘allow’ healthcare staff to work more flexibly across services.

The purpose of this research is to explore the factors that determine service delivery in general practice and to increase our understanding of how the wider organisation of care impacts on service delivery within general practice. The research is based on 3 broad research questions: how services are provided for people with multimorbidity in general practice; why services are configured in this way; and the impact of these on service delivery. The following chapter discusses the research design and the methods used to explore these research questions.
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CHAPTER 3 METHODS

3.1 Introduction
This chapter includes the aims and propositions of the research. It discusses the research paradigm and process and includes the rationale for choosing the methods used in the study. The choice of research design is considered before the case study approach is documented in more detail. The fieldwork schedule is outlined and some of the challenges that arose during the data collection are discussed.

3.2 Aims and propositions
The use of propositions directs the researcher to areas that should be explored within the scope of the study and are particularly useful in exploratory case studies concerned with ‘how’ and ‘why’ questions. Yin (2009) suggests that in the absence of propositions, researchers may proceed in the wrong direction and miss relevant data. The propositions were continually revisited, reviewed, modified and developed during the data collection and analyses to reflect the emergent findings. The aims of the project are outlined below with the initial corresponding propositions and rationale (see the discussion for further detail of these).

- 1. To understand how care is provided for people with multimorbidity in general practice and why it is configured in this way.

Proposition 1: How services are delivered is dependent upon how practice staff ‘makesense’ of what is needed and what is possible given the context.

Rationale: At a micro level, various individual and contextual factors are likely to guide service provision. For instance, the time available may determine what activities are prioritised during a consultation.

- 2. To establish the organisational context of contemporary healthcare, how do professionals in general practice conceptualise and organise care for patients with multimorbidity, whose care is complicated by a number of other chronic conditions.

Proposition 2: In response to their increasing responsibility for chronic disease management in general practice, more integrated ways of working are emerging.

Rationale: In order to meet their new responsibilities, care will be organised around the needs of patients with multimorbidity. The literature suggests a number of care models to facilitate this.
3. To understand the extent to which existing, emerging and future services are constrained and facilitated by the wider organisation of care within the National Health Service.

Proposition 3: Managing the care of patients with multiple conditions is constrained by the way services are traditionally structured and organised.

Rationale: General practice functions within a wider system of healthcare. Services provided outside of general practice will have a bearing on what is provided inside. Collaborative working across sectors is made difficult due to separate funding, the local organisation of care and contractual requirements.

These aims and propositions were based upon my knowledge and experience of health services as well as the theory and practice of service provision contained within the literature. These aims and propositions helped to inform and scope the research design.

3.2 Research Paradigm

The ‘standard view’ of science stems from the philosophical paradigm known as positivism and although its dominance within the research community has been significantly undermined over the last 50 years, it continues to be favoured by a significant number of contemporary scientists. Researchers working within this paradigm suggest that ‘facts’ can only be known through direct experience or observation, that the knower is objective in relation to the known and that the results are generalisable. Within this received view, the primary aim of all science is to explain. However, positivists do this in a particularly circumscribed way by establishing and reinforcing general laws. Scientists in the positivist tradition typically examine the relationship between 2 events or variables that remain constant over time. To do this necessitates isolating the variables of interest from other possible influences and usually takes the form of an experiment in a ‘closed’ system such as a laboratory. Scientific credibility is attributed by the ongoing consistency in the findings over time, with different scientists ‘objectively’ confirming previous findings with their own observation of results. The idea that different scientists can observe the same reality and objectively interpret what they see has been convincingly refuted (Robson, 2002). It is not just the details of what is observed that constitutes and qualifies the findings, but the perspective and interpretation of the participants, as well as the observer (researcher).

In contrast to the early part of the last century in which a positivist paradigm ensured quantitative approaches dominated scientific and social science research, the latter half saw an increasing interest in qualitative and mixed methods approaches to research. The reasons for this included a growing public scepticism of science and its ability to explain social situations and the realisation that outcomes of scientific inquiry required a more practical application.
(Gomm, Hammersley and Foster, 2009). Building on phenomenology, a ‘new’ paradigm emerged and is described by its characteristics including:

...a commitment to constructivist epistemologies...an emphasis on description rather than explanation, the representation of reality through the eyes of the participants, the importance of viewing the meaning of experience and behaviour in context and in its full complexity, a view of the scientific process as generating working hypotheses rather than immutable empirical facts, an attitude towards theorizing from the data rather than a priori theory... (Henwood and Pidgeon, 1993;p16).

Social constructivists propose that the social world is a negotiated and constructed interpretation of the world we live in. Understanding is derived from inter-subjectivity based on common experiences and a shared history (Berger and Luckman, 1966). Language and conversation (symbolism) provide the domain in which inter-subjective meaning is derived and through which reality is constructed and perpetuated (Ibid). Constructivists emphasize reality as socially constructed; reality is not the truth waiting to be discovered but is constituted by multiple social constructions of understanding and knowledge. As such, all research is interpretive (Denzin and Lincoln, 2008) and is dependent upon the researcher’s beliefs about the world and how the world should be understood and studied. The researcher and the research participants work together in constructing the ‘reality’ of the situation, with the role of the researcher being explicit. What the researcher sees and observes and how this is interpreted, will depend upon their own history, beliefs and prior interpretive framework as well as their interactions with participants and the context in which the research takes place (Charmaz, 2002). Similarly, the way the empirical data is generated and collected also has a part in determining how a given reality is understood. Multiple perspectives are only realised during the research, preventing the researcher from fully developing their research questions in advance of the study (Robson, 2002). Given the focus of the research and the associated complexity, a qualitative approach was chosen as it was felt that this would provide a richness of data with which to reflect the different experiences and perspectives of participants involved in general practice.

3.3 Choice of Research Methods

3.3.1 Qualitative or Quantitative research

Fundamental to the constructivist or interpretive approach to inquiry is to ensure the study is conducted within its natural context, where the choice of methods are designed to reflect the complexities of the situation holistically. Whilst quantitative methods have been used in such studies, it is much more common to use qualitative ones (Denzin and Lincoln, 2008). Qualitative and quantitative research are often positioned as polar opposites and in tension with each other (Henwood and Pidgeon, 1993); with quantitative strategies involving measuring and
numerically analysing data, and qualitative approaches focused on non-numerical inquiry. However, in practice, the differences between the two approaches are more generally considered to be a matter of gradation (Creswell, 2009) than of being subject to discrete strategies. To this extent, whilst contemporary research may still be labelled in broad terms as qualitative, quantitative or of mixed methods, these labels often obscure an eclectic mix of philosophical assumptions, research designs and methods.

For many, research methods have traditionally been organized in a hierarchy in which experiments are the best way to establish causal relationships and considered to be representative of ‘hard’ science. In studies where the purpose is to describe, surveys and histories constitute the best method. At the lower end of the hierarchy, the ‘soft’, end of science, case studies are used as an exploratory approach (Yin, 2009). This hierarchy emanates from positivism in which qualitative methods alone are insufficient to establish causal relationships or explanations and that an experiment or a non-experimental quantitative method, such as structural equation modeling, is necessary to confirm causation (Maxwell, 2004). Denzin and Lincoln (1998) effectively challenge this perspective by suggesting that, in contrast to quantitative research, qualitative research is not only concerned with outcomes, but how and why outcomes occur.

Qualitative research is increasingly valued as a legitimate and productive approach to understanding and explaining complex individual or social situations. The purpose of this research is to understand how services are organised for people with multimorbidity in general practice, and why they are configured in this way. Whilst acknowledging the obvious differences in terms of size, socio-demographics and contractual arrangements, each practice is considered to be an individual organisation that subscribes to the philosophy of the National Health Service (NHS). As such, it was expected that individual practices would share general principles of chronic disease management, although the choice and delivery of services would vary according to the individual preferences of each practice. As with most social phenomena, the ‘answer’ will be complex. So whilst the outcomes of care across practices may be comparable, as in a form of care for patients with chronic conditions, the decisions and processes that informed that care may be different. So too will the perspectives of those involved in delivering the care. In choosing a research design, it was clear that a quantitative approach was likely to be too prescriptive and would offer too narrow a focus or only a superficial level of data and understanding.

### 3.4 Case study

#### 3.4.1 Case or ethnography

In deciding which research approach to use two contenders emerged, case study and ethnography. The distinctions between the two approaches are often confused as in practice there is a degree of overlap. Ethnography is generally used to study culture and case studies
are usually exploratory, typically providing an in-depth account to aid our understanding of a particular phenomenon. Ethnography may also be used for this purpose and suggests, ‘...an intensive, ongoing involvement with individuals functioning in their everyday settings that is akin to, if not always identical with the degree of immersion in a culture attained by anthropologists, who live in the society they study over a period of one or more years’ (Schofield, 2000; p 81). Participant observation is a method often used by ethnographers whereas in case study approaches the researcher is generally a non-participant observer so as not to disrupt or overly influence the normal routines of those being studied. Another key difference between case study and ethnography is the ‘specificity’ and ‘boundedness’ of the case (Stake, 1995). A case study is generally concerned with a particular phenomenon and it is the researcher’s interest in understanding more about this phenomenon and its context that circumscribes the scope of the research. This is done through theory development (Yin, 2009) or a conceptual framework based on the issues of interest (Stake, 1995), prior to the data collection. Ethnographers deliberately avoid constructing propositions before the data collection. The risk with this approach is that the specific interests of the researcher maybe obscured or overlooked in the normal activities of the case. The choice of a case study approach in this research had the potential to optimise an improved understanding of service delivery within general practice compared with other qualitative approaches. The use of propositions informed an inductive matrix framework with which to compare and contrast patterns of data.

The definition of case study varies (Hammersley, 1992) and is further obscured by its use in other disciplines such as medicine and education which has promoted criticisms of being pseudo-scientific (ibid). Despite this, the sustained growth in the use of case study approaches across a range of disciplines suggests it is a useful method for understanding complex situations (Bachor, 2002). Gomm, Hammersley and Foster (2000) suggest case study usually denotes a specific form of inquiry that is distinctive from two other influential forms of social research namely, the experiment and social survey. They use the contrasts between these approaches to delineate the currently accepted definitional boundaries of case study, whilst accepting that these remain ‘fuzzy-edged’ (ibid; p2). Two important and related dimensions of case study approach are: the number of cases included; and the amount of data collected. Hammersley, Gomm and Foster (2000) suggest these are often directly related for instance, generally speaking the less number of cases investigated the larger the volume of data that can be collected.

Yin (1984; p23) states that case study is “an empirical inquiry that investigates a contemporary phenomenon within its real life context: when the boundaries between phenomenon and context are not clearly evident and in which multiple sources of evidence are used”. General practices are not homogenous organisations and vary in size, structure, services delivered and population profile. Even within practices, services will be differentially determined according to policy priorities, practice preferences, financial incentives and resource capacities. In exploring the
way services are delivered and determined in general practice a case study approach will incorporate a number of data sources to provide the level of detail, necessary to provide a ‘thick description’ (Geertz, 1973) of the case. It is from this comprehensive description that the evidence is interpreted and provides the reader with the information necessary to understand the case study findings (Gomm, Hammersley and Foster, 2000). In addition to accommodating multiple data sources, case study analyses also include multiple perspectives and typically seek not just the actors’ perspectives, but relevant collective perspectives and interactions between them (Tellis, 1997). In this way, case studies may give voice to and empower marginalised individuals and groups (ibid). This phenomenon has previously been identified in general practice whereby organizational ‘elites’ unintentionally emerged through the way services were organised to exclude certain individuals and groups from decision making foras (Huby et al, 2008).

Case study is an ‘umbrella’ term which includes a range of approaches across a number of research disciplines. Robert E. Stake (1995) and Robert K. Yin (2009) are widely cited in this field and are often positioned at opposing ends of a methodological spectrum (Table 3.1). Their different perspectives demonstrate the diversity of case study in its application. This research draws heavily on both their approaches.

Table 3.1: Yin and Stake different ends of the spectrum

<table>
<thead>
<tr>
<th></th>
<th>ROBERT YIN</th>
<th>ROBERT STAKE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Assumptions</strong></td>
<td>Postitivist</td>
<td>Interpretist</td>
</tr>
<tr>
<td><strong>Nature of reality</strong></td>
<td>Modernist realist</td>
<td>Post structural constructivist</td>
</tr>
<tr>
<td><strong>Goal</strong></td>
<td>Prediction, laws</td>
<td>Understanding</td>
</tr>
<tr>
<td><strong>Knowledge generation</strong></td>
<td>Time-free, context independent</td>
<td>Time-bounded, context dependent</td>
</tr>
<tr>
<td><strong>View of causality</strong></td>
<td>Existence of real causes</td>
<td>Multiple simultaneous shaping of events</td>
</tr>
<tr>
<td><strong>Research relationships</strong></td>
<td>Separation between researcher and subject</td>
<td>Interactive, cooperative, with researcher being part of the phenomenon under study</td>
</tr>
</tbody>
</table>


Yin states case study should not be considered a methodology and suggests it is more accurately described as an approach or research strategy. Stake (1994:p236) agrees to the extent that “case study is not a methodological choice” and describes a case study as a means through which “a choice of object to be studied” can be decided. The choice of the case is dependent upon factors particular to that case and the potential for it to promote learning about it. ‘Intrinsic’ case studies create interest in themselves and are not identified in response to any
preconceptions the researcher may have, or by any ideas of typicality (Stake, 1994). Many key researchers in the field agree with Stake’s position that case study is not sampling research and that cases are purposively chosen to maximise the learning (Tellis, 1997a). Relatedly, Stake uses the terms “functional specificity” and “bounded system” whereby the focus of the researcher’s interest is on the discrete case and how it presents its own story (Stake, 1995;p237) within a limited time frame, as opposed to identifying what aspects of the case can be related to other cases. From Stake’s perspective, the intention of the research is not primarily ‘veridical representation’, but a means through which to stimulate further reflection and learning about the case, or aspects of it, by the audience (Stake, 1995: p37).

3.4.2. Types of case studies

There are lots of reasons why researchers and evaluators are interested in single cases and unique events, for instance, evaluating organisational performance or inquiries into airplane accidents, however, for those researchers with positivistic leanings, the singular case has little to offer in terms of generalising the findings. Yin (2009) uses multiple cases in a similar way to scientists who repeat the same experiment several times over; aggregated results confirm the theoretical propositions and improve the likelihood of being able to generalise the findings. Stake (1995) indentifies 3 types of case: intrinsic, instrumental and collective. In practice, a single case may be of interest, not because it represents a particular phenomenon or can be used to understand similar cases, but because of what may be learnt from it, there is intrinsic interest in the case itself. Whilst Stake (1995) accepts that some studies require multiple cases to be included, it is clear in his own work that he prefers the intrinsic approach to case study. The intrinsic, instrumental and collective categories of case study are not mutually exclusive. The purpose of this research was to increase our understanding of how general practices organise care for people with multiple conditions. So whilst I have a general interest in understanding how practices’ organise themselves, I have a specific interest in the organisation of general practice as it relates to service provision. This research may therefore be considered as an instrumental case study. Stake (2005) describes an instrumental case study as one that is used to explore a particular phenomenon. Case studies are described as ‘collective’ when a particular phenomenon is compared across a number of instrumental cases. Crowe et al (2011), present a number of healthcare-related case studies in which they reflect on a number of different case study designs. Of relevance here is their study of the introduction of general practitioners with a special interest in 4 primary care organisations within the NHS. Although explicitly a collective case study, it was also instrumental in its focus on a particular professional group within the wider context of workforce redesign (Pinnock et al, 2008). In their study of patients’ non-attendance at diabetic screening clinics in general practice, Lindenmeyer et al (2014) also used a mixed instrumental and collective case study approach.

In this research, the focus on general practice is to discover more about the provision of services for people with multiple chronic conditions. I was interested in the individual case
because I suspected a high degree of variability in the nuances that characterised each practice. I was also interested in the extent to which these nuances were present or absent in similarly configured practices. For this reason, I was keen to compare findings across general practices and consider this inquiry to be both instrumental and collective. Each general practice, individually and collectively was instrumental in providing an insight into how care was organised and delivered in primary care. Using this approach allowed an exploration beyond the single case, however it was not my intention to ‘prove’ generalisability across a number of practices. The organisational autonomy of primary care suggested that no single model of care would be identified across all general practices. Similarly practices were structured differently, so even when practices offered comparable services for a particular condition, the delivery of care was likely to be variable. It was the suspected nuanced similarities and differences within general practice that suggested the case study approach as a suitable methodology for illuminating the complexities inherent in researching this social system of organisation.

3.4.3 Choice of cases - Sampling

The following section on sampling drew extensively on Murphy et al’s Health Technology Assessment: Qualitative Research Methods, additional information regarding sampling can be found in their report (1998). A criticism commonly levied at qualitative research is the lack of generalisability (Guba and Lincoln, 1989). Within quantitative research, generalisability is usually secured through the use of probabilistic sampling and sample to population inference, however, in qualitative research the sample size is typically small and is not amenable to the statistical analysis used in quantitative research. A number of researchers have addressed these criticisms: some suggested that generalisability is not an intended outcome of qualitative research (Schofield, 1990); that learning, in-depth about individual cases can be intrinsically useful in itself (Stake, 1995); and that the nuances of complex social phenomena are not easily explained through statistical means (Geertz, 1973). However, more recently an increasing number of researchers have accepted that whilst there may be occasions when a single unit or case may be of interest, for instance in evaluation research, most commissioners and providers of qualitative research are interested in the wider application of research. In circumstances where research may be applicable to other areas Murphy et. al (1998) suggest the sampling strategy becomes ‘crucial’ and grouped an number of approaches under 4 headings:

- Probability sampling (empirical generalisation)
- Opportunistic sampling (not concerned with generalisation)
- Non-random sampling (empirical generalisation)
- Theoretical sampling (theoretical generalization)

(Adapted from: Murphy, Dingwall et al, 1998:p90)

There is some ongoing debate amongst researchers about the suitability of probability sampling in qualitative research and whilst generally it is thought unsuitable, the reasons for this tend to
fall into 2 camps. On the one hand, there are those who maintain probability sampling is fundamentally unsuited to qualitative research (Lincoln and Guba, 1985) and on the other those who do not object in principle to its use, but do not find it useful in practice (Silverman, 1998). Many leading case study researchers, including Stake, Yin and Feagin, agree that selecting cases by sampling particular attributes is not a high priority (Tellis, 1997). The choice of cases is often based on the need to maximize the information gathered in a predetermined time frame Stake (1995; p.4). In some instances the choice of case will be as basic as including those cases ‘willing to be involved’. In some instances a single, ‘typical’ or ‘unusual’ case may suffice; an unusual case will often identify issues that are overlooked or less obvious in more typical cases. Stake (1995) and Yin (2009) suggest that cases should initially be chosen on the likelihood that they will maximise learning; given the research objectives, which cases are likely to improve our understanding or best illuminate the issues. They also add some practical advice about choosing cases that are easily accessible and ‘hospitable’. Given the small number of cases involved, Stake (1995) cautions against attempts at choosing representative cases and along with other case study researchers (Yin, 2009 and Kemmis, 1980) have contributed to the ‘epistemology of the particular’, whereby what we know about the singular case is enhanced by how like or unlike it is to other cases we know (Denzin and Lincoln, 2008; p134).

Sampling in case study is not random and a number of strategies can be employed (Miles and Hubermann, 1994). Some researchers favour those cases indicative of their parent group (Gomm, Hammersley and Foster, 2000) whilst others prefer the ‘atypical’ or ‘unique’ cases (Crowe et al, 2011). For the purposes of this research, it was unknown which cases or practices were unusual in their provision of services. In addition, it was anticipated that many practices would refuse to participate due to workload pressures. It was decided in the first instance to employ a random, scatter approach in which invitation letters were sent to 40 practices in the region. Initially it was intended to select a case from the north, central and south of the city, with a final one from any of the 3 areas. However, in reality recruitment was very difficult, with negative or no responses from the initial invitations. Consequently, an opportunistic sampling technique was employed whereby practices involved in previous research projects were approached. This research was part of a wider national project aimed at increasing the collaborative working between academic institutions and clinical practice (Greater Manchester Collaboration for Leadership, Applied Health, Research and Care – GM-CLAHRC). Numerous general practices in the Greater Manchester area were already involved in various arms of the larger study and potential participants for this research were indentified and approached individually by the researcher.

As with all social research projects, the theoretical design can be compromised by a practical reality in which the seemingly large pool of potential participants is severely curtailed by recruitment difficulties. I had anticipated including a number of demographically diverse
practices for instance, one with a larger than average elderly population in a relatively affluent suburb and one whose registered population was more economically deprived. Although disappointing, the difficulties associated with recruitment in general practice is internationally recognised (Herber, Schnepp, & Rieger, 2009; Williamson et al, 2007; Veitch et al, 2001).

One of the disadvantages of not being able to choose from a larger sample pool of practices are the limitations this places on the applicability of the research findings. All the practices were situated in and around Manchester, in urban areas and within one health economy. It cannot be said to be a representative sample of general practice or even of those practices based in urban areas. However the main purpose of this study was not to generalise across NHS practices, but to identify and explore factors that influence service provision in those practices studied and to highlight similarities and differences across the 4 practices included in this research.

3.4.4 Sampling within the study
The fieldwork in each practice was undertaken sequentially, this is advised when studying a number of cases (Yin, 2009). Four weeks was provisionally allotted to each practice. The time spent in each practice varied, to some extent this was deliberate in terms of reaching ‘saturation point’ of emerging themes and data, but also on the access afforded by the practice to meetings and the availability of practice staff to be interviewed. Initially, the intention was to observe a number of clinical sessions in each practice, however in the two (half-day sessions) that were observed in practice 1, there was little reference the wider organisation of care during these sessions. A decision was made at this point to focus observations on the non-clinical staff as most of the administrative and organizational aspects of service provision around chronic care seemed to evolve around them. In each practice the administrative staff outnumbered the clinical staff and obviously undertook a large amount of activity, some of which was directly related to clinical care (such as prescription administration). This aspect of general practice is under reported in the literature and I was keen to know how their activities influenced and impacted on service delivery. An advantage of not observing clinical consultations was being able to spend more time in areas where most of the organising of chronic care occurred. Those nurses and doctors interviewed confirmed that most referrals to other services occurred through ‘Harmoni’ (a referrals ‘clearing house’) and the administrative staff managed most these referrals. In not observing the clinical consultations there was a possibility that some doctors and nurses did involve themselves in the wider organisation of care and that these episodes were missed. However, in discussions with various practice staff, there was often little time in general practice to do other than address the patient’s presenting complaint or complete the chronic disease template. Time not spent interviewing staff and patients was spent observing administrative activities, either in the practice reception or the ‘back office’ and attending practice meetings. Detailed notes were made regarding what individual staff members spent their time doing and any interruptions to their routines by either, interactions with other staff members or requests from patients. Staff were opportunistically asked to explain their roles and
responsibilities and to describe how they managed particular situations, what they liked about their role and some of the frustrations they encountered. Detailed notes were made and added to the analysis framework.

Practice 1 was the only participating practice in which the practice manager was the initial point of contact for the research. This was because a researcher colleague had suggested that she was keen to encourage researchers into the practice and had a degree of influence over the medical staff. Approaches made to other practice managers were all rebuffed or ignored. In the other 3 practices, a GP was initially approached. In practice 1, access to meetings and medical staff was mainly through the practice manager, whose role included shielding the medical staff from unwarranted interruptions. The chance of impromptu interactions with the GPs in this practice was limited as they entered the practice through a separate door to the reception area and none of staff appeared to use the coffee room on a regular basis. Requests for interviews with the staff were made initially through the practice manager and whilst all the administrative staff who were asked, agreed to be interviewed, one of the GPs refused. The disadvantage of not being able to approach the GPs directly was that I could not explore the reasons why the GP refused and could perhaps have reassured him regarding the purpose of the research.

The intention was to interview as many of the practice staff as possible in each practice. Apart from times when the practice was closed, Wednesday afternoons and bank holidays, up to 5 hours each day over 4 weeks was spent in this practice (a more detailed breakdown of the time spent in each practice can be found in table 3.2). A similar amount of time was spent in practice 2, where most of the observation part of the study took place in the coffee room which was an extension of the reception area. The advantage of the layout in this practice was that all the staff came to the coffee room to make drinks and sometimes to eat their lunch and they would often asked questions about the research. I often took these opportunities to ask the staff if they would be prepared to be interviewed. The profile of participants from the first practice was used as a template to guide the sampling of staff in subsequent practices. The purpose of this ‘matching’ was an attempt to ‘balance’ individual perspectives.

The availability of the GPs was restricted in all the practices, but particularly in practices 1, 3, 4. In practices 1 and 3, this was because the fieldwork spanned the Easter and Christmas holidays whereby a number of regular staff were away, increasing the workload of those remaining GPs and making it difficult for them to spare the time to be interviewed. In practice 4, the pool of doctors was much smaller with only one full-time and 2 part-time GPs, one of whom was on maternity leave. Only the lead GP in this practice agreed to be interviewed. This practice was much smaller than the others in terms of staff and patient numbers and only 14 hours were spent in this practice. They did not have staff meetings within the practice and because of their appointment system, which mainly involved telephone consultations, there were very few if any patients waiting at any one time. Disruptions to the practice staff’s routines were visibly less in
this practice. Similarly, during the time spent in this practice, very few patients visited the practice as the doctor would do most of the consultations over the telephone. The time spent in practice 3 was also less than intended, partly due its closure during bank holidays, but also because by this time I was more familiar with the diurnal routines in the practices, which were generally similar in terms of how they were organised and their administrative systems. Patients were chosen by reviewing the heart failure list and identifying patients with one or more chronic condition. This short list was then reviewed by the medical or nursing staff to determine those patients who were considered suitable to invite to participate in the research. Those patients excluded were typically those who: were acutely unwell; recently bereaved; or cognitively impaired. All those who responded within the time frame in practice 1 were included in the study and subsequently the aim was to recruit 4 patients in each practice.

Despite any prior intentions, the sampling in this study was, necessarily, opportunistic. There is some criticism of this approach in the literature (Jupp, 2006), however, Hammersley and Atkinson (1995) state that it is not unusual to find opportunism as the basis for sampling decisions, particularly amongst professionals such as nurses and doctors, where access is often difficult. Indeed, in some instances, there is no scope for anything other than opportunistic sampling particularly in areas where the subjects are known to be reluctant to participate in research (Bowler, 1997).

This research includes 4 general practices, which are studied sequentially. It draws upon Stake's (1995) work in being both an instrumental and collective case study whereby the organisation of services represents the instrumental aspect and the 4 practices the collective aspect of the study. The case, in this research, is therefore defined as, ‘the services for people with multiple chronic conditions, including heart failure, in general practice’. Whilst the unit of analysis is often ‘the case’ in this type of research, Yin (2003) suggests the depth of analyses may be broadened by including a number sub-units. Initially the intention was to compare services purely at a practice level, however, early in the fieldwork it became clear that the organisation of care was similar across the 4 practices and that the main variations in provision occurred at an individual practitioner level rather than at an organizational level. Similarly, the external influences on service provision were shared by all the practices. The data collection was based around collating evidence which would help to explain the how and why of service provision in general practice. It became more focused as subsequent practices reinforced (or contradicted) emerging themes.

3.5 Methods of data collection and generation
In the qualitative tradition, knowledge and evidence are not just out there waiting to be picked up independent of the researcher. Mason (1996) provides a useful delineation between data sources and methods of data generation and suggests that researchers identify data sources and then decide which methods could be employed to optimise data generation from these
sources. Methods are chosen in relation to the research questions. In this research, the intention was to use interviews, observation and documentary analysis. Whilst interviews are a favourite method in qualitative research as a means of producing knowledge and evidence, they are dependent upon the interpretation and understanding of the interviewer/researcher. Using other methods of data collection provides a means through which the case is considered at different times, in different dimensions or in circumstances where individuals interact differently, interpretations can be reinforced or contradicted (Stake, 1995). Data source triangulation improves the validity of case study research by providing a mechanism through which single source data interpretation may be reinforced or challenged. A large part of the data were collected through individual interviews with staff and patients and supplemented (or triangulated) through observing meetings and practice activity, both formally and informally.

A practical issue previously alluded to, which impinged on the scope of the data collection, was the practices’ workload, particularly the doctors. Most of the interviews occurred in the doctors’ ‘lunch hour’ or on their half-day off. During the fieldwork, Easter and Christmas holidays meant a number of the GPs were away, making it more difficult for the remaining doctors to find the time to agree to an interview. In each practice, as far as possible, a similar cross-section of potential participants were approached, the purpose of which was to explore the beliefs and experiences of different groups of staff and patients across the practices. Practice 4 was notably different as it was a new and private practice that was building up its registered population. There were no practice meetings to observe. In addition, the acting practice manager did not feel she had the authority to agree access to their patients and although she did send a number of requests to the company that owned the practice, permission to approach the patients was not granted. Therefore no patients were interviewed from this practice.

3.5.1 Semi-structured interviews

The purpose of case study is to learn about social situations through the descriptions and perspectives of others. As the case is viewed differently by different people, these multiple perspectives need to be exposed and harnessed. Capturing, illustrating and preserving the complexities inherent in social inquiry is a constant challenge to the researcher. Stake (1995) suggests this is best achieved through methods that privilege participant perspectives and do not involve the researcher, however unconsciously, from steering the data towards confirming a priori theories, or even by the researcher asking questions or undertaking interviews. Case study is ‘non-interventive’ and the researcher should not disrupt the natural flow of events. If the data can be secured through the examination of documents and observations, then interviews should be avoided (Stake, 1995: p12). Having said this, interviewing is one of the most powerful means through which to understand social situations (Denzin and Lincoln, 1998; p47) and continues to be used by many researchers, including Stake. Interviews can be time consuming which may lead to access difficulties, even when access is agreed there can be difficulties in guiding respondents to the issues of interest and keeping them there. Where the
knowledge and evidence informing understanding is seen as situational, contextual and interactional, interviewing may be inevitable but will require a particular approach (Mason, 1996). In contrast to surveys which include a type of interviewing, within qualitative research, interviewing tends to be less structured and may be considered as ‘guided conversations’ (Yin, 2009; p106) or a “conversation with a purpose” (Burgess, 1984:p102).

In response to the increasing awareness of the controlling position of the interviewer, postmodern researchers focus on the relationship between the researcher and the participant. Feminists in particular criticise traditional approaches to interviewing in which the researcher remains dominant and distinct from the object of study. They see the interactive relationship between the researcher and interviewee as methodologically important in reducing the power differential and thereby realising a wider range of responses from participants (Reinharz, 1992, p22). Appreciating the different perspectives of respondents allows the researcher to adjust their approach to individual participants, promoting a more equal relationship within the interview and eliciting more personal accounts of events (Stanley and Wise, 1990). Interviewing has the potential to generate rich data and meeting face to face is considered useful if the purpose of the inquiry is to gain insight and understanding (Gillman, 2000). The researcher can observe and respond to non-verbal cues and often has the opportunity to pause, probe or prompt as appropriate (Ritchie and Lewis, 2003). A potential problem with using interviews is what Gomm (2004) describes as the demand characteristics, whereby the participants respond in accordance with what they think the situation requires. To avoid this, it is important for the interviewer to be clear at the start, what the purpose of the interview is and what topics will be broached. Prior to each interview I had a telephone conversation with each of the participants reiterating that the study was not concerned with individual doctors or nurses, but more about their experience of their care in general. Patients were given the choice to be interviewed in their home or at the surgery, all but one patient chose their home. This possibly changed the dynamic of the interview shifting a degree of control away from the ‘dominant’ researcher back to the participants.

Given my experience as a nurse, I was comfortable communicating with people from diverse backgrounds. During interviews I identified visual and verbal cues that suggested some participants had not fully understood the questions, or were perhaps finding it difficult to articulate their response. Most of the patients were elderly and some had impaired hearing and/or vision. Whilst recognizing that patients share common role identities in terms of being patients, I could appreciate other factors, such as socio-demographic ones, that could affect the patients’ understanding and responses to standardised questions. Questions were regularly rephrased to allow for this. Within case studies, respondents are each considered to have a unique perspective and should therefore not be restricted to a rigid structured format (Stake, 1995). For this reason, semi-structured interviews were chosen as a method in this research to allow for a degree of flexibility and inter-subjectivity. Broad questions around the issues of
interest were devised, using language the patient participants were likely understand. The
respondents were encouraged to share their own understanding of care services, both in terms
of how they were provided and how they could be improved. Subsequent interview questions
were sometimes modified in relation to the emerging themes from the patient narratives.

Interviews with practice staff were also semi-structured around broad issues and participants
were encouraged to develop their responses beyond the researcher defined issues where
appropriate. Although there was some overlap between my understanding of the issues and
those of the participants, I was keen to explore their understanding of how the practice worked
and how they made sense of this. In order to increase the likelihood that the appropriate data
were collected, i.e. to address the research questions, some broad topic guides were developed
(appendices 12 and 13) from an anticipated provider and service user perspective and then
populated with some potential data sources and themes. The intention was to explore in detail
the patient and provider perspectives and look for areas of contrast and convergence in how the
study participants experienced services and how they made sense of them. The topic guides
informed the propositions and were useful in circumscribing the breadth of the data collection to
ensure the research was manageable given the time constraints. These were amended
throughout the data collection in response to the interviewees and the stage of the research.

An obvious aim of interviewing is for the researcher to elicit the evidence to answer the research
questions. In complex social situations, there may be reasons why respondents do not want to
provide that information. Stake (1995) suggests that potential respondents should be identified,
first by their knowledge of the issues and secondly by their willingness to share it. People
generally like to portray themselves in a positive light and may be less candid in discussing
aspects of their work that may be perceived negatively by others. Similarly, most patients are
grateful for the care provided by their doctors and nurses and would not wish to divulge
anything that others may perceive as critical. The focus of this research was not the
performance of individual doctors or nurses, but the wider context which may constrain or inhibit
service provision. This was emphasised by the researcher throughout the study as well as the
commitment to anonymity. Regular reassurances were given to participants to reiterate the
general focus of the research. In general, the study participants appeared candid in their
response to questions, to the extent that, as you might expect, most gave mixed reviews about
services and their experiences of them. All participants were made aware of a post fieldwork
report that could be requested should they be interested.

Nonverbal communication in interviews
Non-verbal forms of communication are an important consideration within interviews as they can
inform and set the tone (Denzin and Lincoln, 1998):
‘Proxemic communication is the use of interpersonal space to communicate attitudes, kinesic communication includes any body movements or postures and paralinguistic communication includes all the variations in volume pitch and quality of voice’ (Gorden, 1980:p.335).

Field notes were recorded during and shortly after each interview and were used to note non-verbal communication and any observations and experiences of the interview. Any preliminary interpretations of the interview were also recorded at this time.

The intention was to include a selection of documents that practice staff used to manage chronic conditions, however whilst practices 1-3 all had bookshelves with a selection of national and professional guidelines, the extent to which they used and referred to them was variable. It was anticipated prior to the research that chronic care services would be based on a number of policies, guidelines, national service frameworks, patient pathways and individual care plans. This was not the case and although the nurses in all 4 practices confirmed the ‘general’ use of NICE guidelines, they were not adopted in any consistent way. There were no documents which described the practices’ management of patients with particular chronic conditions, however, a couple of the practices were in the process of devising some. This was, at least in part, due to the pending practice reaccreditation scheme which suggested that patient pathways and clinical guidelines used by the practice should be readily available for reference by the practice staff. Consequently, no documents were collected from any of the practices.

3.5.2 Non-participant observation

Qualitative observation is often considered too subjective and therefore difficult to validate according to the methodological literature (Fontana and Frey, 2005). Observation techniques have a long tradition within the social sciences and usually involve the researcher immersing themselves in the situation of study. Whilst researcher influence on participants cannot be completely avoided, compared to other methods, the unobtrusive observer may go a long way towards diminishing it (Denzin and Lincoln, 1998). The observational method provides the researcher with the opportunity to witness behaviours, interactions, connections and correlations as and when they occur. A particular strength of using observation as a method is the unobtrusiveness and inconspicuousness of it. It does not disrupt the participants’ routines and in many instances has proved the only way to study particular behaviours in some settings (Denzin and Lincoln, 1998). Stake reiterates the importance of noninterventionism within case study research where the researcher is required to actively ensure that any disruption to the normal activities of actors under study is minimised. The emphasis on noninterventionism within observational methods reduces the ‘observer effect’ inherent within all research observations.
During this research, observational settings were informed by the practice staff’s advice on where care for patients is determined, for example during patient/professional consultations and in practice meetings. In addition, informal and unofficial settings, such as the reception desk and coffee room were also deemed appropriate by the practice staff. Observing staff and patients in the different activities and scenarios familiar to general practice provided additional perspectives on which to interpret the case. Detailed field notes were an additional data source. The evolving research issues were reinforced or challenged through converging or diverging interpretations and understandings of what was going on. Although non-participant observation infers a passive approach, all observation requires the researcher to actively attest to the phenomena under study at the time it occurs without influencing or interfering with the flow of events (Denzin and Lincoln, 1998).

Table 3.2 includes the 4 study practices and the cross section of interviews and observation of activity that occurred in each practice. In addition, there were a number of impromptu conversations, for instance during coffee breaks or at lunchtime, when staff would chat (or moan) about their work and ask questions about the research. At these moments, the staff tended to be less guarded or ‘rehearsed’ in their response to questions.
### Table 3.2: Fieldwork Schedule (April 2011-January 2012)

<table>
<thead>
<tr>
<th>Practice 1</th>
<th>Hours</th>
<th>Practice 2</th>
<th>Hours</th>
<th>Practice 3</th>
<th>Hours</th>
<th>Practice 4</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 partner</td>
<td>1.5</td>
<td>3 partners</td>
<td>3.5</td>
<td>Lead GP</td>
<td>1.5</td>
<td>Lead GP (salaried)</td>
<td>2</td>
</tr>
<tr>
<td>1 salaried GP</td>
<td>1.5</td>
<td>1 GP training</td>
<td>1.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 practice nurse (included 1 clinic)</td>
<td></td>
<td>2 practice nurses</td>
<td>5</td>
<td>2 practice nurses</td>
<td>2.5</td>
<td>1 practice nurse</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 assistant practitioner (included clinic)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Deputy Manager</td>
<td>1.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Practice manager</td>
<td>1</td>
<td>Practice Manager</td>
<td>2</td>
<td>Practice Manager</td>
<td>1</td>
<td>Acting practice manager</td>
<td>2</td>
</tr>
<tr>
<td>Secretary</td>
<td>1</td>
<td>Secretary</td>
<td>2</td>
<td>2 secretaries</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 patients</td>
<td>6</td>
<td>5 patients</td>
<td>8</td>
<td>4 patients</td>
<td>4.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heart failure nurse</td>
<td>2</td>
<td>Heart failure nurse</td>
<td>2</td>
<td>2 Heart failure nurses</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AP (south)</td>
<td></td>
<td>AP (central)</td>
<td>2.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observations</td>
<td></td>
<td>Observations</td>
<td>15.5</td>
<td>Observations</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PCHT x 2 Practice meeting (all staff) Sponsored lunch meeting Admin staff, reception staff Practice manager meeting Reception, admin activity</td>
<td>3</td>
<td>1.5</td>
<td>1</td>
<td>1.5</td>
<td>1.5</td>
<td>50</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>PCHT x 2 Practice meeting (admin) Reception, administrative activity</td>
<td></td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Practice meeting (clinical staff, PM), practice meeting (clinical and admin) Nurses meeting Reception, administrative activity</td>
<td></td>
<td>2</td>
<td>2</td>
<td>1.5</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reception staff/admin staff Reception, administrative activity</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Total time</td>
<td>75</td>
<td>Total time</td>
<td>86</td>
<td>Total time</td>
<td>45.5</td>
<td>Total time</td>
<td>14</td>
</tr>
</tbody>
</table>
3.6 Ethics

Ethical approval for this research was granted by the NHS National Research Ethics Committee. Additional approval was secured from all the relevant Primary Care Trusts through the NHS Salford Research and Development group. Ethics and governance approval provided a strong starting point from which to ensure the principles included in the proposal were ethical, however this did not prevent me from continually reflecting on my practice throughout the project.

3.6.1 Ethical pitfalls

Silverman (2006; p317) suggests there are a number of ethical pitfalls that are commonly associated with qualitative research: exploitation; deception; inappropriate exposure/non-exposure of identities; engaging ‘unsavoury groups; and committing to ‘dubious bargains’. This research did not include engaging any ‘questionable’ groups however, the relevant pitfalls that may be ascribed to this research are addressed in turn below:

Exploitation

Prior to the 1970s, unethical practices in social and medical practices were common and whilst widespread regulations have significantly reduced the incidence, a high profile case recently in UK suggested that unethical projects can still occur (Sanchez and Rose, 2010). Potential patient participants were initially identified from those with two or more chronic conditions who were registered on each of the practice’s heart failure register. A doctor or practice nurse would be asked to scrutinize the list to exclude any ‘unsuitable’ patients. Exclusions were generally associated with acute illness episodes, those at an advanced or terminal stage of their condition or those with cognitive problems. Following the receipt of written documentation regarding the study, potential participants were invited to post back a ‘permission to contact’ sheet. I was conscious that, given the focus of the research, many of the potential participants were older and lived alone. This approach to recruitment prevented a more scattered and pressured approach of telephoning people at random. Given their potential vulnerability, I stated in the participant information documents that their involvement was entirely voluntary and that they should discuss the study with their family and/or friends. Included in the research approval was the presence of a carer or family member during the interview, if the participant preferred. Appointments were made at the participant’s convenience, at a location of their choice. All but one patient participant wanted to be interviewed at home, this was to prevent any unnecessary travel for the patients and to facilitate a candid response which may not have been possible if patients were interviewed at their GP surgery. Prior to the written consent being documented, I explained again who I was and the purpose of the research and, if they still wanted to participate in the study, what this would entail. Participants were reassured that their involvement would not affect their medical care and that the research was about how their care was organized rather than a critique of individual practice staff. Questions were encouraged and further explanations were given as necessary.
As a nurse with several years of experience working in the community with older, and sometimes vulnerable people, I felt I could empathise (and sympathise) with many of the participants and the issues that they raised. Questions were phrased in terms the participants were likely to understand and clarification was provided as required. An ‘opening’ question was used whereby the participant was asked to explain a little about their health and well being. This was intended to reassure the participant and to help them relax.

Informed consent – staff
Prior to starting the field work, I gave each practice an information sheet regarding the study. In 3 of the 4 practices I gave a short presentation on the study and encouraged any questions. Typically, there were no administrative staff present apart from the practice manager. In practices 1-3, provisional agreement to the initial approach for permission to conduct the study in their practice, was given, either through the practice manager, or a GP, although all said they would need to ‘discuss this with the partners’. The GP in the 4th practice was happy to agree on behalf of everyone else. In starting the fieldwork, it was clear that not all the staff were aware of the study. Even amongst those that were, there was some distrust about what I was actually doing there and one GP in the first practice refused to allow me to attend particular meetings because he did not want me to think that the practice didn’t know what they were doing regarding the new QoF contract. Consequently, I spent up to a week in each practice, observing routines and getting to know the staff and explaining the study. In all the meetings I attended I introduced myself and my purpose for being there. This gave the staff the opportunity to get to know me better and view me less as an outsider. After a few days in each practice I would opportunistically approach different members of staff and individually ask if they would be willing to be interviewed. With assurances given regarding confidentiality, each participant was encouraged to ask any questions before signing a consent form.

Prior to the start of meetings I attended, consent was implicitly sought by explaining the study and reassuring the delegates that this was not about individuals and their particular activity, but more about how services ‘fitted together’. I could appreciate that more junior staff and those attending from outside the practice, were not really in a position to object given the support for my project by the GPs. But from what I already knew about healthcare, these meetings mainly proceeded as I had expected and I did not feel participants were in anyway acting differently because I was present. Indeed, in one practice meeting, the rudeness of individuals talking over each other and interrupting, suggested that my presence was unobtrusive.

Privacy and confidentiality
Silverman’s (2006) potential pitfalls include inappropriate exposure or non-exposure of participants. If candid responses to questions are to be elicited, it is important that participants are reassured that all the data will be anonymised and unattributable and that participating general practices cannot be identified in any publications relating to this research. All
participants were offered the opportunity to receive a summary of the research in due time, however, no one took up this offer. In a couple of instances, patient participants provided quite negative accounts of their experience of general practice, particularly in relation to the organization of, as opposed to the clinical aspects of care. When I offered to feed these comments back to the practice, protecting their identity, they refused. One participant thought ‘there would be no point’, the other did not want to ‘make things worse’.

Data security
A university computer was used for the duration of the study. All the interview recordings were transcribed personally and all the data was anonymised. When not in use the computer was stored in a locked office. Data information was used and stored with strict adherence to the Data Protection Act (1998). Following the completion of the research, all associated records remain the property of Manchester Business School and will be retained in accordance with the University of Manchester’s Code of Good Research Practice (University of Manchester, 2014). The data will be available should it be necessary to access it for a retrospective audit. The research results will be securely archived for a minimum period of 5 years following related publication, unless professional/local/ethical or sponsorship guidance requires otherwise. Fieldwork data will be stored within secure units in Manchester Business School for 5 years post publication of related material. The principal researcher will have access to this data. If the researcher leaves the University within the 5 year period, responsibility for it will be transferred to the appropriate division within the School.

Ethical issues in observation
The observational data collection was overt and undertaken with the implicit consent of the staff and patients involved. However this does not absolve the researcher of further considerations regarding ethical matters. It is recognised that gaining consent in certain complex and multi-faceted situations can be difficult (Mason, 1996). In each practice, the staff were made aware of my purpose and prior to each meeting I was invited to introduce myself and explain the purpose of my research. I was conscious that whilst in each of the practices access was agreed by the doctors and/or the practice manager, in multidisciplinary meetings, or situations which included professionals from the community or the PCT, consent was assumed. Regular reassurance was given to participants regarding their inclusion in the study and opportunity was given for them to ask questions or voice reservations. In practice, during the fieldwork nearly all of those involved appeared very willing to share their thoughts and experiences and were very generous in taking the time to explain how things were.

‘Dubious bargains’
Implicit in the use of informed consent is that participation should be voluntary and people should not feel pressurized by the researcher to be involved. In some instances, financial incentives have, and are, used to boost involvement in research and in some contexts potential
participants may come to expect this (Silverman, 2006). Given my sponsorship by the GM-CLARHC, on initial contact with practices, some did ask about reimbursement for the GPs' time. As there was no funding available to pay any participants, those who did agree to be interviewed did so entirely voluntarily. Many in fact seemed to enjoy the discussions and many, patients in particular, talked way beyond the allotted interview schedule. Consequently, I think individuals and practices agreed for genuine reasons such as they believed in the importance and relevance of the research (or research in general) and they had some thoughts they wanted and were willing to share on the subject.

3.7 The researcher's role and reflexivity

The role of the researcher is ongoing and interpretive (Stake, 1995; p43). In studying organisations, qualitative researchers are typically concerned with observing, understanding and specifying the individual and shared characteristics of these socially configured groupings. The case study researcher is empathetic in their interpretation and representation of participant perspectives and attempts to preserve the multiple realities evident within the case study, particularly any contradictory ones. However, as much as the participants are involved in constructing their realities, the researcher's interpretation will invariably dominate the case analyses (Stake, 1995; p12). The qualitative researcher typically understands their work to be interactive, shaped by their identities as constituted by their own history, social class, gender, culture and ethnicity, and in relation to the study participants’ perspectives. Similar to ‘sensemaking’ (Weick, 1995) Stake’s researcher roles are determined by their multiple identities and their interaction with their environment, in terms of what cues are recognised as important, and how these are ‘made sense’ of.

Having worked as a community matron, I had some prior knowledge of general practice and the management of chronic conditions. However, as an ‘outsider’ to general practice I had a partial view which lacked detail and ‘thick description’. As a nurse, I had a degree of ‘insider’ status, particularly with the nurses and I could identify with their frustrations of constantly working under pressure and the need to prioritise and to fit a huge workload into a fixed time. One of the doctors (initially) appeared threatened by my role as a researcher and was worried that I was going to report negative findings back to the PCT. Consequently, I was asked not to attend a meeting. The longer I spent at the practice, the more reassured the doctor appeared to the extent that I was invited to attend all subsequent meetings. In all of the practices I spent time just observing the reception and backroom staff and their interaction with each other and the clinical staff. I wrote a lot of notes to reflect who did what and why and how this contributed to (or detracted from) the overall workings of the practice. In analyzing the data I triangulated what I had observed and noted with details of how the staff explained their activities, whilst continually revisiting and adjusting my assumptions and understanding of how things actually work in light of the emergent findings.
Research is not value free, data and interpretations are constructed (Denzin and Lincoln, 1998; p29) through the researcher’s interaction with the phenomena and as a result can vary diversely depending on the researcher and the context. Stake suggests multiple researcher roles are used and the researcher, not always consciously, decides which ones and to what extent they will be used (Table 3.3). Of these roles the interpreter and gatherer of interpretations are considered central, as the purpose of research is not to find universal realities, but to construct a clearer and more sophisticated reality that can endure ‘disciplined scepticism’ (Stake, 1995; p99).

Table 3.3: Fieldwork implications of 6 common case researcher roles (Stake, 1995; p105)

<table>
<thead>
<tr>
<th>Teacher Role</th>
<th>Advocate Role</th>
<th>Evaluator Role</th>
<th>Biography Role</th>
<th>Theorist Role</th>
<th>Interpreter Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learn what the readers (or other audiences) need to know</td>
<td>Discover the best arguments against your assertions and provide data to counter them</td>
<td>Give careful attention to the case’s merits and shortcomings</td>
<td>The author should strive to convey the complexities of individuals and avoid stereotyping</td>
<td>Use the uniqueness of the case to illustrate ways in which each case is likely to be complex not what cases have in common</td>
<td>Researcher is agent of new knowledge new interpretation but also new illusion. May initiate comprehension in the reader beyond their own</td>
</tr>
</tbody>
</table>

As the researcher, my role required active reflexivity or critical self-scrutiny (Mason, 1996; p6) to be able to identify and understand my roles in the process of generating the research data. Providing the reader with the roles adopted by the situated researcher, helps them to understand how the conclusions of the research were reached (Stake, 1995). My role was a variable mix of some of Stake’s researcher roles: within the teacher role, one of the aims of the research is to establish the facilitators and barriers to effective service provision. This contribution to knowledge will help to support the successful implementation of new services; the evaluator role suggests that definitive polarized evaluations are unrealistic and that, more likely, the researcher will find a balance between the aspects of organisations that work well in a particular situation and others that do not. Within qualitative research it is important to convey the complexity of social situations and whilst individuals occupy similar occupational roles, they often behave in these roles differently at different times; as agents of new knowledge, researchers provide an interpretation of their data and because this is often a synthesis of multiple perspectives can offer new insights for consumers of their research. Enacting these various researcher roles requires a reflexive approach through the research processes.
Reflexivity in research relates to knowledge construction and in particular, the affect the researcher has on the research processes and the effects of the research processes on the researcher:

A researcher's background and position will affect what they choose to investigate, the angle of investigation, the methods judged most adequate for this purpose, the findings considered most appropriate, and the framing and communication of conclusions (Malterud, 2001, p484).

My experience as a nurse working in different organisations and areas of health care, means that I have a certain amount of knowledge and experience in this area with associated beliefs and values. To some commentators, my background in healthcare may initiate claims of subjectivity and bias, which is deemed by some researchers to detract from the validity of research. However, Malterud (2001:p484) suggests that, [p]reconceptions are not the same as bias, unless the researcher fails to mention them’. My preconceptions are embodied in the original research propositions. These provide some insight into my knowledge and beliefs about how services are organized. The evolution of these propositions in response to the emergent data suggests a dynamic epistemological position facilitated by ongoing reflexivity.

These propositions were continually revisited, reviewed, modified and developed during the data collection and analyses to reflect the emergent findings. Yin (2009:p15) suggests that, ‘…case studies are generalizable to theoretical propositions, not to populations or to universes.’ The goal of the researcher in using a case study approach is therefore to expand and generalize theories. Flyvbjerg (2005:p228) cites Karl Popper’s ‘falsification’ as part of the critical reflexivity inherent within case study research and is a rigorous test through which to assess the validity of a scientific proposition. As will be explored later in the findings chapter, a proposition must be revised or rejected if just one observation does not fit with it. During the course of this research one of the initial propositions (number 2) was rejected as there was little evidence to justify it in practice.

There were several advantages to being a nurse as well as a researcher in the context of general practice. I am familiar with the general organising principles of healthcare and understand how different parts of the system are supposed to work and, to a degree, how links across traditional organisational boundaries work. In addition, I am comfortable conversing with a range of different professionals and can empathise with the stresses of working within a highly pressured environment. I think this shared experience encouraged many of the practice staff to talk candidly about their work and the dynamics between different members and groups of staff. A disadvantage of having some insight into clinical practice and healthcare, is being overly sensitive to the stresses of the staff and being reticent about prolonging discussions incase this added to their already busy schedules.
3.7.1. Validity and reliability

Validity and reliability are often seen as problematic within qualitative research however, a major strength in using a case study approach is the possibility of including a variety of evidential sources (Yin, 2009). This research uses interviews and observations in the development of *converging lines of inquiry*, which is a process of triangulation and corroboration (ibid; p115). Although controversial, triangulation of data sources is often used as an alternative to validation (Denzin, and Lincoln, 1998) and is much more likely to provide rigor, depth and breadth to a study (Patton, 2002). Stake uses triangulation to assess whether the case remains the same across time, in different spaces or as individuals interact differently (Stake, 1995). That is, whether what is observed and recorded in one situation has the same meaning when present in other circumstances. The results of case studies that include triangulation are typically more accurate and convincing than those that rely on single sources of evidence (Yin, 2009).

In addition to data source triangulation, Denzin included 3 other triangulation protocols: *investigator triangulation, theory triangulation and methodological triangulation* (Denzin and Lincoln, 1998). Investigator triangulation involves another team member to observe the same situation and a comparison of observations and interpretations are made between the two accounts. During my fieldwork it was not be possible (and probably inhibitive) to have a second person present during the interviews or observations. Denzin suggests that this issue can be circumvented by presenting the data, with or without interpretations, to a panel of experts or investigators who may concur or contradict the original meanings. The panel’s comments provide additional data that can be used in the case study. Different panel members will offer different theoretical viewpoints and comparing the data provides theoretical triangulation. In observing the same phenomena, the extent to which the panel members’ descriptions and meanings are similar confers triangulation. The practicalities of convening a panel to review the data and interpretation of, was not feasible in the context of this research. Methodological triangulation is the most widely recognised and during my research I observed a series of situations such as the administrative staff interacting with patients, in parallel to interviewing patients and staff. The extent to which their descriptions and interpretation of events mirrored my own (and others) provides a level of triangulation. Within the constructivist paradigm, triangulation protocols are primarily used as a mechanism to elicit alternative interpretations as opposed to confirming a single meaning (Flick, 1992). Subsequent alternative and contradictory accounts to my own were revisited and reviewed in light of my previous interpretations and understanding of events. This iterative approach helped to make sense of conflicting narratives and data associated with similar situations.

Although the number of practices involved in the study was small, the intensity of the study in terms of the time spent within each practice and the number and cross-section of staff interviewed, provided a rich and detailed narrative of how practice staff made sense of how and
why services were provided in the way that they were. How I, as the researcher, then made sense of this data was an important process in establishing the validity of this research. In contrast to the criteria used to validate quantitative research, Guba and Lincoln (1981) provide an ‘analogous’ criteria more suited to the philosophy underpinning qualitative studies:

**Table 3.4: Alternative validation criteria**

<table>
<thead>
<tr>
<th>Conventional criteria for validation of quantitative research</th>
<th>Suggested criteria for validation of qualitative research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal validity</td>
<td>Credibility</td>
</tr>
<tr>
<td>External validity</td>
<td>Transferability</td>
</tr>
<tr>
<td>Reliability</td>
<td>Dependendability</td>
</tr>
<tr>
<td>Objectivity</td>
<td>Confirmability</td>
</tr>
</tbody>
</table>

*Source: Adapted from Guba and Lincoln (1981)*

The main claim to validity in this research rests upon the transparency of the analytical process and the conceptual movement between the expected and actual findings of the research, illustrated by the iterative propositions.

**Credibility**

The credibility of qualitative research comes from the representation of the participants perspective, as the point of this type of research is to understand the phenomenon under study from the perspective of those who are directly involved with it. This approach suggests that only those involved in the phenomenon can legitimately judge the credibility of the study’s results. Taken literally, this criterion ignores the extensive subjectivity involved in explaining social phenomena and the fact that given the same data, interpretation by individuals, including researchers, are more likely to differ than not. Consequently, I would suggest that the credibility of this research comes from the acknowledgement of multiple perspectives and a systematic process of managing comparable perspectives that, at least partially, explain the way services are provided. Sensemaking is not about ‘proving’ connections but about providing ‘plausible’ explanations (Weick, 1995). A strength of this research was the cross-section of people interviewed, nurses, doctors, administrative staff and patients. Despite the multiple perspectives, certain aspects of their narratives coalesced and these formed the main themes of the research. Contradictory narratives were triangulated against observational data to establish their validity.

**Transferability**

Transferability relates to the extent to which the research can be applied to other contexts (Lincoln and Guba, 1985). The strong similarities between the findings from the four different allowed the data to be analysed as a single entity, although practice 4 did have some notable differences which are discussed in the findings chapter. These similarities suggest that the results may help to explain activities in a number of other practices.
Dependability or trustworthiness

Dependability in qualitative research replaces the quantitative concept of reliability or replicability; the idea that the same results could be attained if the same study was repeated is not an aspiration of qualitative research (Golafshani, 2003). Dependability (Sarantakos, 1994) requires the researcher to account for the changing context in which qualitative research occurs. During this research sensemaking (Weick, 1995) was used to explain the multiple perspectives and shared experiences of the participants in response to the ever changing context.

Confirmability

Confirmability is the confidence that the findings of the research are a reflection of the participants sense of what is happening, rather than that of the researcher (Lincoln and Guba 1985). Qualitative research recognises the fact that researchers will interpret the same data differently depending on their beliefs, values and experiences. The changing propositions included in this research and the reflexivity of the researcher will help to confirm the legitimacy of the findings in relation to the data. In addition, an audit trail which details the research journey including the design of the research, the data collection, how the data was managed and organized and how the decisions relating to these were made (Cutcliffe and McKenna, 2004).

3.7.2 Generalisability

Stake differentiates ‘naturalistic generalisations’ from ‘nomic generalisations’ used in quantitative research and emphasises the perspective of the reader. In some instances, the reader may be more familiar with the case than the researcher is (Stake, 1995). Compared to other research approaches, single case studies do not normally provide a reasonable basis on which to generalise to a population of cases. Case study research can be more about ‘particularization’ than ‘generalization’, but may also be concerned with ‘commonality’ (Stake, 1995; p8). The aim being to enhance knowledge about the case itself, not (primarily) in relation to other cases and the particularity of the case is considered central to understanding it. Individuals can learn extensively from what is general about a case and they do this in part, through adding new information about a case to what they already know about similar cases. Generalisations are part of everyday life and are routinely shared by teachers, authors and figures in authority. Individuals also develop their own through experience. Stake and Trumball (1982) refer to these generalisations as ‘naturalistic’ and are those made by people in their everyday life, either through their own experience or vicariously through their interaction with others, including researchers. Researchers make choices in organising their analyses and interpretations to produce propositional generalizations and/or to inform the reader’s naturalistic generalisations. In helping the reader to make naturalistic generalisations the researcher is required to facilitate vicarious experience through 3 major steps that requires the researcher to emphasise the person, place and time (Stake, 1995). These should be framed within a detailed
account, or ‘thick’ description of the case. Where actors or readers have reached their own generalisations, these should be included along with the descriptions of their experiences to further assist the reader.

Traditional (quantitative) views of generalisability propose that the aim of science is to be able to apply the findings across time and populations (Lincoln and Guba, 1985). Other (primarily) qualitative researchers such as Denzin (1983) view generalisability and external validity as a low priority and/or largely irrelevant to their research which is often valued for its detailed insights into specific groups rather than establishing general laws or universal truths regarding human behaviour. In bridging the polarization of these perspectives, Guba and Lincoln (1981) suggest that the concept of generalisability should be replaced with one of ‘fittingness’ whereby the situation studied is compared to other situations of interest and their similarities and differences noted. Yin (2009:15) suggests that, “…case studies are generalizable to theoretical propositions, not to populations or to universes”. The goal of the researcher in using a case study approach is therefore to expand and generalize theories. Flyvbjerg cites Karl Popper’s ‘falsification’ as part of the critical reflexivity inherent within case study research and is a rigorous test through which to assess the validity of a scientific proposition. As will be explored later in the findings chapter, a proposition must be revised or rejected if just one observation does not fit with it (2005: 228). During the course of this research one of the initial propositions (number 2) was rejected as there was little evidence to justify it in practice. Stake’s naturalistic generalisation approach (Stake and Trumbull,1982), suggests that through a mix of experience and tacit knowledge, individuals compare situations and form useful generalisations. In studying the 4 general practices included in this study, a deliberate mix of methods were used to collate the data. This allowed for a number of comparisons between what individuals said they did and what they were observed doing in practice. The findings support Lincoln and Guba’s position on the importance of context and time on the behaviour of individuals (1985). Different members of the practice team and patients from each practice were asked to explain the care they provided or received. This approach to studying what is (Schofield, 2000) allowed the participants to share with the researcher their understanding of how and why services were provided.

3.8 Data management and analysis

The data organisation process was largely informed by the work of Miles and Huberman (1998; 1994). Guidance on the framework method was drawn from Ritchie and Lewis (2003) and the data analysis was drawn from Yin (2009) and Stake’s work (1995). Huberman and Miles are widely cited in the qualitative research literature; Ritchie and Lewis work closely with the National Centre for Social Research which has developed ‘the framework method’; and Yin and Stake are renowned case study researchers. In keeping with the general principles associated with a qualitative approach, the data analysis was an iterative process (Figure 3.1) that continued for the duration of the research. A number of case studies were included to explore
the similarities and differences of the organisation of services across the 4 practices and whilst
guidance on analysing case study is the least developed aspect of this methodology (Bachor,
2002) it is generally suggested that in multiple cases, each case is analysed individually before
a comparative analysis is done (Kohn, 1997).

**Figure 3.1:** Characteristics of data analysis

![Figure 1: Components of data analysis: interactive model](image)

*Source: Miles and Huberman, 1984:p21*

In contrast to experimental and survey research, qualitative studies typically collate and analyse
data across the duration of the research. An advantage of this approach is that it allows early
mistakes to be corrected and tentative assumptions to be tested in future fieldwork. Similarly,
instrumentation, such as the interview schedule, can be subsequently adjusted in response to
an enhanced understanding of the research settings this increases the internal validity of the
study (Miles and Huberman, 1984). A disadvantage of this approach is the growing volume of
data and the difficulty associated with reducing the volume of data at the same time as
generating new. Miles and Huberman (1994) suggest there are three main concurrent activity
flows: data reduction, data displays and drawing conclusions (Figure 3.1).

Transcribing and re-reading the data prior to the formal analysis highlighted some anticipatory
themes, categories and trends. The focus of the research further circumscribed the scope of
the data by limiting it largely to general practice rather than the wider healthcare system, and to
patients with multiple chronic conditions, including heart failure. This allowed a large amount of
other activities undertaken by general practice to be ignored, for instance vaccinations. Further
data reduction occurred following the initial coding of the data whereby explanations of chronic
disease management practices were generally categorised as occurring at micro, meta or
macro levels. (See section below, matrix framework).
3.8.1 Iterative research

An iterative process was used throughout the research to systematically review and explain the emergent data. Analytic induction is premised on the belief that there are consistencies to be found in the social and physical worlds. Theories and constructs are used to try to explain these consistencies as accurately as possible. A series of question and answer cycles provides an iterative process through which constructs are uncovered and cases are explored. Cases are modified and adjusted in relation to subsequent findings. During this research an iterative process was used to review and revise the theoretical propositions. The differences between the two sets of propositions represents a direction of travel, from what was thought or assumed to be happening in general practice, through the research process, to what the research evidence indicated was actually happening.

3.8.2 Data reduction and display

Data reduction involves ‘...a process of selecting, focusing, simplifying, abstracting and transforming the data’ (Miles and Huberman, 1984:10). This process is on-going throughout the study but is usually evident even before the data collection has started (Namey et al, 2007), through the choice of cases, interview questions and research design. At the start of this study, the data was broadly bounded by the study propositions (Yin, 2003) which were based on
personal experience and an overview of the literature relating to disease management as well as the focus on the chronic care model. Data displays “are generally an organized, compressed assembly of information that permits conclusion drawing and action” (Miles and Huberman, 1994). The data displayed in the matrix (appendix 18) provides an accessible, heuristic summary of the relevant data for the analyst. It allows the analyst to judge what is happening in the data and either justify conclusions or move to another stage in the analysis. This early data display in the research listed the characteristics of the chronic care model vertically with data, sensemaking and preliminary interpretations across the horizontal axis.

3.9 Case study

In contrast to statistical analysis, when analysing case study data there are few fixed requirements (Alaranta, 2006), Yin (2003) advocates the introduction of propositions at the design phase of the study which helps to direct and circumscribe the data collection and increase the probability that the evidence to answer the research questions will be found. These are iterative and dynamic in nature and typically evolve and/or become more refined as the data are analysed and synthesised. The early propositions for this research were based on my experience in healthcare and the theory and practice of care provision in general practice:

1. How services are delivered is dependent upon how practice staff make sense of what is needed and what is possible in the given context

2. In response to their increasing responsibility for chronic disease management in general practice, more integrated ways of working are emerging

3. Managing the care of patients with multiple conditions is constrained by the way services are traditionally structured and organised

These propositions underpinned the aims of the research, the data sources and data collection (see appendices 11 and 12). In addition, they helped to direct the analysis in terms of focusing on the data that were likely to address the research questions of how services are provided in general practice and why they are configured in this way. Yin suggests case study is a reliable alternative to quantitative research and that whereas quantitative studies are often concerned with statistical generalisations, case studies can provide analytic generalisations through ‘testing’ propositions deductively across multiple case studies (Yin, 2009). Yin’s use of propositions and/or hypotheses have led to criticisms of positivism (Myers, 2008). Although this research uses propositions, it uses them both inductively and deductively. In contrast to theory testing, this study is more an exploration of practice and may therefore be considered as theory-building or interpretive in its approach (Alaranta, 2006). Stake’s (1995) strategy in maximising the learning from the case fits well with the constructivist paradigm and an inductive approach in
which the perspectives of the study participants are interpreted and reconstructed to further our knowledge and understanding, but at the same time remain recognisable to the reader.

3.9.1 Matrix framework
Transcripts and fieldwork notes from each practice were coded individually. An inductive approach was used and data was initially coded under the propositions and a large number of emergent themes using Nvivo©. Patterns and themes emerged and data was revised and rationalized accordingly. The visual limitations to data displays in Nvivo© led to transferring the data to a matrix framework. This was used to organize the data into factors that determined service provision in general practice. The data from each practice populated individual frameworks before the frameworks were aggregated and the data reduced, through an ongoing iterative process into a number of common themes. The framework went through a number of iterations to ensure all the relevant findings were appropriately accommodated. Cross cutting themes in the framework included aspects of the Chronic Care Model (Wagner, Austin and Von Korff, 1996) and macro, meso and micro levels of influence. A snapshot from the final framework is included in appendix 18 (p240). The framework method is a matrix based approach increasingly used in qualitative research and is a way of organising data that goes beyond coding and indexing, to include a process of summarization. In contrast to other approaches, categories may be a mixture of \textit{a priori} and emergent \textit{de novo} themes and concepts elicited through an inductive as well as deductive analysis of the data (Crinson and Leontowitsch, 2011). An iterative approach is employed whereby categories are developed and refined in accordance with the accumulating data (Ritchie and Lewis, 2003). Despite the necessity of distilling the data into a manageable form so an interpretive analysis can provide ‘thick description’ and explanations, supporters of this method emphasise the importance of retaining the essence of the raw data (ibid). In attempting to do this, the matrix includes a lot of direct quotes from the study’s participants alongside any sensemaking by the participants and/or me.

The original axises of the framework used in the early part of the data collation and reduction included the \textit{(a priori)} characteristics of the chronic care model (Wagner, Austin and Von Korff, 1996) down the vertical axis and the emergent \textit{(de novo)} concepts across the vertical one (appendix 18). The chronic care model is, internationally, the most widely used integrated care model for people with chronic conditions. During the data analysis for this research the CCM is used to broadly circumscribe and organise the data. \textit{A priori} themes also help to ensure that key objects of the research are explicitly and systematically addressed within the analysis as well as providing enough flexibility to indentify and incorporate emerging concepts (Dixon-Woods, 2011). The data included in this initial framework was summarised under three main headings, macro, meso and micro. This helped to reduce the volume of data and made it more manageable.
Table 3.5: Categorisation following iterative thematic framework

<table>
<thead>
<tr>
<th>Macro</th>
<th>Meso</th>
<th>Micro</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health policy</td>
<td>Fragmentation</td>
<td>Patients’ health related attitudes and behaviour</td>
</tr>
<tr>
<td>Contractual and financial arrangements</td>
<td>Interdependencies in service provision</td>
<td>Empowering and preparing people to manage their health and healthcare</td>
</tr>
<tr>
<td></td>
<td>Heart failure</td>
<td></td>
</tr>
<tr>
<td>Lack of ‘whole systems’ approach</td>
<td>Communication</td>
<td>Challenges to service delivery</td>
</tr>
<tr>
<td></td>
<td>Increasing administrative workload</td>
<td>Professional work load</td>
</tr>
<tr>
<td></td>
<td>Multiple providers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Communication across professional and service boundaries</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Interface between administrative and clinical staff</td>
<td>Consistency in care</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nurses</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Doctors</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fragmentation, sub-specialisation and deskilling</td>
</tr>
</tbody>
</table>

Factors that influence service provision can be broadly categorised into those that originate at a macro system level, such as policy initiatives or funding streams; meso level factors that occur within and between organisations; and micro level factors that relate to the patient and practitioner level (table 3.5). The data collection and analysis began at a micro level where the experiences of patients and practitioners were categorized as micro, meso or macro. These categories are not mutually exclusive as factors at a macro level, such as finance, can have an influence over what happens at all three levels of care organization. Where factors spanned more than one level, a judgment was made on the basis of the data collected as to which level the factors most ‘reasonably’ resided in. Once populated with data, a descriptive analysis occurred. This approach begins with identifying the substantive content of the data, what are the key characteristics of service provision in general practice?

*This involves looking across all the range of cases with the aim of distilling the key dimensions within the range of perceptions, experiences or behaviors that have been labeled within a theme and charted in the matrix. This process should result in more refined categories that incorporate and discriminate between the different manifestations of the data.* (Crinson and Leontowitsch, 2006:pWebpage).

Refining categories within a thematic framework (appendix 18) is not an automatic process but requires both logic and judgement (Srivastava & Thomson, 2009). Through their analysis and synthesis of the data, the researcher makes judgments about what things mean, identifying implicit connections between ideas and determining the relevance of these to the overall research questions. Conclusion drawing and verification is the third activity stream in data analysis and again occurs through the duration of this type of research. Whilst initially, the
‘conclusions’ are loose and provisional, overtime as the data collection and analysis proceeds these become more explicit and grounded (Glaser and Strauss, 1967).

Chapter Summary

This chapter outlines the purpose of the research, how it was conducted and the processes through which the research design was decided upon, developed and structured. It provides some insight into the use of a case study approach and describes the importance of the theoretical propositions in guiding and circumscribing the data collection, as well as an overview of the literature in this field. It outlines the value of using qualitative approaches in studying complex social phenomena. The data collection schedules are included along with details of the analyses and some of the challenges posed by undertaking research in busy organisational settings.

The following chapter presents the findings of the research and is structured under the micro, meso and macro levels of healthcare.
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CHAPTER 4    FINDINGS

4.1 Introduction

4.1.1 Overview
At a time when successive health policies have increasingly directed the responsibility for chronic illness management towards primary care, this research explores the organisation of care for people with multimorbidity in general practice. Whilst the term ‘multimorbidity’ is increasing used in the literature, its use in practice is somewhat limited and none of the practices used this term or related it to particular activities in practice. They did however make a number of attempts to accommodate people with ‘comorbidities’, largely by offering double appointments for routine reviews. In the absence of empirical evidence related to the management of multimorbidity, this research focuses on the provision of care for people with 2 or more chronic conditions. Where relevant, some comparisons are made with aspects of the chronic care model and what happens in the 4 practices studied in this research. The findings of this research are organised using micro, meso and macro categories to reflect a multi-dimensional approach and to illustrate how the organisation of care in one area can affect services in another, even within the same organisation. Not mutually exclusive, these categories may be useful in considering where the drivers determining service organisation and delivery reside and illustrate the often complex mix of factors that can span all three levels. The boundaries circumscribing each level are variously defined and often arbitrarily populated (Johnson, 2008). In this study micro level factors are those that relate to the delivery of care at the patient/practitioner level and include the beliefs and behaviours of both patients and staff and the context in which care is delivered. Meso level factors are those that influence how care is organised at a practice level as well as the links between various professionals and services at a systems level, both formal and informal. At a macro level, the influences on service delivery typically include aspects of health policy, the structuring of healthcare, contractual arrangements and financial incentives (which, up until recently, were largely orchestrated locally through Primary Care Trusts). During this research, heart failure was used as an index condition to explore the practicalities of provision within and across organisations and sectors of care. Within the scope of this research, it would not have been feasible to consider services for more than one chronic condition.

4.1.2 A summary of 4 practices
The table (4.1) below is a selection of information taken from NHS England’s statistical archive. It indicates some broad differences between the practices for instance, the size of the practice (number of registered patients) and the proportion of patients with a chronic condition. The percentages are a proportion of each practice population.
Table 4.1: Practice statistics

<table>
<thead>
<tr>
<th></th>
<th>Practice 1</th>
<th>Practice 2</th>
<th>Practice 3</th>
<th>Practice 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of registered patients</td>
<td>6 555</td>
<td>5 965</td>
<td>9 697</td>
<td>3 614</td>
</tr>
<tr>
<td>Non-white/British ethnicity</td>
<td>4.2%</td>
<td>Not recorded</td>
<td>6.0%</td>
<td>30.5%</td>
</tr>
<tr>
<td>Pop. over 65 years</td>
<td>17.4%</td>
<td>10.5%</td>
<td>19.0%</td>
<td>6.3%</td>
</tr>
<tr>
<td>Longstanding health condition</td>
<td>49.5%</td>
<td>47.6%</td>
<td>46.0%</td>
<td>37.0%</td>
</tr>
<tr>
<td>Deprivation level</td>
<td>3</td>
<td>3</td>
<td>5</td>
<td>1</td>
</tr>
</tbody>
</table>

Deprivation scale 1-10: 1 most deprived; 10 least deprived.

Source: Fingertips (2012)

Practice 1

The practice had a register of around 6 500 patients and is recorded at level 3 (Fingertips, 2012) on the national deprivation scale (where 1 is considered the most deprived and 10 the least). There were 5 GPs, 2 of whom were partners and there was a vacancy for a third partner. The practice was a training practice and at the time of this research had a resident GP registrar. There were 2 practice nurses who both worked 4 days a week as well as two healthcare assistants, one of whom also worked as an administrator. Both healthcare assistants undertook a number of activities independently such as smoking cessation and weight management clinics. A small number of other administrators had been taught several discrete tasks such as phlebotomy, blood pressure monitoring and recording electrocardiograms. One of the practice nurses was learning to prescribe and did a joint vascular clinic with one of the doctors the intention of which was to eventually make this a nurse-led clinic. Once trained, the nurse would be expected to manage a number of additional conditions independently. The management of respiratory conditions and diabetes was divided between the 2 nurses. The nurses and the healthcare assistants were largely responsible for delivering the Quality and Outcomes Framework (QoF) requirements.

Patients with a pending long term condition review would be invited to make an appointment to attend a session prior to their review so the relevant clinical information could be collected in advance of the review, i.e. their weight, blood pressure recording and an ECG. Where possible, this appointment would be on the same day as their review with the nurse or doctor or could be scheduled at a time that suited the patient. This practice did not undertake any routine bloods prior to appointments. Consequently, patients were sent the required blood forms through the post and asked to go to the ‘drop in’ phlebotomy service at their local hospital. The only exceptions to this were those patients who were house bound.

Heart failure in this practice was initially managed at the district general hospital and mainly through nurse-led clinics. Once stabilised the heart failure nurses (mainly) referred patients’ back to their GPs for further titration of medications and follow up. This particular practice did not have a formalised system for monitoring people with heart failure at the time of the research.
**Practice 2**

Practice 2 had a register of just under 6,000 patients. It scored 3 on the national deprivation scale and employed 4 GP partners, 2 GP registrars and a salaried GP. As a training practice, in addition to the registrars, a rotation of junior doctors based at the local acute trust did an 8 week placement with the GPs. There was one full-time practice nurse who was new to the practice and a part-time nurse who had recently retired but continued to run a travel clinic and a session to manage people with diabetes every week. This nurse also worked part-time in a practice nearby. Whilst neither nurse prescribed medications, they could both ‘initiate’ a number of treatments, which meant they would make decisions regarding the start of a number of medications and the GPs would authorise these without reviewing the patient. Unusually this practice had an assistant nurse practitioner who undertook many QoF related roles such as monitoring and recording of routine data. In addition, 2 of the administrators were trained to take blood and monitor blood pressure readings. A number of administrative staff were responsible for organising routine appointments for different conditions and the nurses and the assistant practitioner would largely manage these appointments according to computerised templates.

The assistant nurse practitioner provided a number of clinics collecting monitoring information for a number of conditions, prior to the patient seeing the GP. One of the GPs had provided a list of tests and tasks that were required for each condition and the practice nurse was in the process of writing a number of protocols for chronic conditions. This practice provided a weekly cardiology clinic, this was a tier 2 service where patients could be referred from other practices locally to avoid unnecessary appointments at the acute trust. From here patients could be referred for more investigations or treatment or discharged back to their own GP.

In their management of heart failure, practice 2 was part of a service improvement programme whereby a number of practices working together to engage the patients in aspects of their care. In conjunction with secondary care services, the aim was to provide a more consistent approach to heart failure management, whereby patients were encouraged to monitor their weight for any sudden changes. They were given advice to contact the practice nurse should they notice any significant weight loss or gain in 24-48 hours. The practice nurse would discuss any problems with a GP before advising accordingly. This was the only practice of the 4 to proactively manage this aspect of heart failure.

**Practice 3**

Practice 3 was the largest of the 4 practices with around 9,500 patients. At level 5, it was the least deprived of the areas included in the study. 7 GPs were supported by 4 nurses and 2 healthcare assistants. Unusually, 2 of the nurses were partners in the practices, one was a nurse practitioner and both could prescribe. They ran a number of services independently from the GPs including, an anti-coagulation clinic and a minor illness and injury clinic. This allowed
for a certain amount of independence from the GPs and helped to reduce the doctors’ workload. It was also more convenient for patients who could often see a nurse of their choice more easily than they could see a doctor. The two other nurses in this practice were also involved in clinics and had a responsibility for at least one chronic condition such as stroke or hypertension, and both ran nurse-led clinics.

Whilst doctors in practice 3 were responsible for certain clinical areas, it was only those patients with diabetes and/or chronic kidney disease that were managed in a joint doctor-nurse clinic. The patient would see the doctor first who would examine them and review their medications, before they would meet with a nurse to discuss a number individualised goals. The role of the two health care assistants was similar to the other practices whereby they carried out a number of routine tests such as ECGs and phlebotomy. This practice had an administrator whose actual job title reflected her role as a long term condition coordinator, the focus of which was to arrange appointments, collate data around the QoF and to facilitate audits. In contrast to the other practices in this study, practice 3 also employed an IT manager who assisted the practice manager in the administration of services as well as collating performance related data.

Heart failure patients at this practice were routinely reviewed in secondary care until considered well enough to be discharged back to general practice. There was no formal system for managing patients with heart failure in this practice.

**Practice 4**
Practice 4 was the only ‘alternative provider of medical services’ (APMS) which was owned by a private company who had a number of practices in the region. It was situated in an area under served by general practice and demographically had a high proportion of younger eastern European migrants whose residency was often transient. This perhaps accounts for the lower proportion of people over 65 and the reduced percentage of the population reporting a long term condition. It was also the most deprived of the 4 practices, with a score of 1. The practice had been open for nearly 2 years and was in the process of increasing its registered population. It was the smallest of the practices with only 1 full time GP and 2 part-time ones, a practice nurse and a part-time healthcare assistant. All the staff had previously worked in ‘regular’ well established ‘NHS’ practices. The structure and organisation of care had some similarities with the other practices in the study i.e. with the practice nurse and healthcare assistant responsible for completing most of the QoF requirements. At the time of the research, the practice manager was absent having been asked to cover another practice. One of the experienced administrators was ‘acting up’ as manager. In contrast to the other practices, most of the management of this practice occurred at the regional office this included human resource and finance issues. In some ways this was a positive arrangement as it allowed the practice staff to focus more on service delivery. On the negative side, only the lead GP was directly involved in decisions regarding practice activity.
The lead GP in this practice used the Stour Access Model (NHS Institute, 2012), a GP-led telephone triage system in which most patients are deemed not to require face to face consultations with the doctor and certainly on the days I was present there was often nobody waiting to be seen and minimal staff. As with the other practices, the nurse ran a number of clinics supported by a healthcare assistant. A number of clinics were focused on the QoF, but the nurse also managed patients with diabetes and respiratory conditions. The acting practice manager arranged all the routine appointments for the practice nurse. At the time of the research, the practice was still building up its registered population and did not appear as pressured for appointments as the other practices.

The heart failure service in this area was also provided by the district general hospital and the practice made no additional systematic arrangements for monitoring these patients apart from those stipulated by the QoF and in relation to advice regarding individual patients from secondary care.

The findings presented below are divided into 3 levels, micro, meso and macro. The purpose of this structure is to emphasise the multifaceted organisation of healthcare and the multilevel factors that influence service delivery in general practice. The population of these categories are not mutually exclusive and the boundaries are somewhat arbitrary. Indeed a number of factors have moved a number of times from one category to another. Broadly speaking, those factors included at a micro level are those that relate to the patient and the practice staff, such as attitudes and beliefs. Meso level factors include the organisation of the practice and its relationship with other providers. At a macro level, factors usually originate at a regional or national level and include health policy and funding.

### 4.2 Micro

#### 4.2.1 Challenges to service delivery

At a micro level, the key principles of the chronic care model require: patients to feel prepared, supported and empowered to manage their health and healthcare; service delivery to be efficient and effective; and the promotion of evidence based healthcare that includes patient preferences (Singh and Ham, 2006). Micro level factors are those affecting service delivery at the level of the patient and practitioner/s and include: patient and public health beliefs and attitudes; access to services; and individual professional practice. The focus on contractual targets and disease specific templates also affected delivery at a micro level, but as practitioners had little individual sway over these factors, these are included in the meso and macro sections. Similarly, self-management is a relatively new concept in the management of chronic illness and whilst the intention is to promote self-management support in general practice, as yet, the uptake is generally low. A notable exception to this is the management of asthma and diabetes in general practice. Self-management support is key to the Chronic Care Model and is increasingly prominent in emerging health policy. It goes beyond the purely
clinical aspects of chronic illness to incorporate aspects of patient empowerment and shared
decision making. For these reasons, it is discussed in the meso section of this chapter. The
patients included in the study were self-selected in response to a written invitation to be
interviewed. Although all those involved had at least two chronic conditions, including heart
failure, there was a spectrum of need, spanning from those who were independent and
attended general practice for routine monitoring only, to those who were high users of
healthcare, typically elderly and/or frail people with a complex mix of chronic conditions of
varying severity.

4.2.1.1 Patients’ health related attitudes and behaviours
In each practice those patients with multimorbidity listed on the heart failure register and
deemed ‘well enough’ to consider an invite to participate in a research project were sent an
invitation to participate. Of the 15-20 invites sent from each practice, 4 patients responded from
practice 1 in the allotted time and this guided the selection from subsequent practices. No
invites were sent from practice 4 as the company did not give permission to access their register
of heart failure patients within the time available. Perhaps unsurprisingly, having volunteered to
be interviewed, the patient participants were generally well and were happy with the care they
received, respected and trusted the staff at their practice and most did not think their care could
be improved upon.

Despite the multimorbidity listed in the patients’ electronic record, some did not know or perhaps
had forgotten what conditions they actually had:

[Researcher]: “So you’ve got a fair list [of chronic conditions] did you know that“?
[Patient]: “No I didn’t really, until I read that [clinic letter]”.
[Researcher]: “And previous congestive cardiac failure, so there was something
wrong with your heart at some point“?
[Patient]: “Well I didn’t know that either till I read that”. (P1, PT1).

Most patients were not ‘interested’ in their medical conditions per se but more concerned about
how particular symptoms impacted on their activities of daily living. However, they did not
always relate these symptoms to their medical conditions and few seemed to think they were
something the practice staff could help them manage, most people just ‘put up with things’. In
some respects, patients just accepted the care they were given and trusted the practice staff to
‘do what they thought was best’:

“The blood loss from the leakage is bad he [the doctor] said “we can’t see anything
proper would you mind having the camera down your throat and then we will be
able to have a proper look at it.” So I said “… well you have to do as you’re told
don’t you” […] no I’m quite content for people to say, you need this you have got to
do that so on and so forth, I'm quite content with that, I wouldn't have any suggestions, put it that way...I mean the doctor has all the knowledge, I wouldn’t have anything to add, he’s the expert like.” (P3, P2).

One of the GPs thought this deference to the doctors was typical of elderly patients:

“I think a lot of older people don’t think they should question the doctor, that the doctor does know best and therefore shouldn’t question it”. (P2, GP4).

Given the age of the patients included in the study (all but one were over 65 years), this ‘professional deference’ was perhaps a reflection of a generational divide in which older patients often accepted the doctors’ instructions unquestioningly. Having said this, a number of patients were selective in choosing what advice to follow:

[Researcher]: “Do you have water tablets”?
[Patient]: “I do but they don’t do anything for that [swollen ankles] all they do is make me poorly really poorly. Yeah so I only take them when I have to do you know but other than that I only take my blood pressure tablets, I’m naughty I know.” [P3, PT4].

[Patient] “Well I have a blood pressure monitor but it’s not very often that I use it I should use it more…” [P3, PT4].

[Patient] “Yes, I mean I don’t go walking out anywhere, they say you should go out for walks for your arthritis. But to be honest the curbs are so rubbishy and it’s boring.” [P3, PT3].

Several patients equated their healthcare with taking medications and whilst several of the participants could explain, in general terms, what tablets they were taking, most could not name them all. Similarly, when asked directly about their health and how it affected their daily activities, many would ‘gloss over’ the impact and burden of their condition, describing themselves as ‘fine’ despite the obvious restrictions on their everyday life. The participant in the extract that follows had been increasingly breathless which restricted her mobility but did not equate this with a possible worsening of her condition/s. She explained when she was ‘really bad’ she would go upstairs to bed on her hands and knees:

[Patient]: “Yeah but it’s only in my legs and I can’t figure that out neither. I mean I have it in my [h]ands my [h]ands don’t work as well as they did but at night time it’s horrific and at night time the pain’s horrific as well”.
[Researcher]: “Have you got something to try some quinine or something”? 
[Patient]: “not really, I thought you just had to grin and bear it [...]”
My feet...sometimes I could scream with them and I'm trying to get out of bed to walk round [...] Well I thought to myself nobody can do much for cramp, cramp is cramp, everybody has cramp. I'm sort of convincing myself that I've got to put up with it.” (P1, P1).

Several of the patients had a number of troubling symptoms and whilst some had broached the subject with their doctor, there was a number who had not. One of the patients from practice 3 was a retired social worker and had very swollen feet on the day she was interviewed. She struggled to find footwear to fit and had just been to the hairdressers wearing slippers:

[Researcher] “So you don’t feel you need any more information about your condition”?
[Patient] “Well I don’t know what kind of a condition I’ve got really, other than swollen ankles and that is my own fault really for putting these slippers on”. (P3, P4).

Another patient had his own unique way of managing his symptoms:

[Researcher] “So how are your other conditions then, your chest problem”?
[Patient] “You mean the narrowing of the airways? I’ve never ever been affected...I’ve got inhalers...basic inhalers nothing special. No I...the four puffs a day thing I don’t really use it. The other one I regularly use it twice a day, it’s just routine, not that I need it”.
[Researcher] “And your heart, who looks after that”?
[Patient] “I do. I generally have about 10-15 minutes deep breathing as a weapon that triggers itself, not that I’m in a gasping state [...] there’s one they quote and even the vascular people quote it in the medical history ...something about kidney disease, I’m on this strong tablet and I know that it’s something to do with high blood pressure related to the kidney condition but when I ask questions they say oh there’s nothing to worry about it comes to everybody with age so I don’t know I take it as it comes”. (P1, P2).

The commentary of some patients suggested that during their appointments they were not given enough information regarding their condition or treatment:

[Researcher] “Who do you see for your chest”?
[Patient] “No one”
[Researcher] “You just look after it yourself”? 
“Just keep taking the medicine. It’s terrible isn’t it, they just don’t bother, they don’t bother. They give you a leaflet and that’s it, they don’t tell you ought when they’re giving you something.”

“Would you be happy to discuss your care with your doctor”?

“Well he never says anything to me, he never says ought you know.” (P3, P4)

“The last couple of times I’ve seen Dr [Smith] was to review my medications and there again while I think Dr [Smith] is a great doctor erm it’s a matter of how are you, yes well, yes so and so, yes we’ll keep you on these, and that is it.” (P3, P2).

This is not to say that doctors and nurses did not provide information to the patients, but just that in the instances quoted above, the patients could not remember it. Despite the limited knowledge regarding their conditions, only one patient interviewed felt he needed more support regarding his health, the others felt they knew what they needed to know and trusted the clinical team to manage the rest. Even in the small sample of patients interviewed here, there was a surprising variation of adherence to their treatment regimes’. Whilst all the patients expressed or inferred confidence in their general practice team, a number of them did not always follow their advice with regard to medication or treatment.

4.2.1.2 Time and Workload

Demand in general practice was high and practices 1-3 struggled to provide same day appointments for all those patients who requested them. In practice 4, there were no queues of patients to see the doctor because the lead GP managed the majority of consultations over the telephone. The nurses were responsible for a large number of patients with chronic conditions who typically required a number of tests and routine reviews at least once a year. Externally set targets meant that if the set quota was not met, the practice would not receive the maximum payment available for this activity. Whilst all the practice staff worked hard, the nurses felt that their share of the workload was expanding disproportionately more than that of the medical staff:

“I mean we’ve been practice nursing for more years than we care to remember and as we’ve always been saying, we started when the job was really easy, we thought it was really hard but in retrospect…it’s grown in complexity really in a fairly ad hoc way over the years. You know there is always something that people think, oh the practice nurses can do that...you know, the practice nurses will be good for that.” (NP1, P3).
Much of this expanded workload was attributed to the Quality and Outcomes Framework (QoF).

Organising appointments and meeting the QoF targets was a daily challenge to practice staff. Complex patients often had a number of (sometimes related) issues but the time constraints meant addressing them effectively during one appointment was often not possible. In practice 2 the manager stated that the timing of appointments was determined by the Primary Care Trusts (PCT) and whilst it was possible to offer a number of ‘double appointments’, even these were not long enough for people with multimorbidity. All the practices had some capacity to provide extended appointments, which were generally 15-20 minutes long. Practices nurses routinely used these extended appointments to review patients with 2 or more chronic conditions. These were typically related conditions and those included in the Quality and Outcomes Framework, such as diabetes and chronic kidney disease or hypertension and heart disease. A doctor in practice 3 lamented the short duration of appointments and suggested those patients with more complex conditions often required much longer appointments, perhaps as long as 30 minutes. However, she also said, that in some instances you would need all that time just to read and understand the patient’s notes, before you actually got to the clinical issues (P2, GP2). The demand on services and the nature of the work, meant that in all 4 of the practices the staff, particularly the nurses and the administrators, were under constant pressure to complete their workload. Whilst many of the QoF appointments were considered ‘routine’, in practice, they could vary significantly according to individual patients. For instance, a simple task, such as taking blood or recording a blood pressure, could be prolonged because of patients who were perhaps elderly and may have had mobility or cognitive problems which could make the procedure more difficult:

“I mean people like you and I will walk in the door we’ll have our blood test no problem we are able to remove our clothes, we are not covered in 15 layers of clothing, yes, we can understand what people tell us... anything complicated on top of that and then the whole thing...[has a knock on effect]” (P2, PN1).

Clinical staff were acutely aware that for a number of reasons patients with the same condition could have different levels of need. Variations in cognition, cultural beliefs and language barriers complicated and prolonged consultations and could often not be accommodated within a 10 minute consultation:

“We can use [Linguline] which is okay if you’re stuck but it’s better if you can get a family member to come because they can translate and help at home too. But it is difficult, it takes twice as long when English is not their first language and then it’s not just the language it’s the medical condition that they may not understand and so you have to be very basic and keep giving them little bits of information over time”. (P2, PN2).
In practice 2, the time allocation was 15 minutes per diabetic appointment, but even then it was not always long enough and whilst information could be spread across a number of appointments, both the doctors and the nurses appreciated that attending numerous appointments could be difficult for people:

“Also with the elderly […] you can’t keep sending patients away and bringing them, sending them away, bringing them back and […] especially if for example you’ve got, like you were saying, diabetes and asthma and they haven’t had that checked in a while and they don’t know how to use their inhalers properly and are just spraying them into the air […] a lot of them come up with the same things, my family can’t bring me because they are working so I have to get a taxi so you try to cram everything you can do into one appointment while you’ve got them there. Seems only fair really, but then like I said, I’m old school.” [P2, PN2].

The nurse above talked a lot about the different needs of patients and how she tried to adapt her approach to meet the needs of particular patients.

The nurses’ roles seemed much broader and more structured than those of the medical staff. All of the nurses across the practices did a series of clinics, many of which were related to the QoF and/or chronic illness management, but also included a wide range of other activities such as women’s health, baby clinics, flu jabs, childhood vaccinations and so on. In relation to chronic condition management, they suggested they worked in a more holistic way, stepping in where GPs had left off and addressing the wider issues of care, providing information for patients and even explaining the GPs treatment decisions:

“I do a minor injuries clinic and I’ll have someone who’ll say, ‘the doctor said I had an infection but then he wouldn’t give me any antibiotics for it’, and I have to explain, that it’s a type of infection that doesn’t respond to antibiotics cause it’s a virus” (P3, NP).

Despite trying to provide a comprehensive service, time was always an issue for practice staff and for some the focus of their work was increasingly on the volume and throughput of patients, as opposed to the quality of their service:

“Doctors have issues as well but it’s notorious, not every practice admitted but a lot of the practices still see practice as a conveyor system and why, I don’t know” (P2 PN1).

Given the time constraints and conscious of the burden to the patient, compromises in care were common as practitioners routinely adjusted to particular circumstances, sometimes on a
patient by patient basis. The nurse in the following example was talking about an elderly diabetic woman who had recently been started on insulin when she was admitted to hospital:

“It's difficult, but I know this woman and she probably did need insulin at the time because she was sick. But I don't think it's right for her now, she lives on her own and I think there will be issues with hypos. What I will probably do today is just explain to her that we should stop it and she should go back on the treatment she was on before. Ideally I'd like to see her tomorrow and the next day, but that's not realistic. I'll probably just give her a ring later tomorrow. She won't want to come back tomorrow and it's not really fair to try to make her. There are lots of things you want to fit into an appointment, but you have to be realistic and you can't give old people lots of information all at once because, one, you haven't got the time and two, they won't remember it.” (P2, PN1).

Professional judgements about what was needed and what was possible within the given context was continual.

4.2.2 Changing roles and responsibilities

The increasing workload in general practice has necessitated the need for more staff. As well as the employment of more GPs and nurses in some practices, all of the practices had a number of healthcare workers. These roles are relatively new to general practice and are aimed at reducing the workload of the nurses, in particular. Their remit included individual tasks such as recording electrocardiograms and taking blood, but some also involved more extended roles such as smoking cessation clinics or weight management sessions. Some administrators were also trained in aspects of clinical work for instance, taking blood or recording patients’ blood pressures. In the same way as nurses were devolving aspects of their work to healthcare workers, GPs were doing the same with the nurses. Many of the practice nurses felt that their workloads were expanding disproportionately to that of the medical staff, particularly in relation to chronic condition management.

As well as their clinical responsibilities, the nurses were increasingly involved in service development and quality improvement. At the time of this research the nurses continued to juggle all of the competing demands on their time and were struggling to keep all ‘their plates spinning’. The nurses felt that whenever the practice took on more work, they were often expected to incorporate it into their existing workload:

“The way I describe this job now, it's a bit like...you know that Christmas game, we play it in our family where you have a load of things on a tray, you have to remember them all and somebody takes something off, well it's the other way round, you have some things on a tray and every now and again somebody will put
another one on and then another one and you have to keep remembering all the new things that are on the tray.” (NP, P3).

In practice 3, the nurses’ roles extended beyond traditional aspects of nursing and included non-clinical activities such as organisational development and improvement initiatives. All these responsibilities were squeezed in around the traditional role of the practice nurse:

“There is very little capacity for doing other things and it’s not just about nursing really now…it is about doing…developing services, referrals, path lab links, because we actually…our path lab results all come down via an electronic link so we request them, they come down the path lab electronic link, it’s looking at those and managing those and looking at the results and dealing with those emails you know it’s all those sorts of things that aren’t within your capacity for the day and there is no real allowances made for those sorts of things because the role has changed.” (PN2, P3).

The expansion of the nurses’ role into more ‘corporate’ and organisational areas, such as service design and quality improvement, was in some contrast to that of the GPs’ which appeared to remain largely unchanged continuing along traditional lines of focusing on the doctor-patient consultation.

Patient-centred care and managing patients holistically have been enduring principles underpinning general practice. During this research it was sometimes difficult to consistently identify these characteristics across the complex patterns of care that were described and observed. Not least because of the number of patients registered in each practice and the 8 minute appointments with GPs. All the GPs interviewed stated or inferred they managed patients holistically and in relation to patients’ acute presenting complaints, this may have been the case. However, despite the best intentions, in observing patient flows through the practice and having interviewed patients and other practice staff, care for most chronic conditions was fragmented through a series of professional encounters in which a narrow group of clinical indicators, based on specific diseases, were addressed. Activities that could be devolved to nurses and other staff members were:

“The aim really is to shift as much of the chronic disease management onto the nurses as possible […] they do it better than the doctors, because they have the protocols and they stick to them whereas the doctors, you see someone and you’ll think, oh god I didn’t do whatever… […] the more we can shift that sort of thing onto nurses the better” (GP1, P1).
To some degree the nurses in all the practices used a number of evidence based guidelines for certain conditions, such as respiratory illnesses and diabetes, particularly those from professional bodies such as, the National Institute for Health and Care Excellence (NICE). In addition, practices 1 and 2 were in the process of developing their own evidence based processes of care. Compliance with national guidelines was an aspect of care monitored by the PCTs, but the nurses often used them as leverage to persuade the doctors to ‘sanction’ certain aspects of their practice:

“So it is the COPD [chronic obstructive pulmonary disease] but we’ve got NICE guidelines and I will always, if I find anything with the spirometries or anything, I will take my guidelines with me to the doctor and say look the guidelines state… that’s where we go and they are very very amenable on the whole.” (P4, N1).

“We want them [GPs] to do what we want. If we put an explanation to somebody what we wanted they’re very amicable to…and if the guidelines say that, the patient wants it and there is no reason why [not]…I know in years gone you were just given an outright no…” (P1, PN1).

The nurses did seem to provide certain aspects of care better as they organised and routinised activities in ways that doctors did not, many using evidence based guidelines and the QoF. Those conditions not managed by the practice nurses tended to be less prevalent and more complex. For instance, although heart failure and epilepsy are included in the QoF and the practice nurses and healthcare workers monitored clinical parameters, the management of these conditions (at the time of the research) was decided by the GPs. Consultations in relation to these were typically in response to patient initiated appointments or requests from secondary care, as opposed to proactive management. For many of these conditions there was no system for tracking or managing patients systematically. Consequently requests to monitor and titrate treatment were sometimes lost in the milieu:

“And then you realise it has not been addressed and it’s difficult because we don’t like to keep calling patients back regularly to see doctors it goes against the grain but really unless you are going to get the nurses to do that, that is what you are going to have to do […] we need some sort of better system…” (GP1, P1).

A contributing factor to delays and omissions in reviewing patients’ treatment was the huge volume of patient data received by the practices on a daily basis and the letter format that, following receipt, required a process of administration before being filed in the patients’ electronic record. In some cases the patients were reviewed prior to the practice receiving the letter. More detail about the administration of general practice is included in the following section.
There was no formal system for managing patients with multimorbidity, but medical staff would routinely review patients' medication lists either over the telephone or during a prearranged visit. Their utilisation of the evidence base for particular conditions was much less clear cut amongst GPs:

“Well I suppose we are maybe just slipping into the art of medicine, not just science, where you're balancing the evidence base in trial situations with needs of the individual...erm and I think you have to make a judgement then about balancing which intervention is likely to be beneficial than another. I suppose....it's not really that common, but one that gives us a lot of problems is when people have got COPD and heart failure and possibly AF as well and possibly a bit of dementia erm... and it's even worse for those living on their own. Err... so you have to try and balance it up and do your best really.” (P2, GP1).

Even with single conditions, it was difficult to establish the extent to which the medical staff adhered to evidence and guidelines. For the most part, those GPs interviewed inferred that they ‘more or less’ [P2 GP1] followed the guidelines associated with various chronic conditions and felt their colleagues ‘probably’ did the same:

“We have some practice protocols which are both for the nurses and nominally for other staff for chronic conditions such as diabetes, hypertension etc. Now uhm I mean really for the doctors they are only guidelines and I have to confess myself they are useful, they are there but uhm but I don't necessarily follow them absolutely 100%. I don't know about the other doctors, how closely they stick to things. I imagine that the more recently trained doctors probably adhere to these things more.” (P1, GP1).

Some doctors felt guidelines had little to offer experienced doctors, “I think they are all right if you’ve got no experience in that area or for more junior doctors...” (P2, GP1). Despite an increasing number of guidelines and pathways, the doctors retained a large degree of autonomy in managing chronic conditions on a day to day basis and it was not clear how consistent care was within each practice because decisions regarding patient care were not routinely shared between the practice staff. In addition, there was no widespread use of management plans to aid consistency and continuity across different professionals:

“No, of course all of the patients in our practice have a formalised care plan, it is just not written down...it’s in somebody’s head somewhere” [Laughs]. (P2, GP1)

The absence of management plans made it difficult to see how consistency of care was maintained over time, particularly for patients with multimorbidity and when different
professionals were involved. Another barrier to consistency of care was the changing roles of the staff within the practice in which processes of care were increasingly subdivided into individual tasks so they could be performed more quickly.

4.2.2.1 Sub-specialisation
In attempting to manage the increasing workload, the practice staff sub-divided a number of responsibilities. In all 4 practices the GPs ‘sub specialised’ to some extent and had a ‘responsibility’ for certain conditions for instance mental health or vascular conditions. The extent to which they were involved in managing these conditions was variable and dependent upon the individual GP and, to some extent, the capacity and experience of their practice nurses. This enabled them to focus on a smaller number of conditions and patients, and allowed them to remain updated and skilled in these areas. Similarly, with some conditions the doctor was responsible for certain aspects of care and the nurses and care assistants, others. Whilst effectively dealing with patient demand and the flow of patients through general practice, this sub-specialisation of care fragmented care to some extent, reduced continuity and in some instances led to a degree of de-skilling amongst clinical staff in certain areas of their practice. Despite the expanding role of the practice nurses, the GPs in all of the practices retained overall responsibility for the medication reviews and did nearly all the prescribing. Whilst a nurse in practice 3 could prescribe and another in practice 2 was learning to, their prescribing practice was largely restricted to discrete conditions or symptoms. While most of the nurses did not prescribe, they were largely familiar with treatment options for patients and would make requests to the doctors if they felt certain patients required their medication adjusting. In practice 2, the nurse ran the diabetic clinics independently of the doctors and although she couldn’t prescribe insulin, she could ‘initiate it’, which meant the doctors trusted her judgment enough to prescribe it at her request. In practice 3, the GP with responsibility for diabetes worked alongside the practice nurse:

“Thursday morning is the annual review clinic and they have their bloods done before they come and then they come to discuss the results and we’ll chat about management plans, again have a discussion about how they will manage their diabetes and we have a management card, a self-management card plan and its individualised to each patient because as you know different patients have different ideas about what the priority is for them and it’s got to be the priority for them really and it may be reducing their cholesterol or maybe reducing their HBA1C or it may be stopping smoking or blood pressure [control] and its negotiated at different levels.” (PN2, P3).

“Dr K supports that clinic coz she likes to kind of keep her skills coz she does the GP tier 2 diabetes service within the community on a Thursday morning. So they come in [the patients] to see me, we discuss the bloods we discuss the
management, and Dr K does medication reviews with them when they go round” [to GP office]. (PN2, P3).

The doctors’ involvement in disease management was to some extent determined by their own interest in the condition, but also by the pressure of the appointment system which meant that most days they were scheduled to see 18-20 patients each morning and afternoon session. To cope with the demand on the practice and in particular to optimise the use of the doctors’ time, there was a degree of task allocation and ‘sequencing’ of activities so that as much as possible, doctors’ time, an expensive resource, could be spent on activities that only they could do, such as diagnosing, reviewing medication and complex decision making regarding patient care. Almost all of the routinised care around chronic conditions was devolved to the nurses and all the practices were supportive of nurses expanding their knowledge and experience to be able to manage an increasing number of conditions. This extension to the nurses’ role allowed the nurses to work more autonomously and reduced their dependency on the doctors. It also helped to reduce the doctors’ workload. In their exposure to and management of a number of chronic conditions the nurses were increasingly skilled and, in some instances, were more familiar with current treatment and management of conditions than the GPs:

“I mean I know all the treatments, all the inhalers and devices because I’m using them all the time Dr [Smith] [GP] wouldn’t have a clue”. (PN1, P1).

Similarly, in this practice, if they were unsure about how to proceed with a respiratory patient they would contact the specialist nurses or secondary care services for advice rather than ask a GP:

“Most hospital consultants won’t take referrals from nurses, but respiratory, Dr [Savage] is a respiratory consultant and he would if I wrote to him, he will take a patient because he knows that practice nurses are very often better at respiratory…”(PN1, P1).

Clinical staff in other practices also linked with specialist nurses in the community on occasion and found them supportive and informative:

“But they’re [diabetes centre] not as community based as [Claire] was when she worked for the PCT. [Claire] did an awful lot of education too. She put on an awful lot of educational sessions and organising things, specialists to come and talk to us and she ran various training courses as well for people just coming into the job or who wanted to update themselves basically. Yeah so she was very good, she was excellent, but she’s gone.” (PN2 P1).
Recent changes within the PCTs meant this resource was not guaranteed and where there had been a number community specialist nurses for various chronic conditions, their number appeared to be diminishing in some areas. Links with professionals in secondary care was variable and whereas in practice 1 the nurses worked quite closely with the respiratory team at the hospital, this was not the case with all chronic conditions or indeed with other practices and perhaps reflects the geographical and historical links between the practice and respiratory services at the local district general hospital.

The division of labour and the downward substitution of some clinical roles was reflected in a level of deskilling in some areas of practice. As their exposure to patients with certain conditions lessened, so did the doctors’ experience and skills in this area. The division of roles occurred across all the practices:

“For instance, I don’t do much women’s health now and to be honest it’s difficult to remain updated when you’re not dealing with things on a day to day basis.” (P3, GP1).

The above GP was the lead GP in practice 3 and in admitting his own difficulties in remaining skilled across the increasing range of general practice activities, found a similar deskilling amongst practice nurses:

“We have got the same situation with our nursing team, you know our nurses have particular areas, so you’ve got [Jane] who is extremely skilled in respiratory and COPD probably as high and possibly higher than GPs, but she then..., the flip side of the coin is that she isn’t doing other areas cause she is doing so much in that. It is this balance between the generalist and the special interest that is becoming more to the fore”. (GP1, P3).

Despite the devolution of activity to other practice staff, the workload of the nurses in all the practices continued to rise and each of the nurses sub-specialised in an increasing number of conditions in line with the expansion of the QoF activities. In some areas, such as hypertension and diabetes, where the patient numbers were high, some of the nurses trained to be able to share the load with their colleagues:

“She [the other PN] did diabetes and I did respiratory, but as time progressed and we both got quite busy [...] we had to develop skills in both really [...] we were struggling.” (P1, PN1)

The organisation of many appointments into disease specific and task orientated ones is likely to disadvantage a significant number of patients, particularly those with combinations of
conditions or problems outside those managed by the nurses, leading to further fragmentation of care. These and other themes are discussed in the next section which focuses on the wider influences on service delivery. It uses heart failure as an index condition to explore how services are organised across different organisations and sectors of care and the connections between them.

4.3 MESO

4.3.1 Fragmentation within and across services

Meso level factors illustrate the vertical and horizontal layering of health services and the need for effectively linking provision across individuals, services and organisations. Some fragmentation of care was evident at a micro level within general practice, but also between general practice and the community and secondary care services. This fragmentation created interdependencies between the different aspects of provision and with the addition of extensive administrative responsibilities, all construed to challenge the effectiveness of care for people with multiple chronic conditions.

Relational continuity in general practice was historically provided by patients being registered with a particular GP. The recent devolution of activities in general practice, coupled with the nurses’ responsibility for chronic conditions, suggests that continuity of care is much more likely between the nurses and the patients. Whilst the GP-patient relationship continues to be a revered characteristic of general practice, the ability of GPs to provide it for people with chronic conditions is increasingly challenged. Not least because of the volume of work a practice is required to manage in a day. Patients’ acutely unwell need to be seen quickly and practices cannot meet this demand if patients expect to see the same doctor or nurse each time. Currently in most practices, patients are likely to be registered with the practice rather than a particular GP. This is largely due to the ‘rapid access’ initiative, a contractual arrangement which stated that patients should be able to secure an appointment with a doctor within 48 hours of requesting one. Often practices could only achieve this target if the patient was willing to see any doctor, rather than the one they were initially registered with. Most of the patients interviewed for this study could book to see their own doctor if it was a planned appointment but if they needed to see somebody within 48 hours, they would usually have to see whichever doctor was available. In P3, one of the patient’s interviewed could not book to see his own doctor, even for a planned appointment the following week:

[Researcher]“I can only see him if he happens to be the duty doctor on that day and if I say, well tell me which days he’s the duty doctor they won’t [tell me].” (P3, P3).
The doctor above spent a lot of time outside the practice working with the PCT and the local clinical commissioning group. The point in mentioning it here is to note the changing context and the increasing involvement of GPs in non-clinical activities both within and outside of the practice. Whilst these absences often accrue a locum doctor, consulting different doctors, even those known to the practice, is likely to reduce the continuity of care for patients with multimorbidity:

[Researcher] “Do you always see Dr [Smith] or do you sometimes have to see someone else”?
[Patient] “Sometimes I see, Dr [Brown]…but you’re wasting your time because the simple reason is, you get used to one doctor he knows you, he knows the tablets you’re on so consequently… do you know what I mean? But you go and see Dr [Jones] or someone like that and all they’ve got is all that comes up on the screen he doesn’t know you… you know what I mean”? (P3, P1).

“Well they send a doctor [to visit at home] but they don’t know you and they ‘aven’t got your notes and so by the time you’ve gone through everything, it’s time for them to go…and nothing is sorted out.” (P3, P1).

The lady above had multimorbidity and had recently been discharged from hospital. She was referring to the time taken in explaining her problems to someone who has only just met her. An additional barrier to care continuity in this case was the absence of her medical record (out of hours doctors do not have access to the patient’s electronic record), which meant the doctor could not review the rationale behind current treatment regimes and was reliant upon the patient’s recollection of events.

Consulting different doctors did not seem to be an issue for those patients with less complex conditions or those with an acute problem:

[Researcher] “When you go and see your GP do you try to see the same one?”
[Patient] “No chance, you’re lucky if you can get an appointment”
[Researcher] “Would you prefer to see the same one”?
[Patient] Erm …not particularly I don’t think it matters as long as they are reading what’s on their computer about me, then that’s alright. (P1, P3).

“Well as long as they’ve got the computer in front of them, it is all there. I mean I am under Dr [Brown] but I never see him, nah I don’t think it matters” (P1, P4).

[Patient] I don’t really go to the doctor, but if I need to they just give you the next doctor who’s free.
[Researcher] Would you rather see Dr Smith [heart failure doctor]?
[Patient] I’m not really bothered, they’re all pretty good. (P2, P4).

Although this patient was registered as having a number of chronic conditions, asthma, heart failure and atrial fibrillation, he was a young man in his late 30s, with no mobility problems or ongoing health issues on a day to day basis. Continuity of care, or lack of it, was not an issue. For older people with multimorbidity, or those whose condition was unstable or at an advanced stage, relational continuity is likely to provide a more pragmatic approach and aid consistency in care.

A key observation of this research was the spectrum of need within disease groups, people with diabetes for instance, do not represent an homogenous group and neither do people with multimorbidity. This was evident in the patient participants and their experience in accessing health care. The younger man cited above, had no problems attending appointments, partly because he was generally well, but also because his appointments were yearly and he had his own car. For the older, more frail patients, particularly those who were dependent on public transport, travelling to appointments, even at the practice, could be challenging:

[Patient] “I went out and I couldn’t walk proper, but I used to walk all over, I never got on a bus. And then I thought well I’ll have to, she said ‘the bus is her’e and my daughter said to me ‘well the bus is there mam, use the bus’. So I said ‘well I’ll have to do’, I said I ‘feel like I’ve done a hard day’s work and I’ve only walked to the bus stop”. (P1, P).

[Patient] “Oh yes, well… I have to get a taxi from the door to where I am going, well the surgery is down that way […] Lane East, the chemist is not far from it. So if I have to do anything with the surgery or chemist I can grab a taxi and go. At one time there was a bus but that’s gone now. Now there is a bus service that comes back this way, circular 77, it’s supposed to come every 20 minutes but you can be out there an hour. (P1, P2).

The current organisation and fragmentation of services meant that patients with multimorbidity and a high level of need were often burdened by multiple appointments, not all of which are confined to the practice:

“It costs some of our older patients 5 pounds to get down here in a taxi and they only live a mile up the road. Well they can’t be paying out 10 pounds every week.” (P2, PN1).
To some extent as independent businesses, general practices can decide what services they provide and how they provide them and this explained a certain amount of variation in provision between practices. P3 provided a community coagulation service, a service traditionally provided in secondary care; most people registered at other practices in the area were still required to attend secondary care for the same service. Indeed at the time of this research the difficulties of a housebound patient attending a coagulation clinic at the acute trust had been brought to the attention of the practice:

“He lives across the road but he’s not registered at this practice, but his daughter asked us if we could do his warfarin monitoring, but we send our patients to [the hospital]. He had just been discharged from hospital, but he was unable to get in a wheelchair and so the first time he went to the clinic he had to get a two man ambulance and his daughter thought this was too much for him every week. Let alone the PCT who thought it was too much money to send a two man crew to take a man to outpatients and back, that must be a few hundred quid. Anyway it’s ongoing” (Practice manager P1).

The extract above illustrates the variation in service provision, had this gentleman been registered at Practice 3, he would have had the benefit of a home coagulation service. As it was, neither his own practice or the practice nearest him provided this service. Of those people interviewed for this research (particularly those who were functionally more independent and had their own transport) accessing services across the city was not too much of an issue. For those who had several chronic conditions, were under a number of providers geographically dispersed and who had mobility problems and/or were reliant upon public transport, travelling to and from numerous appointments could be problematic:

“This is another thing they’ve altered at the [practice]. I used to go and have my blood done there and the last time I went to the hospital to have it done I just thought I was never going to get out. It was 92 [ticket number] when I went in and I was there half an hour before my time and I thought I don’t believe this. And I had to keep getting up because I kept getting cramp and one thing and another and […] and when I come out I’d just missed a bus and the next bus was another hour. I said I just couldn’t believe that they could do that I said I used to go to this surgery get my bloods get on the bus and come back home end of story. I said why they’ve stopped that, I think it’s stupid cause there must be hundreds of patients who it’s not convenient for.” [P1, P1].

Even travelling the short distance to the surgery was an issue for some patients. In practice 1 they had stopped doing routine bloods (except for housebound patients). When asked why, the practice nurse explained they could spend all day just taking blood and even though they had
trained two of the administrators to take blood, the inference was they could utilised their skills better doing other (more lucrative) things. Similar to the patient in the above scenario, the lady in the extract below had difficulty accessing services, even though she could see the practice from her house, her husband was 80 years old:

[Mrs Jones] “Well I’ve never been out for months. I can’t expect [Mr Jones] to push me through snow but [the practice nurse] can, just for a prick of the finger, to go down and come back again.”

[Mr Jones] “3 minutes work, we had to wait 20 minutes before she sees us, I mean she gives us a time to be there and we are always there quarter of an hour-20 minutes before, depending on the taxi, we get a taxi down, it’s ridiculous from here but I’m just not up to it anymore pushing it [the wheelchair] around it is too much, […] and then when you get there she is late seeing to you and your sort of in out, stick that plaster on there, okay, bye. For 3 minutes….” (P3, P1).

Changes to the service provision in general practice and the wider health system meant some services were moved to different facilities across the city. All the practices used a centralised referral system whereby, in most instances GPs had little influence over which providers patients were referred to in the community and secondary care:

“Since they have brought in this new system there are very specific contracts and the pressure is on you to send people in certain directions and the choice is much more limited and sometimes there is no choice at all. You refer someone to physio and they have got to go to [a community physio in the city] and they’re saying, but I went to north [of the city] last time and that is where I want to go” [GP1].

“So he said he’d send me for a scan. My daughter took me for that and we couldn’t find it. It was in Wythenshawe [12 miles away], we went to the wrong one and he tried to direct us to the right one and it was miles away and I said they’ll not see to us now Bev… any road when we got there they were still there and they said no they’re here till 9 o’clock so I said we’ve been riding round for 2 hours trying to find you. It was in a field and there was just a little hut thing […] and you see the more I was getting worked up my breathing was going.” (P1, P1)

Although travelling to appointments can incur substantial costs to the patients and their families, in some instances travelling further was actually beneficial as it provided a more comprehensive service, the following patient was eligible for hospital transport for this service and so did not incur a direct cost:
[Patient] “I have to go to the eye place in south Manchester goodness knows where it is, it’s about 8 mile away” 
[Researcher] “It’s not the eye hospital then” 
[Patient] “No, it’s a one stop shop there for cataracts.”

However, the main benefit was the ‘one stop shop’, which meant a series of tests and or treatments delivered at the same time in the same place, reducing the burden on the patient and their family.

In addition to general practice, in recent years there has been a diversification in provision whereby patients have had an increasing number of options in accessing care in the community. The GP in practice 4 listed several different points of care:

“So you’ve got 8 accesses to primary care based medicine. And you’re going to get 7 different opinions or you’re going to get 5 people that say go away it’s a viral thing but the other 2 are going to give antibiotics. You’re going to have this [healthcare] culture of shopping.” (P4 GP1).

The doctor felt that these organisations, such as walk in centres, undermined general practice and further fragmented care by breaking the consistency of care usually provided by attending the practice where the patient was registered. There was limited evidence of comprehensive services beyond those that centred around individual conditions and where episodes of care were completely based in one facility.

Multiple providers increase the potential for fragmentation of care. To some extent this can be allayed by effective communication. The following example provides an interesting insight into the challenges of continuity in care when aspects of provision are divided across a number of professionals and organisations. Two of the practices included in this research were ‘early adopters’ and were piloting a new version of an electronic patient management system called EMIS, a feature of which included the logging of all contacts between the patient and the local health system. These contacts reflect practice activity that is often unrecorded (and unreimbursed) elsewhere. ‘Contacts’ include any communication or activity relating to a particular patient. As well as the obvious events such as appointments, referrals and telephone consultations, it also includes third party contacts, such as requests from district nurses, telephone queries from relatives, or prescription queries from pharmacies. Whilst many of these contacts are easily managed by checking the patient’s notes or messaging the doctor, the sheer number of them collectively generates a huge amount of additional activity for the practice and can disrupt the normal routine activities.
Patients with multiple chronic conditions, receiving care from a number of providers not surprisingly tended to have the most contacts. One of the patients on the heart failure register had over 400 contacts in the previous year. Whilst this was at the extreme end of the spectrum, it was not unusual for patients to have over a hundred contact entries. The box below (Box 4.1) is a snap shot of a patient’s 3 month contact record. The previous year the patient had 113 recorded contacts, 5 months into the current year he had 43. As well as heart failure and COPD, this gentleman had recently undergone a vascular operation on his legs and had a chronic leg ulcer which the district nurses were dressing.

The extract below (Box 4.1) provides an interesting insight into the ‘black box’ of healthcare in which ensuring the patient had the appropriate dressing took 15 contacts and/or exchanges between general practice, the acute trust and the district nurses. Now whilst it is likely that in this instance a certain amount of additional activity (and delay) was generated by the patient’s wound becoming infected, the overall process was fragmented and elongated by the need to share information across providers and the difficulty in doing this effectively within the current systems. The example used suggests that changes to the way services are organised, in some instances, has not been accompanied by appropriate adjustments in the way communication systems and supporting services are provided.

The problems associated with organising dressings for patients reflect the wider issues of service provision in a fragmented system. At one time, practice nurses used to do a lot of dressings, these are now contracted to a local clinic and the practice is not reimbursed for any dressings they do.

District nurses will undertake dressings on patients who are housebound and consequently have a budget for dressings, but many cannot prescribe them and so will ask the patient’s GP, usually by fax. These dressings are then paid for out of the practice’s budget. The practice no longer keeps a stock and dressings are therefore ordered on an individual patient basis. Each request for dressings is checked by the administrative staff at the practice and is sometimes referred to the practice nurse or doctor for authorisation if unusual or expensive:

“We had one request and when I went to order it, it was going to be £365 for a box, so I said to the GP, do you know how much these cost? And sometimes, they [the district nurses] don’t even use the whole box, they’ll try them for a few days and decide they’re not working and switch to something else and the dressings just get wasted then because you can’t use them on anyone else” (P1:Administrator).

Lots of activity is generated around the ordering of dressings. The district nurses will fax over a request which is checked by the administrators. If it is a new type of dressing or one not regularly used in primary care (initiated in secondary care), the nurse will probably not know what sizes or volumes are available. The administrator will check the catalogue and try to
contact the nurse for clarification, usually leaving a message on the answer phone requesting that the nurse telephones the surgery. The administrator also checks the amount and cost of what is ordered as dressings are single patient use only, so if it is likely that the patient will switch to another in a couple of weeks, a smaller box will be ordered. Expensive dressings are authorised by a GP, who will sometimes check with the district nurse the need for particular dressings and discuss any possible alternatives.

Box 4.1: Transcript from electronic patient record

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 February</td>
<td>Fax from district nurse (DN) requesting dressings</td>
</tr>
<tr>
<td>7 February</td>
<td>Outpatient letter from vascular surgeon</td>
</tr>
<tr>
<td>9 February</td>
<td>Culture and sensitivity result for wound swab</td>
</tr>
<tr>
<td>15 February</td>
<td>Patient attended for COPD review</td>
</tr>
<tr>
<td>16 February</td>
<td>Request from district nurse for dressings, has run out of those supplied by acute trust. [Staff to check with doctors]</td>
</tr>
<tr>
<td>17 February</td>
<td>Request from district nurse to speak to doctor [time given for D/N to telephone doctor]</td>
</tr>
<tr>
<td>17 February</td>
<td>Telephone contact Dr D and DN. DN worried that wound on patient’s leg infected.</td>
</tr>
<tr>
<td>17 February</td>
<td>Patient telephoned to make an appointment for fasting bloods</td>
</tr>
<tr>
<td>22 February</td>
<td>Letter from vascular clinic (specialist nurse), continue with same dressings</td>
</tr>
<tr>
<td>28 February</td>
<td>Patient attended for blood test, blood glucose and Hb</td>
</tr>
<tr>
<td>4 March</td>
<td>Chronic disease review [Dr D]</td>
</tr>
<tr>
<td>29 March</td>
<td>Request from district nurses for dressings</td>
</tr>
<tr>
<td>4 April</td>
<td>Swab sent and received from DN, Drs need information regarding clinical context [staff have to ring DN for more information]</td>
</tr>
<tr>
<td>7 April</td>
<td>Fax from DN for dressings (Dr to check request)</td>
</tr>
<tr>
<td>7 April</td>
<td>Message left on DN ansa phone to contact Dr [re-dressings]</td>
</tr>
<tr>
<td>8 April</td>
<td>Telephone conversation between GP and DN re-swab result, needs antibiotics</td>
</tr>
<tr>
<td>9 April</td>
<td>Request for 3 dressing and a surgical boot different from previous dressings</td>
</tr>
<tr>
<td>10 April</td>
<td>Message left on DN ansa machine, no size on dressing request</td>
</tr>
</tbody>
</table>

This overly bureaucratic process is exacerbated by the fact that the person prescribing and ordering the dressing is often not the one who will be using or evaluating it. Similarly, many of the nurses are based some distance away from the practice and do not have direct access to the patient’s electronic record. Information and communication is therefore largely via fax and telephone messages. Even if they did have direct access to patient information, there is often a delay in information sent from secondary care to general practice and from general practice to district nursing services. This complex scenario of sourcing the correct dressing for a patient is another example of how fragmented systems can create inefficiencies and unnecessary work, not just for practice staff but across the healthcare system. This additional work is born by both the clinical and administrative staff.
4.3.2. Administration and organisation

4.3.2.1 Information flows

General practice manages a huge amount of data on a daily basis, the timely receipt and delivery of which is an important mechanism in facilitating appropriate and timely patient management. Whilst the introduction of various electronic databases, including the patient record, have greatly improved the flow of information to and from general practice, issues with the interoperability of systems, the dependency on services up and down stream of general practice and the resistance of aberrant individuals to work within the systems and organisation of care, all contributed to delays in the data flows that inform and facilitate continuity of patient care. Missing or delayed information often created extra work for the practice staff. The efficiency of communication and information flows between professionals and across organisations was an important part of continuity and consistency of care. Early in the fieldwork it became clear that sourcing patient data and information sharing occupied a significant part of everyone’s day, including that of the clinical staff. The management of prescriptions, a seemingly innocuous activity, provides an interesting insight into how sourcing information can be both frustrating and time consuming for clinical staff as well as administrators.

Professional requests for prescriptions came from a variety of sources including: secondary care; district nurses; community matrons and nursing homes. Frequently changes were initiated in secondary care but the practice had no record of this as discharge summaries are still largely sent by post. Changes to patients’ medications were left for the GP to advise on and sometimes required the administrator to telephone the hospital or requesting professional for further information. Both the administrative staff and the doctors found this time consuming and frustrating.

Each practice had their own administrative and managerial systems to facilitate information flows, but were all generally similar in structure and organisation. The interdependence of these systems with other services and systems, meant there were regular disruptions to the flow of information, usually due to delays in receiving information from secondary care. This subsequently affected the ongoing continuity of care:

“I think there are probably faults on both side but I think access to information from secondary care is non-existent for the PCT they can’t get access to that, so they are reliant on us to send that out so sometimes it’s a matter of a discharge summary might never have been dictated and they may not have known that a patient’s been in hospital and have no documentation of that episode so I don’t understand why we can’t share the same systems.” (HFN6).

This nurse was seconded from an acute trust to work with general practice on a project with a heart failure team. Her insights’ into the problems from both perspectives was interesting:
“And even secondary care is at fault because you move trusts and they’ve all got their own sets of notes it’s just information is kept in certain areas and it doesn’t really make for a seamless service for the patient because they get asked the same questions over and over again and so I don’t think it is just PCT and secondary care, even within the trusts you see the same things the same issues but yeah it’s interesting to see, it would make patient care a lot better and a lot more seamless if we could all share information but I am sure it would be useful for us to see the primary care records as well erm especially as they get elderly they get more comorbidities.” (HFN6)

In all settings the doctors were ultimately responsible for the patients, even when large parts of disease management were devolved to the practice nurses. Typically, the supporting systems had not adjusted to reflect this and continuity and consistency of care were sometimes disrupted by traditional professional hierarchies and suboptimal communication flows:

“But very often I get a patient that comes in and there is a load of correspondence about something […] and it’s all gone through the [clinical lead] and I have no idea that it has gone on…so they do get in touch [GPs] but not with me. And then I think, well how can he [the heart failure specialist] answer that, he doesn’t see them [the patients].” (HFN2).

In the above trust the nurse sees the patients in clinic and will write to the GP with any changes to the patient management. The GPs will often reply directly to the heart failure consultant and a series of decisions can be made without the nurse, managing the patient, being aware of this. Not only does this create work for the nurses, it also undermines the patients’ confidence in the nurses and the service when they appear not to know what has been happening. As nurses extend their roles and increasingly refer to other services, the problems associated with information flows become more apparent in general practice as well as secondary care:

PN “[T]he communication between secondary care and other tertiary services is to the GPs, never to the nurses who are actually doing most of the work on the ground. I mean we also do home visits as well, we do annual reviews at home you know, but yeah I think the thing is, the frustration is sometimes you can be managing a patient and erm you’re doing the management and actually you’ll get a letter to the GP and you sometimes don’t even see that letter because the letter will go to the GP and that’s the frustration because sometimes you don’t actually see the outcomes, you don’t see the follow up and what happens, unless you actually make an effort to go and actually route it out, because it just gets seen by the GP and scanned to notes.” (P3, NP).
An additional problem which contributed to disrupted information flows was the continued reliance on letters and the postal system to relay information within and between different organisations. The PCTs had recently started to charge the acute trusts fifty pounds if a patient’s discharge letter was not received within 48 hours of discharge. However the GPs in practice 2 were not convinced this was enforced and lamented the delays in receiving information on patients’ hospital stays. Most of the communication between professionals in primary and secondary care continued to be paper based and had to be changed manually on the patient record and/or scanned and then individually attached to the associated contact. As much as scanning documents was formalised within the administrative routines it was a constant battle to keep up to date with the daily influx and meant there was an inevitable time lag between information being dispatched from the acute trust and being available in the practice based electronic record.

All of the practices had some automatic links with particular databases at their acute trust, typically access to blood results which would automatically be transmitted electronically. Some also had access to clinic letters and radiology results, however this was variable depending on the hospital. Two of the practices were equidistance from 3 different hospitals, each with their own systems of information distribution. With many patients attending different hospitals for different specialities and services, retrieving relevant data could be difficult and time consuming. Similarly, with the centralisation of certain services across the region, tracking data could be cumbersome. Most of the practices had paper lists of services not covered by ‘Harmoni’ (referral clearing house) as a reference for referral of patients and retrieval of information. This was 4 pages long in practice 1. In addition, numerous flyers for different services were posted in the offices of all of the practices. None of the PCTs connected to the practices produced a comprehensive list of current services in primary care which created problems for staff in both primary and secondary care and disrupted informational flows:

“You know if you look at secondary care services […] you know who you are referring to because you know what kind of services they provide and you’ve got these kind of directories if you like, there is nothing really like that for primary care anymore […] so a patient will be seen in secondary care by a registrar or someone and a letter will have come out, but they will hang on to them [the patient] because they don’t know what services our practice has got in place if they discharge them.”

(P3, PN2).

The above practice managed diabetic patients with complex needs, but often found that following admission to an acute trust, the patients were referred back to tier 2 services because the discharging team are unaware of the different levels of service provided by individual practices. The practice nurses liaised with tier 2 services to negotiate the early transfer back of
patients, but this added to the workload of the practice and could disrupt the continuity of care for patients.

The provision of care across a number of providers meant that different information was stored in different places. Where information was not available via a shared database, delays in information were a fairly regular occurrence. Missing patient information could delay treatment and generated additional work for the practice staff. For instance, one of the secretary’s in practice 2 described an issue with referring patients to the heart failure nurses. For patients to be accepted by the heart failure team, the results of a cardiac echo had to be reviewed prior to a consultation being arranged. The echo may have been undertaken in a different facility to the one where the heart failure services were based and the results were not always available electronically. In these situations, an administrator, usually the secretary writing the referral, would be obliged to track down the report and attach it to the referral. This often involved contacting a number of people at the acute trust and leaving telephone messages with requests to ring back. With thousands of patients registered, tracking missing data can be time consuming and an inefficient use of time. In these situations, the ability of the practice to facilitate timely reviews of patients is constrained by their dependency on other services to pass on the relevant information.

“I keep a list now, these are the times I’ve contacted someone at the hospital, usually you get an answer machine, or you get someone who doesn’t know but says, I’ll ring you back, well they never do. So I write a list and so I know exactly who I have spoken to and when and what they’ve done about it. But it can take a few phone calls.” (Secretary, P2).

Organising prescriptions was another time consuming and laborious for all the practices and was often made more difficult due to the need to liaise with prescribers external to the practice, and a reliance on the effective flow of information between providers.

Prescriptions
In their practice of nearly 7000 patients, practice 1 had well over 100 requests for repeat prescriptions daily. In the days prior to a bank holiday the number could increase to nearly 200. Each request was individually checked to ensure that the patient was prescribed the medications requested and that they are intended to be repeat prescriptions. The staff also checked that the patient had not submitted a request too early (which could indicate the patient was taking too many tablets or too often). The administrators check the prescription against the patient’s electronic record. ‘Legitimate’ repeat prescriptions are put in a pile for the GP to sign. Some prescriptions require the patient to be reviewed by the doctor prior to being issued and the administrators will book an appointment with the doctor, which may be a face to face consultation or via the telephone. Other prescriptions may require clarification which may be
due to a request for an increased dose of a medication, or a change in the administration schedule of a drug.

Each member of staff in the 4 practices had access to an electronic ‘task’ program and the administrators’ (mainly) actioned various task activities to the clinical staff electronically in ‘real time’. This allowed doctors and nurses to fit them in around patient consultations. In the process of authorising prescriptions, GPs were required to electronically ‘sign’ off on their medication related tasks before a prescription could be issued. Whilst the administration staff thought this generally worked well and was an improvement on the previous system, all the practices had occasions when some of the GPs would omit to confirm that they had completed the tasks and so when patient’s came to collect their prescription it was not ready and they were asked to come back. In spending time in each of the 4 practices’ reception area, only practice 4 did not have a least one patient on a daily basis calling in for a prescription that was not ready. During the study period one patient in practice 3 was asked to come back 4 times:

“It’s not normally 4 times, she [the patient] came back on Tuesday but it [the patient review] wasn’t checked on their notes, so I think it just got missed again, but we have plenty that have to go home and come back the next day. Some doctors are worse than others, they forget to tick that they have done the review, but then if we don’t know…[…] I don’t think they realise the hassle [they cause] and of course we have to tell the patient which isn’t always nice.” [P3, receptionist].

Delays in issuing patient prescriptions were not always the result of disrupted information flows within general practice or from other providers. A small number of patients’ across the practices would (sometimes unintentionally) challenge the system by requesting repeat medications when they had failed to attend for their review or unilaterally change their medication without discussing their changing need with the practice staff.

4.3.2.2 Interface between clinical and administrative staff
The administrative activity on a day to day basis, in all the practices, appeared frenetic. As much as possible the staff would try to complete these tasks without having to disturb the clinical staff, however the GPs (in particular) were at risk of a daily barrage of interruptions to their scheduled practice. These appeared in a number of formats such as: electronic messaging, telephone calls and administrative and nursing staff knocking on their door. Each patient encounter incurred a certain amount of administration activity for the clinical staff, i.e. updating the patient record, generating a prescription or referring patients to other services, however, in addition to this there was an unpredictable daily amount of other activity that often competed for the doctors’ and nurses’ attention. For instance, telephone calls from patients, clinical staff in primary/secondary care and relatives. The length of these calls varied but could involve prolonged discussions. This additional activity was coordinated at the discretion of the
administrators and forwarded to the appropriate person. Anything deemed not urgent was conveyed via the messaging system and, where possible, scheduled into a clinician’s timetable, however throughout the day there was a constant stream of interruptions to the practice routines. All of the practices had a ‘doctor of the day’ who would have some allocated slots in which to address unscheduled activity, however this was often not enough to ensure that other clinical staff remained undisturbed. These interruptions encroached on an already busy diurnal schedule and involved staff trying to ‘recoup’ time throughout the day. This was largely done through ‘hurrying’ consultations which often became shorter and less in-depth if the session was over running (P2, PN1), or by heuristically prioritising the patient’s main issue [P2 GP1].

The administration of healthcare proved to be an important factor in facilitating continuity and coordination of care within the 4 practices studied, but during this research, appeared to run largely in parallel to the clinical services. Of the 4 practices, only two held practice meetings that included administrative as well as clinical staff. From observing these meetings, it was noted that the clinical staff did not appear interested in the organisational issues experienced by the administrative staff, even when it was their behavior that contributed to these issues [P1 and P3]. In addition, there was an increasing amount of administration that had to be done by the doctors and nurses before the administrator could complete their part of it. The administrative dependency on clinical staff regularly created delays as a small number of GPs were seemingly unable to work effectively within the organised systems. For the most part, across all the practices, some GPs appeared to eschew administrative activities that weren’t directly linked to patients and would resist attempts by the practice staff to up-date them on new developments. For instance, the PCTs were in the process of converting practices to a new edition of their electronic patient management system and the manager in practice 1 was explaining that various training sessions would be available for staff:

[GP1] “Well they won’t be for the doctors”.
[PM] “They are, they’re for all staff”
[GP1] “Well why do we need to go?”
[PM] “So you know how to use the new system”
[GP1] “I’m not sure that’s a good use of our time.” [P1: joint clinical-admin. Meeting]

The practice staff would develop lists and prompts to encourage the GPs to comply with the various systems in place and whilst adherence was variable, the administrators thought it was better amongst the younger GPs. Similar behaviour was noted in practice 3 whereby only one of the 7 GPs filled in the computer templates correctly, causing more work for the practice nurses:
“Yeah but in some cases, a bit like the chronic disease management really as far as data entry is concerned, we use the templates, GPs tend not to use the templates very well so apart from the odd one or two…”

“…who always uses them, so for read code entry and trying to get information that you can retrieve it’s sometimes better that we do those.”

“Yeah you sometimes wish they hadn’t done anything [laughs]. yeah it doesn’t matter how many times you tell them and then partly it’s because they just need to get it done quickly and then they just don’t get into the same habits that we do.” (Practice 3, nurse meeting).

Despite the negative impact this had on their own work and practice efficiency, in a number of instances the administrators appeared to have little or no professional or organisational support to address these problems.

In P2, the administrative staff would have a separate practice meeting monthly to which the clinical staff no longer attended (through choice). One of the GPs suggested in passing, this was because their professional time was better spent elsewhere, “they just go on and on about nothing” (P2, GP4). Practice meetings, that included the administrative staff, were a forum in which information could be shared and discussed, and where administrative issues could be raised and formally addressed. For a number of different reasons, none of the meetings in any of the practices were effective in addressing the frustrations of the administrative staff. Practice 1 would hold a general meeting every month for the staff to discuss any issues. An agenda was typed and pre-circulated. Although the practice manager usually attended the meetings, on this occasion she was on holiday. After a discussion in the general office, the administrators decided to send a message to the GPs suggesting they may want to cancel it, given that the practice manager and one of the nurses were away:

“I don’t know why we go anyway we’re not allowed to say anything).”

“Why aren’t you allowed to say anything”?

“Oh, Dr T. doesn’t like us bringing up any issues, he thinks if we’ve got something we want to say we should bring it up with Claire [the practice manager] before the meeting and then if she thinks it’s relevant, she can bring it up”. (Practice1: impromptu conversation).

Several of the other administrators agreed with this and at the meeting, it was interesting to see that the GPs sat at one end of the long narrow table and the administrators and healthcare assistants sat at the other. The nurse sat in between the two groups.
A practice hierarchy between the clinical and administrative staff was evident to some degree in all of the practices whereby the concerns of administrative staff whilst often acknowledged, to some extent were largely unsupported and unaddressed by the clinical staff:

The first 3 issues were all related to administrative systems which weren't working because some of the doctors weren't following them. One doctor in particular would not even attempt to use the system and despite several reminders just “did his own thing”. The lead GP suggested “naming and shaming” the doctor as ‘we all know who it is’ (P3, GP1), however, the administrative staff felt they had already done this but their concerns were just ignored. The particular doctor in question didn’t attend the meetings and previous attempts to ‘get him on-board’ had failed.

It seemed clear that the administrative staff had felt they had done what they could and were hoping that the GPs present would talk to the particular GP, however, this was not suggested and none of the GPs volunteered. Quite quickly into the meeting, people started losing interest in what the person speaking (an administrator) was saying and there was a lot of peripheral conversations, people talking over each other and chipping in with ‘related’ anecdotes that weren’t really relevant. It appeared that the clinical staff did not appreciate the level of disruption caused by not following the administrative systems and the effect of these disruptions on the administrative workload and the quality of the service.

(Observation of P3 meeting).

During the fieldwork several GPs made comments about the organisation of care within and outwith the practice that suggested they were unaware of how certain aspects of the practice functioned. The following transcript is an extract from one of the monthly joint meetings of practice staff (P1):

[GP3] “The patients going for scans and x-rays are no longer going to the same hospital, is there a new system in place”?
[Administrator] “It’s not new, it’s been in place for some time.”
[GP1] “Jane’s [the secretary’s] ‘hints’ list is useful to know who to refer to, where and in what circumstances.”
[GP2] “I don’t think I have a hints list. Do I have those forms?”
[HCA] “It is probably in the drawer that says x-ray referrals [general laughing].”
[Secretary] “You don’t need those forms.”
[GP] “No because I get you to do them for me” [general laughing].” (P1).

At the same meeting, the administrator was explaining some of the changes to the QoF and how the practice was intending to manage these changes, following which one of the GPs said, “well that’s as clear as mud, I know nothing” [GP2]. The non-clinical work involved in delivering
the QoF appeared to come as a surprise to the doctors, "[w]ho does all the administration of this routine monitoring? "We do!" [Administrator]. You must be tearing your hair out?" [GP2] (Practice meeting, GP2).

Practice 4, a private practice, had only ever had one meeting in the time it had been open (over 2 years). The assistant practice manager explained the reason for this was largely due to the company’s contractual arrangement with the PCT, which stated that the practice must remain open all day. Another reason may have been due to the structure and organisation of the company which was much more hierarchical and assumed many of the managerial responsibilities and decision making normally undertaken within NHS practices. This frustrated the practice manager who felt processes were unnecessarily complicated and prolonged because of the number of people involved outside of the practice:

“There are a lot of people involved and like this problem that I am trying to sort out now, wages get mixed up mistakes do happen, I mean it gets rectified, don’t get me wrong, but it’s so time consuming when you have to sort problems out and people are ringing you”. (P4, PM).

“The GPs do [have meetings] and they are all on different levels so for instance they have a GP meeting next month, so all the lead GPs from all the practices will go and see the lead GP. You see there is also not only lead GPs within the practices, there is also like a GP over all the lead GPs, it’s very tiered and it’s totally different than a normal practice”. (P4, PM).

Although the GPs from the company met regularly there was, at the time of this study, no opportunity for the rest of the staff in practice 4 to do so and consequently, some administrative and organisational issues took longer to resolve than they would if they were managed ‘in-house’, because a significant proportion of these were deferred to the parent company.

The nature of healthcare, particularly in relation to people with multimorbidity, means there is an inevitable degree of administration and decision making related to clinical care that needs to be shared with various stakeholders. However, most of the practice staff felt that there was an increasing amount of paperwork and form filling, particularly in relation to recording of their activities. Much of this required producing data sheets to prove the relevant amount of activity had been undertaken to comply with the targets and/or contractual arrangements. Similarly, practices are charged for certain community care and hospital admissions and all the practices had a system for checking the accuracy of this data:
"We get a list of all our patients who attend A&E and who are admitted to hospital. We check the data every month because sometimes mistakes are made when they charge for so many days admission and you realise they’ve made a mistake over the number of days the patient was in [...] we don’t do every one, but we might check the top 20 each month, it is time consuming, but you can save a lot of money." (Practice manager P1).

"MAGIC tells us when our patients are seen in other parts of the system, A&E or walk in clinic. ‘Drill down’ I hate that expression, but we need to find out who the patients are so that they are not misreported or reported twice. Some hospitals record patients as new when they are actually follow up and the difference in costs is really noticeable.” (Practice manager, P2).

“I do all the vaccinations. We get this computerised print out of all the children in our area that should have had certain vaccinations in each quartile and we have to check on our system that they have had them and then fill in a return’s sheet to the PCT. It’s a bit of a pain really because it is not always obvious, we get loads of people with the same names or who live at the same address and then you have to go into individual records to try to work out if they are the same person.” (Administrator P2).

Although some of the data needed could be downloaded automatically, there was still an element of effort required by the practice staff to ensure the downloaded data was correct and that it was shared with the appropriate people. This occupied several hours each day and was in addition to other (mainly clinical) data that had to be recorded manually for each patient contact. Similarly, the PCTs monitored a number of non-clinical activities in the practices including for instance, the receipt and review of NICE guidelines and the practices were obliged to notify them when the medical staffed had read the new guidance. An increasing part of everyone’s role in the practice was supplying data in support of their contracts with the Primary Care Trusts (PCT) and their compliance with health policy. Practices 1 & 3 were in the process of having their PMS contract reviewed and the managers complained how time consuming this was, collating and checking the appropriate data. Practice 3 was the only one of the 4 with an IT manager, who helped to systematise all the relevant data. Even with this extra help, “proving” that the practice had delivered on its contractual agreements was increasingly onerous, but necessary in ensuring the appropriate levels of reimbursement were paid and for determining indicative budgets for the following financial year. At the time of this research the introduction of the general practice accreditation scheme was an additional administrative burden challenging the practice staff.
4.3.3 The Chronic Care Model

None of the practices used any recognised model of care for managing multimorbidity or chronic conditions. In general, there were no community links with non-health organisations although one of the practice nurses (practice 4) was considering linking with a local exercise programme. Care was organised into a series of disease specific appointments that were largely framed around the biomedical model. Routine reviews of patients with chronic conditions included in the QoF were structured around electronic templates. Whilst the care of certain conditions was shared across secondary care and general practice, there were few examples of formalised linkages (in terms service level agreements or management plans) to suggest any organised collaboration or integrative working above that forged between individual practitioners. Similarly, although there were no formalised programmes of self-management support in any of the 4 practices, the nurses in particular when they had time, tried to encourage and support aspects of self-care. Whilst may aspects of care were fragmented across a number of providers, integrative mechanisms such as management plans and specialists working with GPs, were not widely used. Decision support was typically similarly limited to advice being sought from the hospital consultant on an individual patient basis. The usefulness of the clinical information systems used in general practice was somewhat constrained by the lack of interoperability with those used by other providers in particular, the acute trusts. Table 4.2 includes a summary of findings in relation to aspects of the chronic care model, a more detailed summary is included in the appendices (appendix 17).

Table 4.2: Summary of findings in relation to chronic care model

<table>
<thead>
<tr>
<th>Components of chronic care model</th>
<th>General practice and heart failure services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community</td>
<td>Little evidence of linkage with other, non-health organisations</td>
</tr>
<tr>
<td>Organisation of care</td>
<td>Disease specific, in general, general practice little influence/involvement wider organisation of care</td>
</tr>
<tr>
<td>Support for self-management</td>
<td>Some support around individual conditions, limited resources particularly time</td>
</tr>
<tr>
<td>Design of delivery systems</td>
<td>Fragmented even within organisations few integrative mechanisms used</td>
</tr>
<tr>
<td>Decision support</td>
<td>Reduced contact between micro and meso level, generalists and specialists</td>
</tr>
<tr>
<td>Clinical information systems</td>
<td>Lack of shared electronic patient data sources, numerous patient records</td>
</tr>
</tbody>
</table>

Possible exceptions to this were those conditions traditionally managed in general practice, such as asthma and diabetes whereby the nurses provided a degree of care continuity and tried, as much as possible given the time constraints, to provide individualised care and self-management support. Practice nurses were generally more explicit in their use of evidence based guidelines for these condition. Responsibility for additional, less prevalent conditions, if devolved to nurses, were mainly managed in accordance with the QoF templates. Heart failure was used as an index condition to explore the practical issues of managing care across different disciplines and organisational settings.
4.3.3.1 Heart failure across providers

The following findings describe in more detail how services are provided for people with heart failure and some of the factors that contribute to these particular configurations of care. Included in the Quality and Outcome Framework were 4 performance indicators related to heart failure, 3 with a percentage target range that practices were obliged to meet if they were to be optimally reimbursed:

- A register of patients with a diagnosis of heart failure
- Confirmation of diagnosis either by an echocardiogram or specialist assessment 3 months prior or 12 months post admission on to the register
- Percentage of patients with a current diagnosis prescribed an ACE inhibitor or an angiotensin receptor blocker
- Percentage of patients with a current diagnosis prescribed either of the 2 medications listed above and in addition a beta blocker.

In most practices heart failure was overseen by the GPs. Each practice included in the study had a registered list of around 30-40 patients with heart failure of varying severity, 2 of the 4 practices had a GP with a special interest in cardiology one of whom provided clinics for cardiology patients across a number of practices in their area. The other provided input to a tier 2 service at the local hospital. Patients on the heart failure register in these 2 practices were not routinely managed through these clinics, which were focused on screening patients with suspected heart conditions into those who could be managed in primary care and those who needed to be seen by a cardiologist. None of the practices had a formalised management system for organising the care for patients with heart failure across providers. The staff in practice 2 would encourage aspects of self-management by asking patients to weigh themselves daily and contact the practice nurse or their GP if there were any sudden increases or decreases in weight.

There was little evidence of any structured self-management support or any formalised shared care arrangements between primary care and the specialist heart failure services. At the time of this fieldwork there was a cross-city initiative aimed at providing heart failure patients with a personalised information booklet regarding their care. It was effectively an individualised management plan and included a number of scenarios such as, sudden weight increase or loss, which medications they were on and why and information on who to contact. The main aim of which was to support patients in managing their condition and to aid communication and shared care between secondary care and general practice. At the time of this research none of the patients interviewed had received a copy and none of the 4 practices used a formalised management plan that could be shared with other providers.
The management of heart failure patients varied across the area in which the research practices were situated, largely because of differences between the organisation of services, both at a meso and micro level. Secondary care services for heart failure were provided by 2 foundation trusts and 2 district general hospitals. At a meso level, patients were often diagnosed in secondary care following an acute admission or a referral from general practice. Patients could be readmitted for exacerbations of their condition and were often recalled to a clinic in secondary until stable enough to be managed in general practice. Although in the recent past 2 of the 3 heart failure services in this area provided support for patients and GPs in the community, only 1 hospital continued to fund home visits. The exception to this were those patients treated in the tertiary centre, who were not routinely transferred back to the referring hospital, sometimes for financial reasons (see below). Several of the patients involved in this study would attend yearly or bi-yearly appointments in secondary care for routine monitoring. Most of these clinics were nurse-led with a doctor running a parallel clinic for more complex patients.

During the preparation prior to discharge to the care of GPs, the heart failure nurses become familiar with individual patients and their capacity for tolerating particular treatment regimes and the corresponding effect this has on their clinical parameters. For instance, in patients with advanced disease, some could tolerate a low blood pressure if it improved their breathlessness. These nuances, particular to individual patients, were often important in keeping patients out of hospital. The heart failure nurse felt that general practice did not routinely record these details (HFN1) in an accessible format and consequently when a patient presented acutely unwell, GPs would stop all the blood pressure lowering medications without referring to the patients ‘normal’ readings. Of course in some instances this was appropriate and the GP had to make a clinical judgement in the face of the presenting patient, however, the heart failure nurses across all 3 trusts, felt that too often decisions were made in the absence of any qualifying data that supported the patient’s existing management plan. From the GPs’ perspective there were a number of issues competing for their attention. The doctor below provides a valuable insight into the pressure GPs are under on a daily basis: he was asked his opinion on why doctors don’t always follow best practice guidance:

“Erm… why not…because there is a clash of priorities all over the place it is not just heart failure we’re dealing with, we are dealing with 40 pts a day coming through the door that could have anything, that are completely unscreened. I mean you can have a guess as to what they might come in with judging with your prior knowledge of them, their race, their gender and so on. But by and large it could be anything so you really need to be pretty up skilled in managing any presentation really so you have to prioritise what you’re interested in erm… and obviously, up until now, probably because they haven’t been supported sufficiently. it hasn’t been a high enough priority from, if you like, the healthcare management
and you know it has to compete with other long term conditions. You might as well say, why isn't care of the dying a priority, why isn't COPD a priority, they are all priorities, so you can't have everything, you have to pick out what's important to you and your practice, you know.” (GP1 P2).

Several of the heart failure nurses mentioned problems associated with maintaining continuity of care when patients were discharged back to general practice. They would often write to the GP with a suggested medication regime for optimising individual patients' treatment. GPs deviation from, or ‘non-adherence’ to this and/or the heart failure guidelines, was an on-going source of frustration for the specialist nurses:

[Heart failure nurse] “If the GP would bother to listen to the patient or indeed read a letter [...] they literally just stop things rather than reduce them, you know, or add in [...] and it’s still the same, we just explain to the GPs please don’t, if you’re going to do anything please speak to a cardiologist if you don’t to speak to us” (HFN1).

Although practices were informed of the patient’s individual treatment thresholds, these were routinely filed as an attachment in the patient’s electronic record and were not always referred to. It can take weeks of outpatient appointments to optimise a patient’s medication schedule and for various reasons this schedule can be disrupted on referral back to primary care. Whilst this situation added to the workload of the heart failure nurses they had some insight into the pressures on general practice:

“The guidance [heart failure] makes it quite straightforward, [but] once you start throwing in other co-morbidities, it makes it really hard to manage [...] especially if that’s not your bread and butter, what you do all the time. So I think it’s hard, I think they [the GPs] have a hard job”. (HFN2).

Interviews with the heart failure nurses highlighted a number of similarities between the 3 heart failure services in relation to general practice. Facilitating continuity of care across secondary/primary care was challenging when patients were widely dispersed across a large number of practices and the small number of specialist nurses who were largely hospital based. As much as the specialist nurses tried to support GPs, the sheer numbers of patients, the workload of both the nurses and the practices and the absence of any formalised system of support made collaborative working at the interface between primary and secondary care difficult.

The heart failure nurses acknowledged the heavy workload in general practice and appreciated the increasing number and complexity of patients with heart failure and other chronic conditions being transferred to the management of general practitioners. They were also aware that the
number of heart failure patients per practice was relatively small. Consequently individual GPs have a limited exposure to, and experience of, managing those with advanced disease:

“You think everyone will know about heart failure and the reality is that they don’t and if you look at the size of a heart failure register compared with an AF register or a diabetes register, they are quite small numbers compared to what you think will be there so they probably aren’t exposed as much as you think to the heart failure patients until they start coming in to real problems” [HFN5].

“So as a whole I think it is quite daunting for GPs to treat [heart failure], it’s not straight forward and the risk of them becoming unwell [is high] and I think some of it as well… you have to give GPs credit, they are jack of all trades and master of none […] they can’t be expected to know everything and we have specialists in heart failure, not even cardiologists manage heart failure” [HFN3]

Services for people with heart failure were organised into discrete services that rarely, despite good intentions, worked collaboratively across organisations. Heart failure services had little leverage over patient management in primary care and GPs had no jurisdiction over patient management when patients were managed by the acute trust. So whilst professionals across the system implicitly recognised the need for collaborative management across organisations, the extent to which this occurred was largely subject to the informal relationships between particular GPs and the heart failure service. With no formal ‘integrating’ mechanisms, such as a shared management structure or pooled funding, the specialist nurses resorted to approaching individual GPs and offering them the opportunity to contact them directly if they were unsure of a patient’s treatment. Whilst time consuming and practically impossible to do with all patients, it was a particularly effective approach to use with complex patients at risk of recurring admissions.

At a micro level, managing heart failure in general practice can be complicated by multimorbidity and the difficulty of balancing a number of treatments in patients who are clinically complex. There were no formalised systems in general practice for managing heart failure in conjunction with heart failure services and, as with other conditions, GPs would often work ‘independently’ from colleagues to the extent that within each practice, GPs implicitly adhered to evidence based practice and national guidelines, but how they actually managed chronic conditions, was unknown. The involvement of providers in general practice and secondary care created a number of ‘interdependencies’ whereby what happened in secondary care would often have a bearing on care once patients were discharged back to general practice and vice versa. For a number of reasons, the linkage between these two was not always optimal. Not least because of the plethora of other services associated with individual patients, but also the expanse of different activities in general practice. Workloads in both general practice and the heart failure
services mitigated against more collaborative working and continuity of patient management and this was accentuated by communication systems that sometimes disrupted and delayed information across services and organisations.

4.3.3.2 The Patient’s Role: Self-management
An important aspect of the CCM is the involvement of patients, both in managing their conditions and in being included in decisions regarding their treatment and care. There was evidence across all 4 practices that staff were aware of the importance of promoting self-care:

“Involves the family, if they’re not cognitively impaired try and even if they are try and educate them as well as they can to manage their own care, to contact us at the start of the deterioration rather than at the end.” (P2, GP1).

This role was mainly undertaken by the nurses who were responsible for the day to day management of people with chronic conditions and had the most ongoing contact with the patients. However, the extent to which they could support self-management was constrained by a number of factors, including the patients’ willingness and ability to engage in discussions and decisions regarding their health. Many of the patients did not value routine monitoring appointments, particularly when they felt well and some inferred that they were a waste of time. This may suggest that extending appointments to include aspects of self-management may not be something that would appeal to patients with multimorbidity.

The nurses frequently mentioned their workload as a barrier to certain activities:

“...and it’s the ongoing management that takes the time, the GPs actually see somebody once and if they can’t resolve it, then it’s passed on to somebody else. When I think of the people we’re seeing we would tend not to pass it on, we tend to manage it and see people as many times as we actually need to manage that.” (P3, PN1).

The organisation of Practice 4 was noticeably different compared to the other practices. This was partly due to being less busy because as a new practice, their list of registered patients was relatively a lot smaller than the other practices, but also their use of the Stour access model seemed to shift a certain amount of responsibility back to the patient and free the doctor to spend more time with those patients who actually needed it:

“I’ve sorted 31 issues this morning, that’s 31 potential appointments. I discuss things through with the patient and make suggestions regarding what they can try at home. I know the patients, so you get a feel for when they need to see you and...”
when they don’t and you also know which ones are going to follow advice and you can say to them, why don’t you try doubling that medication and I’ll ring them again in a couple of days to see how they have got on. It gives you a lot more time to spend on patients who need it, I can spend half an hour or forty minutes on an individual patient…whatever time they need.” (P4, GP1).

There were obvious examples during the research of the nurses’ supporting a number of aspects of self-management such as information sharing however, for the most part self-management support was ad hoc and squeezed in around the more biomedical aspects of disease management such as checking blood results and monitoring a patient’s blood pressure. Lack of time and a heavy workload was a commonly cited reason for the absence of a more structured approach to supported self-management.

4.4 MACRO

4.1 Health policy

Most of the factors that influence service provision in general practice were found at the micro and meso levels, however there were a small but important number of key factors situated at a macro level. These were largely structural and determined through health policy and the wider organisations of services, as well as contractual arrangements and the financing of healthcare. Financial incentives encouraged certain processes of care such as targets and the QoF and, in some instances, displaced clinical priorities during patient encounters. Services across the city were increasingly centralised so whereas patients would previously have attended a local hospital for a scan or physiotherapy, current arrangements meant they could be sent anywhere across the city, thus reducing continuity and choice and often inconveniencing patients and their families, particularly those older ones with mobility problems. The increasing complexity and fragmentation of services reduced the relational continuity, both between patients and practitioners but also between different professionals and services.

At the time of this research health policies relating to chronic illness largely focused on a number of priorities including: reducing variation in care across practices; improving self-management; and enhancing the coordination of care through personalised management plans. There was some evidence of the influence of health policy on the activities in general practice, particularly amongst the nurses at a micro level, who often referred to guidelines and frameworks in their management of chronic conditions. Practice 1-4 all had a small ‘library’ of policies and guidelines but none of the practices admitted to having a documented practice wide system for managing individual chronic conditions. However, all the practices were preparing for the newly introduced ‘accreditation’ of their practice and one of the stipulations of this was that practices had to have a file of clinical guidelines and guidance that informed their practice.
All 4 practices were in the process of collating these, practice 2 were developing their own. The PCTs mandated certain checks on practices for instance, individual GPs were obliged to acknowledge they had received (and read) recent guidance from the National Institute of Health and Care Excellence and data collected on the QoF ensured the adherence to other policy directives. None of the 4 practices admitted to documented, individualised management plans and self-management support was largely opportunistic and ad hoc.

4.4.2 Healthcare systems

Most of the routine activities in the 4 practices relating to chronic conditions centred on the QoF and was guided by electronic templates that would alert the staff if certain investigations or tests were due. There were varying opinions about the usefulness of this programme in guiding care. Some nurses found it a helpful aide memoir (practice 1), although in practice 3 they had turned the alert system off because they found it unnecessary and irritating. Whilst recognising the need to record data and conform to a number of templates, some clinical staff resented the impact these requirements had on their professional practice:

*But my theory is, its QoF, we’ve got to tick the boxes if we don’t tick the boxes we don’t get paid. If I’m going to tick boxes for the rest of my career then I shan’t be doing it, I don’t want to tick boxes, because it’s not what I was trained for.* (P2, PN2)

In some instances the nurses and doctors felt that increasingly their activity was not in response to patient need but to ‘organisational’ or ‘external’ requirements. GPs clinical work tended to focus on acute problems: diagnosing; decision making; medication reviews; and referrals to other services, although not always through choice:

*“Trouble is we are so caught up with doing the day to day stuff. For instance, I am seeing patients with coughs and colds and need sick notes, when I should be focusing on the complex patients…”* [P2, GP1].

Another doctor in this practice felt over qualified and under-utilised with the stream of minor illnesses that she was routinely managing and suggested that her time would be much more effectively spent managing more complex patients and providing continuity over time:

*I had someone ring me up with a sore throat this morning, they woke up with a sore throat, had it an hour and a half and then rang me. Now I’m not being funny but you don’t need a doctor with 2 degrees to manage problems like that.* (P2, GP2).
The doctor quoted above felt that the system compromised them professionally and ‘short-changed’ patients with complex conditions. She felt the organisation of the practice was old fashioned and that patients would be better served by the practice working in teams, with one team managing acute and episodic care and another organising care for patients with more complex needs. With their responsibility for so many patients and the processes of care dictated by the QoF as well as all the other activities the practices were contracted for, it was difficult to envisage how a more holistic and generalised approach for managing chronic conditions could be incorporated within the existing structure of general practice. Similarly, the need for certain chronic conditions to be managed in both primary and secondary care, was made more difficult due to the lack of formalised linkage.

The influence of health policy, professional bodies and guidance was largely limited to activities that were linked to financial reimbursement, individual chronic conditions and work that nurses and healthcare assistants undertook. Interviewees in both secondary and primary care expressed concerns about the tensions created through trying to balance patients’ needs against the requirement to undertake activities that created revenue. Although not overtly adhering to chronic disease management pathways, medical staff ‘more or less’ followed evidenced based guidance as they considered appropriate, however this could not be verified as practice staff did not use management plans and did not discuss with colleagues how they managed particular conditions. The financing and contractual arrangements were important drivers of chronic care activity in particular, what services were provided, where they were provided and who provided them. At present care for individual conditions is provided across a number of facilities which inevitably fragments care and as yet mechanisms for consistency in and coordination of care are undermined by the absence of a whole systems approach.

The organisational pressure to ensure certain activities were undertaken and accurately recorded was also mentioned by a number of heart failure nurses at the acute trusts. They were enrolled in a quality improvement program. This involved ensuring all heart failure patients had a number of timely investigations, smoking cessation advice and details of who to contact if they had problems when they went home. If they reached the target of 95% the trust would receive several thousand pounds:

_I have huge gripes with advancing quality I really feel it’s a tick box exercise and although I try to do it, it doesn’t ensure continuity of care or that proper pathways are in place. As long as all the boxes are ticked they just want people going round ticking boxes and not giving the patient the time so it’s not going to improve quality._

(HFN1).

The nurse was disappointed that the success of the project was based on process measures and did not recognise the importance of discussing with the patient the implications of their
condition and how best to manage it. The onus was on giving patients an information leaflet but not necessarily allowing time to check their understanding of it or to answer any questions they may have had: “We go through it, but as long as those boxes are ticked and you give the sheet to the patient then that is it” [HFN3].

The organisation of care for people with heart failure across different disciplines and facilities created interdependencies whereby consistency and continuity of care were reliant upon the effective linkage between providers. There was a general lack of formalised linkage, for example, shared care agreements or management plans, that identify the goals in treatment and who is responsible for what aspects of care. The sheer volume of information, the ongoing reconfiguration of services and the widespread use of postal systems often created delays in information flows. The chronic care model advocates collaborative working and managerial continuity, but the opportunities for this between generalists and specialists was possibly restricted due to respective workloads and the lack of a whole systems approach.

The absence of effective linkage and the (constant) reconfiguration of services did not just inconvenience practice staff, but also affected patient’s access to services as staff were not always aware of the changes and were unable to advise patients’ accordingly:

“So when I rang her [the practice receptionist] and said I would need another box, she said she was told she was only allowed to give me one […] I rang the stoma nurse but she wasn’t there and nobody seems to know where she’d gone […] I rang medolink [supply company] and the women there said she would write to my doctor but I haven’t heard anything”. [P3, P3].

[Researcher] “So what happens if you need some advice” [about your stoma] [Husband] “That’s a good question that…” [Patient] “That’s it you see, I said to these down here [practice staff] because her on counter down there, the receptionist, she said I don’t know who she is, why ask me. So that were that really”. [P3, PT3]

In the previous practice the patient was registered, a specialist stoma nurse did a regular monthly clinic where people with stomas could attend if they had any issues but these have since stopped and nobody at that practice could tell the patient above where the nurse or the clinic had moved to, or indeed if the service had been discontinued.

Across the region services were being reconfigured, centralised and, in some instances decommissioned. In addition, many of the referrals to other services were managed through a national referral system called ‘Harmoni’. The aim of this programme was to coordinate activity across the region to where the capacity was. So if patients were prepared to travel to a different
service provider, they would often be seen sooner than if they preferred to wait until an appointment became available locally. The diversification of providers and the use of referral systems meant the doctors and nurses in the practice had difficulty keeping track of where their patients received services. Previously patients with community or secondary care needs would go to the nearest hospital or provider, but recent changes mean that patients could be referred to a number of geographically dispersed facilities and should they require the same service again, they were not necessarily guaranteed the same provider. It is perhaps not surprising that the practice staff found it difficult to keep track of services in their area:

“Too be honest, off the top of my head I don’t know [where heart failure patients go], but we are on the border here between [north hospital] and [central hospital] and I don’t know the exact figure but it is something like… maybe we’ve got…well the vast majority of patients are from [the north of the city] although a significant number are from [central] so we’ve always had the choice or given the choice to patients because some people prefer to go to [the central trust] even though they are north Manchester and I am pretty certain they have services at [north] …but as I say I couldn’t tell you if our patients are using them or not.” (Practice 1, GP1)

All the recent reconfigurations of community services, coupled with the use of a third party to coordinate referrals and secondary care appointments had the unintended consequence of diluting, and in some case fracturing, relational links between general practice and secondary care. Historically, GPs (and in some cases practice nurses) were likely to know who the specialists in their local hospital were and would refer directly to them, often using their first name. The new system requires a referral to a service rather than an individual and priority is often given to the service with the next available appointment as opposed to a local service. Of course, this is not always an issue, particularly if the patient’s need is urgent, but for many older people with multiple problems and reliant on others for transport, travelling across the city can be problematic. The increasing fragmentation of care within and across healthcare sectors increases the requirement for informational continuity. At present, flows of information up and downstream of general practice are variable. Delayed or missing information generates additional activity and can distract professional staff from focusing on clinical issues. A related constraint was the increasing amount of (mandated) bureaucracy associated with healthcare provision.

4.4.2.1 Interdependencies and linkages
Not surprisingly, contractual arrangements underpinned many of the services provided and were important drivers in prioritising certain activities and deciding what services were provided, by whom and where. In some instances these arrangements differed in the detail to what the clinical staff thought should be provided. Collaborative links between practice staff and other services were generally informal and therefore variable. This frustrated both the
clinical and administrative staff in general practice but also the specialist staff in the acute trusts who rely on general practice to monitor and manage patients following a diagnosis of heart failure:

[Heart failure nurse] “I can see variances in how the PCT works compared to secondary care, sometimes you feel like politically stuck in the middle of things, nobody ever says anything but the priorities at the PCT are obviously to keep people out of hospital, rightly so, but then obviously secondary care require that they still see some patients so with the tier 2 services being set up you can see issues between the two. This is how they run different they don’t seem to run, I don’t know if you have found the same thing but they don’t seem to run as well as they could do together, they kind of work separately which is a shame really.” [HFN6].

The heart failure nurse above is referring to service revenue. There is a long standing national initiative to manage chronic conditions, as much as possible, in the community. However, hospitals earn money from inpatient stays and outpatient clinics. The provision of tier 2 services in primary care means a diversion of resources from the acute trust to community services. A heart failure nurse based at another trust also mentioned the tension between hospitals having to generate income and the requirement to treat people closer to home:

[Researcher] “Why do you think they work separately”?
[HFN5] “I don’t know if it is financial drivers I don’t know if it’s the way things are funded whether its set that way or whether it’s always been that way I don’t really know the reason. Cause it surprises me with the tier 2 services why you wouldn’t ask, I know you have GPs with special interest but why you wouldn’t ask the established cardiologist to come out to your surgery and hold a clinic there and they could do them alongside the GPs and they could say, yeah you can stay in primary care with this management plan and you need to come to secondary care and I will see you in secondary care setting. It puzzles me a bit and can only assume maybe the way services are set up and the financial drivers dictate that it is that way”. (HFN5).

The GP who organised the heart failure service in practice 2 had extended the project to include a number of other practices in the area. One of the intended outcomes was to reduce referrals and admissions to secondary care and in particular to the interventional cardiology department. The project was very successful in achieving this outcome much to the chagrin of the cardiologists:
“Well what we have done is taken control of cardiology referrals err… through a referral gateway some of them come in to see me or I go to them. Some of them are just being managed with advice to the GP. [We] documented a reduction in referrals to them [cardiologists] and that makes them sit up and pay attention. […] they had a debate at the end of it [a cardiology conference] from an interventional cardiologist and an electrophysiological cardiologist, ‘should investment go into interventional cardiology or electrophysiological cardiology’ and I said well actually, investment needs to go into primary care, not into either of you because we know 60% of people with AF aren’t properly anti-coagulated 60% of people with COPD aren’t on optimal drugs. People with heart failure, very few of them are on optimal drugs, so that is where we need to be investing not in your fancy technology… that didn’t go down very well either [laughs]…” (P2 GP1).

The viability of the interventional cardiology service at the acute trust is dependent upon providing a number of procedures each year. The inference from the GP above is that optimising the medical management of patients in primary care has a direct consequence on the income and viability of some services in secondary care. A similar scenario was noted by a heart failure nurse at the regional centre:

[Heart failure nurses]. “The thing with us is… well… is that not all patients are repatriated. Say they come in for a [cardiac] device as an emergency, so if they’ve gone to…I don’t know [a district general] wherever and they’ve come across and had a device they will be followed up here […] I suppose with my nursing head on, I think of the practicalities of getting someone to bring them along and will try if possible to discharge them back to [their district general]. Doctors do not do that. […] We used to have ‘treat and return’ when we would get patients in, treat them and send them back but then they realised there was issues with funding, that you’d only get 20% or 30% of the funding if you return them, so now it’s ‘treat and keep” (HFN3).

Finance was an important driver of service provision in both general practice and secondary care and was often linked to contractual agreements which stipulated which activities would be reimbursed and therefore prioritised. A number of administrative activities were also prioritised by the practices when it was relevant to financial reimbursements. There was evidence of perverse incentives which, in some instances, prioritised financial concerns over what clinical staff thought should be provided. Whilst there was evidence that heart failure services and general practices tried to work collaboratively, their ability to do so was often challenged by heavy workloads and sub-optimal linkage that appeared to suffer from a lack of organisation, formalisation and funding.
Chapter summary

In general, patients were happy with their care and trusted the practice staff to know what was best for them. Several of the patients did not always follow the advice given by their doctor or take their medicines as prescribed. Most did not want to be involved any more than they already were with their care and several complained about the ‘pointlessness’ of routine appointments for monitoring their health. This extended to heart failure services at the acute trust as well as to general practice. A number of patients complained about the difficulty in arranging a same day appointment when they were unwell and a smaller number of not being able to see the doctor of their choice. Practice nurses typically tried to support self-management but this was often ad hoc and squeezed in around activities that were incentivised. An increased (and increasing) workload challenged all staff, but particularly nurses who felt their roles were expanding disproportionately compared with the doctors. The requirement to incorporate increasing reviews for patients with chronic conditions has led to the development of new roles and the downward substitution of a number of roles and responsibilities in general practice. This created a certain amount of care fragmentation, as well as sub-specialisation and a degree of deskilling in some clinical areas amongst both the nurses and the doctors.

At a meso level, practices 1-4 organised routine services for people with chronic conditions in ways to accommodate the demand on their services, rather than in ways that would suit patients with multimorbidity. Care was fragmented across primary and secondary care and administrators in particular struggled to maintain informational continuity across different professionals and services. Within general practice there was an obvious divide between the clinical and non-clinical staff, particularly in relation to the administration of services. In some instances work flows were disrupted or delayed because decisions or actions were required from, in particular, the medical staff. Medical staff, where possible, seemed to avoid involving themselves in issues relating to administration. In some cases this was even so when they were asked explicitly to intervene, possibly because they did not view this as a good use of their time. Linkage between general practice and specialist services was variable and largely based on letters between specialist services and GPs. In an attempt to aid continuity, heart failure services would often outline a management plan when patients were referred back to their GP, the extent to which these were adhered to in general practice was variable. In some instances, the heart failure nurses felt that GPs would ‘ignore’ advice from them, preferring instead to contact the specialist medical staff. Attempts by the heart failure services to systematise the management of heart failure across primary and secondary care had largely failed to promote consistency in care and in a number of instances the heart failure nurses resorted to contacting individual GPs. There was, however, an increase in the number of GPs contacting the heart failure nurses which was seen as positive step towards more collaborative working. Recommended aspects of chronic care management models, aimed at improving patient outcomes and healthcare efficiencies, were largely absent from the services studied during this research.
Macro level factors were mainly related to health policy, the wider organisation of care and funding arrangements. Much of the workload relating to the management of chronic conditions was determined by health policy and contractual arrangements. As well as generating additional clinical activity, these arrangements were accompanied by a substantial increase in the administrative aspects of care, which disproportionately added to all the staff’s workload. To a large extent, funding arrangements determined what services were provided and where. In some instances, activities that were incentivised were prioritised over others, sometimes in contrast to what the clinical staff thought should be provided. In general practice this was evident in appointments regarding the QoF in which the structure of the consultation was based on an electronic template. Patient concerns were accommodated, where possible, around these templates. Collaborative working between heart failure services and general practice was challenged by the lack of a whole systems approach in which care across organisations is coordinated and supported through appropriate funding and formalised linkage.
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CHAPTER 5 DISCUSSION

5.1 Introduction

This discussion explores the themes identified through the findings of the research and situates them in relation to what is already known in the theory, policy and practice of service delivery for people with multimorbidity. The discussion is structured around the final propositions and the micro, meso and macro level factors that affect service provision. The purpose of this structure is to highlight the relative influence general practice has on the services it provides and to illustrate the individual and environmental/contextual factors that inhibit or accentuate that influence. Micro level factors include, individual beliefs and behaviours of staff and patients; individual and collective workloads, demand on services and changing roles and responsibilities. Meso level factors are predominant in determining services and delivery and include: the fragmentation of services across healthcare, the increasing administrative workload and the disrupted information flows between providers. Finally, macro level factors are largely determined by the traditional organisation of the NHS, central policy, funding arrangements and the absence of a whole system approach. To some degree, several factors span all three levels such as the wider organisation of care and financial incentives, however the direction of influence appears largely to be downward, mainly because the NHS is centrally funded and the government retains significant sway over how the money is spent (Gubb and Meller-Herbert, 2009).

5.1.1 Aims of the study

This research focuses on exploring the factors that influence service provision for people with chronic conditions in general practice. The main themes identified during the research help to explain how services are provided, why they are configured in the way that they and the challenges associated with working more collaboratively. The chapter starts with the aims and propositions of the research. It explains the rationale behind these propositions and their development over the course of the research. The chapter is structured around these propositions and the micro, meso and macro level factors that contribute to the organisation of care. The references to sensemaking included in this chapter, help to illustrate its ubiquitous nature and its function in helping practice staff to rationalise and justify decisions regarding their care provision. The limitations and strengths of the research are discussed as well as the implications of it in relation to future research, policy and practice. The chapter concludes with a section on the contribution to knowledge of this research and a chapter summary.

The aims of this research were:

- To understand how care is provided for people with multiple chronic conditions in general practice and why it is configured in this way.
To understand the extent to which existing, emerging and future services are constrained and facilitated by the wider organisation of care within the National Health Service.

To assist in meeting the aims of the research, 3 propositions were developed.

### 5.1.2 Initial propositions

These 3 propositions were based on my knowledge and experience of healthcare, but also on the theory associated with the delivery of general practice services.

1. **How services are delivered for patients with multimorbidity is dependent upon how practice staff make sense of what is needed and what is possible in the given context.**

   A large part of clinical care in both nursing and medicine is assessing patient’s needs and taking action to meet those needs and it was expected that their interpretation of those needs would influence the delivery of services. For a number of individual and contextual reasons, it is not always possible for practice staff to deliver these required services. This proposition focuses on care delivery at a micro level, mainly between the patient and individual practitioner/s. Given the individual, organisational and system constraints within healthcare, in most instances, there is an adjustment to be made between what is ideal and what is achievable. Sensemaking plays an important role in reaching a balance between the two.

2. **In response to their increasing responsibility for chronic disease management in general practice more integrated ways of working are emerging.**

   It was anticipated that this research would highlight new integrative models of service delivery in response to the growing empirical evidence that challenges the effectiveness of disease specific services.

3. **Managing the care of patients with multimorbidity is constrained by the way services are traditionally structured and organised.**

   It was predicted that factors such as the international classification of disease, the structuring of medical education (Starfield, Lemke et al, 2005) and hospital design based on which area of the body the disease occurs (Aspinall, 2008) would reinforce and perpetuate a service design focus on single conditions. This is despite the fact that a number of advocates of general practice and primary care are critical of the way healthcare has been organised around disease groups. The prevailing model of organising care around individual diseases appears to disadvantage those patients with more than one condition. The traditional structuring, organisation and financing of services is largely linked to macro level factors.
These propositions were continually revisited throughout the research and reviewed in light of the emerging evidence. Their final version is given below, along with a summary of the rationale for the developments made.

5.1.3 Final propositions
Proposition 1 (Micro)
How services for patients with multimorbidity are configured is dependent upon how practice staff make sense of what is needed and what is possible in the given changing diurnal context.

The first proposition remains unchanged apart from an addition at the end which was included to convey the ‘changing’ context of general practice which emerges strongly from the findings. Wieck describes the ‘impermanent’ organisation which is a reference to the ongoing change that occurs within organisations however slowly and subtly (Weick, 1995). At the same time as patterns of activity are embedded within daily routines in responding to cues, patterns can be misshapen, become obsolete and reform into different patterns. Irrespective of the rigid structures and processes that characterise services in general practice, delivery at a micro level was subtly variable on a day to day basis. There were several inter-related reasons for this but mainly because people with the same conditions do not always have the same needs and these could vary with each visit. Similarly, at each patient consultation practice staff would often have to make sense of the patient’s needs and balance these with the wider organisational requirements and constraints at any given time. These factors were accentuated by the heavy workload of the practices and the time available.

Proposition 2 (Meso)
Many doctors and nurses express little interest in the organisation of services, despite their input and cooperation being critical to the overall functioning and effectiveness of the practice in terms of services for patients with multimorbidity.

The growth in the incidence and prevalence of chronic conditions globally has fuelled an interest in health service redesign, key principles of which are to promote more collaborative and integrative working with a view to improving patient outcomes and encouraging more efficient use of resources. This is directed not just at health care providers but also focuses on the relationship between patients and professional staff. Although there are a number of models in existence, the most widely cited and utilised is Wagner’s Chronic Care Model (Wagner, Austin and Von Korff, 1996). Despite the growth in the use of chronic care models aimed at more integrative working (RAND Europe and Ernst and Young LLP, 2012), services provided by the practices included in this research continued to be organised in traditional, disease specific ways. In some instances, with the delegation of certain aspects of care to other professionals and the lack of effective linkage, the opposite of more integrated working was actually the case. In relation to heart failure services, in general there was little evidence in this research of any
formalised care integration, coordination or linkage, both across general practice and secondary care.

Changes in proposition 2 were influenced by the disconnect between the administrative aspects of general practice and the clinical staff. The importance of administrative activities appears to be underestimated across services despite its effect on practice efficiencies. In each of the practices there was an ever increasing administrative workload, which often ‘distracted’ staff from clinical activities and disrupted workflows. Despite the attempts of the administrative staff in engaging clinical staff in issues regarding the internal organisation of the practices, doctors in particular and less so nurses, were often adept at avoiding involvement. In light of the findings of the research, the second proposition was changed to reflect the importance of clinical engagement, a commitment to working within the administrative systems and supporting non-clinical staff at improving work flows.

Proposition 3 (Macro)
Managing the care of patients with multimorbidity is constrained by the way services are traditionally structured and organised.

Proposition 3 remained unchanged following the data collection and analysis. General practice is situated within the wider organisation of healthcare and is subject to health policy and contractual arrangements. Traditional divisions across sectors of care are perpetuated by independent funding and management streams and a lack of a whole systems approach to care provision.

5.2 MICRO
5.2.1 Challenges to service delivery
In practice, proposition 1 suggests that how services are provided for people with multimorbidity are configured and delivered is dependent upon how practice staff make sense of what is possible in the given changing diurnal context. At a micro level a number of factors affected service delivery, including patients’ attitudes and level of engagement and the practitioners’ assessment of what was needed. In addition, a number of contextual factors such as time, workload and incentivised priorities were increasingly determining what was possible. The varying needs of individual patients and the subtle variations to practice routines on a daily basis allowed for some flexibility within the consultation that the nurses would often take advantage of.

5.2.1.1 Patients’ health related beliefs and attitudes
In managing chronic conditions, an important source of knowledge are the patients themselves. At several points during the research, it became obvious that patients had a number of health related problems that they had not relayed to their GP or other providers. The reasons for this
were complex and not always obvious to the researcher. It can be no surprise therefore that in these circumstances, care is not as comprehensive as it could be. In contrast to the Chronic Care Model (Wagner, Austin and Von Korff, 1996), a number of the patients considered healthcare as something provided by professionals and most did not wish to be involved in their care anymore than they already were. To some extent some patients were deferential to the medical staff and generally did not see it as their place to involve themselves in, what they considered to be, medical decisions. There were a number of patients that ‘did their own thing’, with regards to some aspects of care and did not always follow medical advice. Some did not take their medications as prescribed and employed some ‘dubious’ techniques to self-manage their symptoms. In surveys canvassing patients’ views about their health care, researchers found that patients primarily: wanted to be listened to (Primary Care Commissioning 2013); to have their care explained to them; and for care to be coordinated across services (National Voices, 2013).

A number of studies indicate that self-management is associated with better outcomes for people with chronic conditions (Gillett et al, 2010; Lowrie et al, 2014). However, there are several recognised barriers to this including the presence of multimorbidity (Bayliss, Steiner and Fernald, 2003). Functional disability, lack of knowledge, financial constraints, polypharmacy and a high level of morbidity have all been identified as barriers to self-care. This research also detected a degree of unwillingness in some patients to be more involved in their care. The evidence in the literature suggests that with individualised self-management interventions, it may be possible to successfully address some of these barriers (Bayliss, Ellis and Steiner 2007). In their recent implementation of a self-management system into a large number of general practices in the north of England, only 43% of eligible patients responded to the survey. The researchers report the difficulty of engaging patients in self-care, particularly given the time constraints in general practice (Kennedy et al, 2013).

5.2.1.2 Time and workload
There were no formalised arrangements in any of the practices to support self-management and whilst most of the staff identified patients as having individual needs, the pressures of the diurnal workload often prevented a more individualised approach to patient care. Consequently, much of the day was organised around time-limited appointments and particularly for the nurses, governed by a pre-determined structure. The organisation of care was based around what the practices were commissioned to provide and tailored to coping with demand. As yet there were no formal arrangements to support self-management. Programmes for managing chronic conditions were largely based around using a series of electronic templates, which were used to record activity and to ensure practices were reimbursed accordingly. There was some evidence in this research to support the finding in other studies that instead of reflecting activity in general practice, these templates were beginning to drive it (McDonald et al, 2007; Swinglehurst, Greenhalgh and Roberts, 2012). The link to payment ensured activity related to
the templates were prioritised during consultations, sometimes in preference to patient reported issues or those identified by the clinical staff. Whilst one of the nurses felt they were a useful reminder during the consultation of what data needed to be recorded, most of the staff interviewed bemoaned the routinisation and generalisation of care it promoted. Although GPs were not necessarily explicit in this matter, the templates seemed to be used as a rationale for delegating certain clinical responsibilities to the nurses. At the same time that most of the staff resented the ‘tick box’ approach that the clinical templates required, they all made sense of their use by the link to the payment system. The preferring of incentivised activities in general practice, particularly in relation to the QoF is noted in a number of other studies (McGregor et al, 2008; Campbell, McDonald and Lester, 2008; Steele et al, 2007).

Many nurses and doctors in this research explicitly and implicitly bemoaned the constraints contractual arrangements such as the QoF posed to their practice. However, aside from the financial drivers, this structure to appointments and the division of labour allowed for a certain amount of efficiency in terms of ‘processing’ patients. There has been some acknowledgement in the literature regarding the organisation of care and the trade-off between improving efficiencies in managing demand (through routinisation and economies of scale) and changes to the quality of care (Sibbald, McBride and Birch, 2011). In their systematic review of the impact of role revisions in primary care, the researchers found that whilst the expansion of the practice team improved access, it reduced the continuity of care (Laurant et al, 2009). Similarly, research by Charles-Jones, Latimer and May (2003) and Checkland (2005) suggested the change in the traditional organisation of care in general practice (mis)directed clinical interest towards a preoccupation with patient through-put as opposed to holism.

5.2.1.3 Making sense of demand
There is widespread recognition of the increasing demand on general practice and the consequent time constraints this places on staff. In their provision of care for people with chronic conditions, practice staff experienced a number of competing pressures. Optimising care for individual patients was constrained by a number of factors, not all of which the practice staff had much control over. The nurses made sense of their workload by ‘prioritising’ those aspects of care that were incentivised and filling the remainder of the time available meeting the needs of individual patients as best they could. Clinical staff talked a lot about patients with individual and complex needs. Nurses, in particular discussed the heterogeneity of patients’ needs and their difficulty in meeting these. Much of this was associated with the time available. A recognition of differing levels of need in patients with the same conditions is not explicit in the organisation of healthcare services and practice staff were constantly challenged to balance the needs of individual patients with their ability to complete their workload in the time available. A constant refrain during the data collection and a common justification for action (and inaction) was ‘the lack of time’. Time is a contextual factor that commonly affects professional behaviour in healthcare. During this research clinicians were often obliged to compromise their
professional preferences to focus on what was possible given the contextual limitations for which time was often a dominant one. A number of studies report that clinical staff typically streamline their interactions with patients to fit their work into the time available (Waterworth, 2003; Gabbay & Le May, 2011; McBride-Steward, 2012). A more worrying situation is when priorities during consultations are determined by incentivised processes of care rather than those that may directly address patients’ concerns (Campbell, McDonald and Lester, 2008). In their study, which included training clinical staff in self-management support, Kennedy et al (2013) suggested that part of the barrier to adoption was the nurses’ scope for being able to justify an activity that was not audited or rewarded. Whilst there is no suggestion here that the prioritising decisions made during this research were to the detriment of patients, the routinisation of care that these processes promote, have the potential to override the nurses’ clinical judgement and stall practice improvement initiatives. Nurses make sense of their service by weighing up the individual needs of patients in the context of their workload at any particular time. Context and environment are important determinants in extracting cues and stimulating action, creating as they do a reference for those cues that are salient to the organisation (Weick, 1995). Of course, even in the same settings with the same people there are subtle differences that can invoke different decisions and actions at different times.

Collective sensemaking is also evident at a micro level whereby the financial viability of the practice required staff to prioritise certain (more lucrative) activities over other (less lucrative) ones when appointments were ‘over-running’. For experienced staff, prioritising during consultations was often not a conscious decision but a heuristic response (Gabbay and Le May, 2011) to their workload and the time constraints within which they practiced. Sensemaking includes the ability of individuals to move from ‘programmed’ activities, such as protocols or established processes of care, to working heuristically when the need arises. This involves the “capacity to move between heuristics and algorithm, intuition and logic, inductive and deductive reasoning, continuously looking for and providing evidence, and generating and testing hypotheses, all while “playing the game.” (Anacona, 2012:p5). The ‘game’ in this sense is ‘getting the job done’. The time constraints in general practice mean staff continually make heuristic judgements about what they think are the pertinent cues (or priorities) given the patient’s presenting complaint or condition, in relation to what is possible within the current context which, at a micro level, may be different on a day to day basis. (Macbride-Stewart, 2012; Marewski and Gigerenzer, 2012).

5.2.2 Changing roles and responsibilities
A characteristic of all the practices included in this research was the increasing and expanding roles and responsibilities of the staff and in particular, the nurses. This study suggests that whilst, in theory, doctors and nurses may consider the wider issues associated with multimorbidity, in reality their patient management is increasingly characterised by its alignment to individual diseases and the biomedical model. In two of the practices, a number of the
administrative staff, although not healthcare assistants, had also been trained in certain tasks such as weighing people and taking blood samples. Whilst some aspects of care became ‘prescriptive’ and routinised, the ‘downward substitution’ of roles was aimed at making more time available for doctors, in particular, to focus on aspects of care that only they were qualified to undertake. In some ways this made sense as those patients with the most complex problems would be allocated to those practitioners with the appropriate level of expertise. However, the negative impact of organising care in this way is the movement away from patient-centered care. These findings support other research in this area. In their study of professional hierarchies in general practice Charles-Jones, Latimer and May (2003) suggested that downward role substitution as an organising principle encouraged a general ‘retreat’ from holistic and individualised care towards a focus on the biomedical model and ‘a clinical gaze that is both narrow and shared’.

Similarly, again to address demand, a sub-specialisation occurred whereby the clinical staff were responsible for different chronic conditions and different aspects of care, so for instance, healthcare assistants may be responsible for weighing patients with heart failure, nurses would manage their blood pressure and doctors were responsible for medication titration. In addition, different chronic conditions were divided between nurses and doctors. Respiratory and diabetes were typically managed by practice nurses and individual doctors may take responsibility for mental health services or palliative care. As well as those services they were contracted to provide, enhanced and additional services were offered according to what the practices thought were a priority and what individual doctors were interested in. At the time of this research none of the practices offered services aimed at patients with multimorbidity, although one GP in particular would have liked to. A number of studies acknowledge the threat to the ‘speciality’ of generalism and holistic care in general practice from the increasing specialisation within it (Moffat et al, 2006; Gerada, Wright and Keen, 2002).

Sub-specialisation has the advantage of increasing the knowledge, skills and experiences of those practitioners involved, which is likely to be beneficial to patients, particularly at the extreme end of the illness severity spectrum. However, there are disadvantages associated with sub-specialisation and the downward substitution of roles within general practice, one of which is an ‘additive-sequential model of care’ which may reduce the opportunity for more holistic care and overburden the patients (Bower et al, 2011). Another non-intended consequence of organising care in this way is the risk of ‘deskilling’ amongst the clinical staff. As the staff increasingly focus on particular conditions, they are less exposed to others and less likely to be up-to-date with current treatment and management recommendations. In their study of GPs with a special interest, Boggis and Cornford (2007) found that whilst there were advantages to GPs specialising there was a risk of deskilling amongst the other GPs in the practice who had reduced exposure to those patients.
Practice 4 was notably different in the way it was organised compared to the other 3 practices included in this research. This was largely because organisational and service decisions were made by the parent company. Despite this, the simplification of care processes into individual tasks and the downward substitution of various activities to nurses and healthcare assistants was also a feature of care organisation in this practice. An obvious difference was that the lead GP in practice 4 used the ‘Stour Access Model’ (2006). This approach reduced the demand for face to face appointments and allowed much more flexibility with regard to the length of the consultation as most problems were managed over the telephone. The reduction in the number of face to face consultations meant the GP could spend as much time as was necessary with those patients who actually needed it (as opposed to being constrained by 10 minute appointments). There may have been an improvement in continuity as patients were ‘followed up’ by the same doctor, although sourcing evidence to support this claim was not within the scope of this research. It was also convenient for many of the patients not to have to visit the surgery unless absolutely necessary. Whilst it was clear that this improved patient flow through the practice, it was not possible to ask the patients’ what they thought of this system or to determine whether patient reported outcomes were comparable to those experiences’ of patients in more conventional practices. There is some evidence that telephone triage in general practice is acceptable in terms of clinical safety and patient satisfaction although the evidence of cost effectiveness is uncertain (Ismail, Gibbons and Gnani, 2013). Although the Stour model increased access to general practice, there was no evidence to suggest its use directly impacted on the care of those with chronic conditions, either negatively or positively, apart from the inference that it freed up more time in which the doctor could spend considering more complex problems.

Patient attitudes’ to, and involvement in, their health and treatment have important implications for their long-term health and well-being, as well as the effective utilisation and sustainability of services. There was some evidence in this research that patients did not always share pertinent information regarding their health with their GP, did not always follow healthcare advice and did not want to be involved in their care anymore than they already were. None of the practices had a formal programme of self-management support and whilst the reasons for this were not explicitly explored, time was a limiting factor to a number of activities in the practices studied. The downward substitution of roles and responsibilities and the division of processes into discrete tasks, to some extent routinised and fragmented aspects of care. Sub-specialisation in general practice was probably beneficial to a number of patients but likely to disadvantage those with multimorbidity and those with more complex conditions. Similarly, sub-specialisation resulted in some deskilling of nurses and doctors in some areas of chronic disease management. The organisation and fragmentation of care into disease specific appointments and the allocation of different staff members, is likely to undermine the aspiration of patient centred care in general practice.
As care for chronic conditions is increasingly shared across primary and secondary care, factors external to general practice are increasingly influential within it. The following section explores those factors and how professionals and services are linked within and across services and organisations.

5.3 MESO

5.3.1 Fragmentation within and across services

Proposition 2 suggests that many doctors and nurses express little interest in the organisation of services, despite their input and cooperation being critical to the overall functioning and effectiveness of the practice in terms of services for patients with multimorbidity. Their engagement in the organisation of care is likely to be critical in promoting more collaborative working around multimorbidity. It was anticipated that the increasing responsibility for chronic conditions in general practice would have led to more integrative forms of service delivery. However, with the exception of end of life care and some collaborative activity with the primary health care team formalised as joint meetings, evidence of fragmented systems existed across all the practices.

Relational continuity between patients and particular GPs was low, during this research, but for most patients, this was not considered an issue. For patients with more complex medical problems this was more of a problem as the consultation time could be taken up explaining their medical history and previous courses of treatment. Research in this area suggests that patients have different preferences regarding access depending on the nature of their presenting complaint. Turner et al (2008) found that consulting a familiar GP was preferable in situations where the problem caused some uncertainty or they required a routine review. Where symptoms were considered ‘minor’ patients would rather be seen earlier than wait to see a GP they knew (Turner et al, 2008).

Relational continuity not only involves the therapeutic relationship between individual practitioners and patients, but extends to the GP taking overall responsibility for patients’ care, which includes coordinating across providers and helping patients to navigate through complex systems of care (Freeman and Hughes, 2010). Using the events documented in the Francis report (2013), Smith, Holder et al (2013) questions the ability of GPs to be able to do this and suggest their influence over patient care is limited to their current remit. Although this research did not specifically explore the extent at which GPs could influence other services, there was evidence to suggest that the current organisation of services made it difficult for GPs to keep track of where patients were actually receiving their care outside of general practice. In addition, patients with the same condition did not always attend the same providers which made it difficult to establish patterns of care and formalise communication systems to support these patterns. This research highlights the importance of administrative support in optimising service delivery.
5.3.2 Administration and organisation

The findings of this research suggest that non-clinical activities have an important part to play in the overall efficiency of general practice and care coordination, yet the clinical staff, and doctors in particular, had little interest in these aspects of service provision both within general practice and across organisations. Within general practice, this led to a number of delays and inefficiencies and presented a lost opportunity to develop more integrative ways of working across services.

5.3.2.1 Information flows

The recording and sharing of information, particularly between primary and secondary care, was an arduous task and involved not just the administrative staff but the clinical staff also. An increasing part of this data recording was associated with regulatory and contractual surveillance. Sourcing patient data recorded in different parts of the system was made more difficult by a number of different software programmes being used across the region and problems with the interoperability of some of these. A large part of someone’s day in general practice was spent sourcing, sending and receiving information from other providers. The lack of a centralised electronic health record and the enduring dependency on sending patient information in the post, often disrupted and delayed information flows. In some instances, this led to additional recording and relaying of information across boundaries of care, all of which increased the administrative workload. All of the practices had more administrative staff than clinical staff and many hours were spent recording and ‘chasing’ data. Much of this was directly related to retrieving and sending patient information to and from other providers. In practice, GPs themselves report a “treadmill of bureaucracy” (Rimmer, 2014), “ballooning workloads” (RCGPs, 2013), as well as an increase in “box ticking and administration” (British Medical Association, 2013). A number of studies confirm the “domination” of administrative work associated with the recording of data related to the QoF (Kennedy et al, 2013; McGregor et al, 2008).

This research highlights the importance of efficient administrative practices to the smooth running of general practice. Disruptions and delays in data flows had the potential to add to the workload of both the clinical and non-clinical staff. There was an evident divide between the organisation of clinical care and the administrative systems of general practice, to the extent that these systems worked almost in parallel. The lack of collaboration between clinical staff and administrators in some areas contributed to a number of inefficiencies and whilst the administrative staff recognised the need to engage GPs in a number of issues, GPs were often reluctant to involve themselves. The importance of the administration to the overall functioning of general practice, appears to be underexplored and underestimated in the literature.

Despite the anecdotal evidence, there is very little empirical evidence that reflects or quantifies the growing administrative workload in general practice. Where it does exist, it is mainly self-
reported and related to the increased complexity in the organisation of care, and linking services across numerous professionals and organisations. Increasingly, a proportion of administrative activities are associated with a growth in the surveillance and regulation of healthcare (Cheraghi-Sohi and Calnan, 2013; Swinglehurst, Greenhalgh and Roberts, 2012; Plochg and Klazinga, 2002; Harrison and Wood, 2000; McDonald et al, 2009). The staff in the practices included in this research, acknowledged the administrative work directly related to clinical activity, however there was another much larger volume of work that involved the multiple recording of various activities, sometimes in several formats. The purpose was to ensure the appropriate reimbursement but also to ensure that practices were adhering to nationally and locally imposed targets, contractual and governance arrangements. As much as this burden was born largely by the administrative and managerial staff, the nurses and doctors were also expected to record an increasing amounts of non-clinically related data.

There were a number of inefficiencies evident in the flow of information between the heart failure services and general practice and vice versa. One contributory factor was the change in roles and clinical responsibilities not being accompanied by a change in administrative practices. Communication between primary and secondary care typically continues to be from doctor to doctor, despite nurse-led services increasing in many areas (Furler et al, 2014; Fletcher and Dahl, 2013; Sibbald 2008). In their study of nurse-led management of chronic obstructive pulmonary disease, the researchers identified the need for the role extension to be recognised and institutionalised (Walters et al, 2012). A study of a nurse-led primary care pilots also noted communication to be a significant barrier to continuity in care, in particular there was a reluctance by hospital consultants to accept referrals from nurses in primary care and problems with consultant nurses not receiving letters back. In their evaluation of new ways of working in primary care, the authors found that improving linkage through a negotiated formalised system, helped to facilitate information flows to accommodate new (nurse-led) services providers (Lewis, 2001).

Working more collaboratively would facilitate more understanding of how each service functioned and would likely enhance continuity of care. The heart failure services had recently attempted a programme of meetings aimed at promoting more integrative working practices, however despite a promising start, the number of GPs attending had diminished when subsequent meetings were chaired by the heart failure nurses. The problems of information sharing across (in particular) primary and secondary care was not just confined to heart failure services and was a constant source of frustration, additional work and practice inefficiencies. Effective communication between services that provide different aspects of care to the same person has long been recognised as a key aspect in the consistency and quality of care (Bindmen et al 1997; Mastellos and Aylin, 2012). In a survey of around 700 GPs (OnMedica, 2011) more than half thought communication between primary and secondary care had worsened. The GPs stated a number of reasons for this including: an increasing lack of
understanding of the primary/secondary care environments; reduced accessibility of consultants; and lack of engagement of GPs and consultants in a clinical setting (ibid).

During this research GPs were reluctant to involve themselves in non-clinical activities such as IT training and practice meetings. In her study of general practices, Checkland (2005) found that GPs individually and collectively, implicitly and explicitly, decide what may be considered a legitimate part of their role. The suggestion here is that activities unconnected to the patient-doctor consultation are often not considered to be legitimate work by GPs which may explain their reluctance to involve themselves in them. Similarly another study by (Dawda, Jenkins and Varnam, 2010) indicated that GPs’ interest in quality improvement was limited and most considered it a managerial role as opposed to something they should be involved in. Non-engagement in activities not directly related to clinical work extends to those outside the practice. A recent survey of NHS engagement (Chou, 2014) found that GPs were much less likely to be engaged with Clinical Commissioning Groups than practice managers. The deputy chair of the BMA thought this was due to, GPs being ‘overwhelmed’ with their practice commitments” (Chou, 2014). Of the doctors interviewed for this research, whilst 2 were involved in regional activity, most were not. Although they were not explicit about the reasons for this, a GP in practice 1 said commissioning was not within GPs area of expertise and not what GPs practiced medicine for. Whilst there is no doubt that GPs have a heavy workload, the impression from this research is that this is not the main reason GPs do not involve themselves in non-clinical activity. There are a number of projects that have studied doctors and GP engagement in a number of non-clinical activities such as quality improvement (Currie, 2008) initiatives, integrative care pilots (Duquemin, 2011) and clinical leadership and management (Wilkinson, Powell and Davies, 2011). All of which, to some degree, note the difficulties of engaging and retaining GP involvement. Whilst the reasons for this are multifactorial, the suggestion from this and other research is that many GPs prefer to focus on clinical work.

5.3.2.2 Interface between clinical and administrative staff
Nurses and administrators bore the brunt of non-clinical activities and were candid in expressing their frustrations, particularly in relation to the medical staff. Whilst not all the GPs were guilty of avoiding non-clinical work to the same degree, their general disinterest created a disproportionate amount of additional work. Several of the participants in the study exhibited contingencies, whereby they ‘worked around’ obstructions to their activities caused by others not completing theirs. Swinglehurst (Swinglehurst, Greenhalgh and Roberts, 2012) and others (Hasbeselben, Wakefield and Wakefield, 2008) suggest ‘work arounds’ are a common strategy invoked by organisational workers to circumvent disruptions to their routines. Work arounds can be seen as manifestations of sensemaking in which contextual cues that disrupt the flow of organisational activities are made sense of by practice staff who look to understand the reasons for the disruption and take action to enable the resumption of the disrupted activity. In those situations where resumption is problematic, sensemaking is ‘biased’ towards alternative action.
(work arounds) or further consideration of the disruption (Weick, 2009). This focus on work arounds allows the immediate activity to be resumed but does not always address the underlying problem associated with different interconnected parts of the healthcare system, from working more collaboratively.

5.3.2.3 ‘Dual’ Organisations
There was some evidence during this research of what Crabtree, Reuben et al (2008) refers to as the ‘dual’ organisation, whereby the administrative and clinical aspects of general practice operate as two separate systems. The clinical staff provide clinical services and the main function of the administrative staff is to support this, but the two streams effectively remain separate, with the practice manager ‘minding the gap’. The practice manager’s role is primarily concerned with protecting the clinical (medical) staff from the ‘inconsequential’ issues that pre-occupy the support staff. During this research for the most part medical staff were disinterested in the non-clinical aspects of practice activity. This was evident in the lack of joint practice meetings, but also in remarks made by a small number of GPs, and the comments of administrative staff in a practice that did hold joint meetings, but where the non-clinical staff were not allowed to broach a subject without ‘running it by’ the practice manager first. During this research, whilst most GPs completed the mandatory administrative tasks, they did not consistently involve themselves in the wider administration and organisation of general practice. This reluctance of GPs to involve themselves is likely to have implications for future services for people with multimorbidity. A number of evaluations of coordination and integration noted an important barrier was the lack of engagement by GPs (Goodwin, Sonola and Thiel, 2013; Ling, Brereton et al, 2012).

As well as their clinical workload, GPs spent a certain part of everyday responding to a number of interruptions. These ranged from requests on the electronic messaging systems, telephone calls, and administrative or nursing staff knocking on the door with questions. These, ‘unforeseen’ interruptions, all took time and this time was not necessarily accounted for when clinical staff planned their day. In some instances, if the clinical staff worked more closely with the support staff, decisions regarding particular recurring issues could be agreed across the practice and would likely reduce the number of disruptions to clinical flows. There is limited research in this area however, Lanham, McDaniel et al (2009) emphasise the importance of a number of relationship characteristics that apply to all practice staff, both clinical and non-clinical, that should be nurtured and supported if overall performance is to be optimised:

Trust, mindfulness, heedfulness, respectful interaction, diversity, social/task relatedness, and rich/lean communication were all identified as important in practice improvement. (Lanham, McDaniel et al 2009; p457)
An indication of the extent of these interruptions was evident on many of the patients’ electronic records whereby there could be, at the extreme end of the spectrum, several hundred contacts in a year. Many of these required an action or an intervention by the GP. Much of this activity is ‘unseen’ and not reimbursed. As with the example of the dressings in the findings chapter, in some instances, seemingly simple requests, such as starting a new medication, become a laboured process due to the lack of formalised (and efficient) systems of communication and organisation across different services. These, ‘unforeseen’ interruptions, often detracted from time that could have been spent on clinical activities. Throughout the day practice staff, often subconsciously, were continually making sense of their workload, identifying and prioritising (deliverable) cues and deflecting or deferring others. Inevitably when time was an issue, there were occasions when they focused on the technical (clinical) issues and ensuring the electronic data recording was complete as opposed to any wider concerns the patients may have had regarding their health. This finding supports other studies in this area (Freeman and Hughes, 2010). The suggestion here is that if the GPs worked with the administrative staff in developing more efficient systems, there may be a way to improve the efficiency of the non-clinical activity, at the same time as reducing the number of interruptions in the GPs day.

Administrative activities occupied a significant proportion of everybody’s day in general practice. The absence of a centralised patient record and a reliance of information sent through the post, disrupted information flows and had the potential to delay treatment. An increasing amount of clerical activity was linked to information required by the PCTs which in some instances was necessary for ensuring appropriate payments. An increased surveillance of general practice is noted in a number of studies (McDonald et al, 2009; McDonald et al, 2007; Chew-Graham et al, 2013). There was some evidence from this research that systems of communication were inefficient and actually created additional work for practice staff. The organisational divide between the clinical and administrative staff reduced the opportunity for more collaborative working and was perhaps a barrier to improved efficiencies.

5.3.3 The chronic care model

The Chronic Care Model did not feature in any discernible way in the 4 practices included in this study. The reasons for this were multifactorial, but included a lack of time to address much beyond the clinical workload and a possible disinterest amongst GPs and nurses in aspects of non-clinical care. However, there were a number of external factors which also determined practice provision, over which practice staff had little or no influence, for instance, the interoperability between patient information systems, a reliance on postal information, contractual arrangements and the administrative workload. Similarly, heart failure is managed across primary and secondary care but linkages are typically limited to communication between individual heart failure nurses and GPs with occasional letters from the heart failure doctors. Linkage in the form of organising structures that span strategic, managerial and delivery levels are key to promoting more integrative working (Kodner and Spreeuwenberg, 2002) however
general practices are relatively small entities that work largely independently from each other (Smith, Holder et al 2013) this can make joint working across primary and secondary care particularly challenging.

5.3.3.1 Heart failure management across providers
Even with the focus on one chronic condition, care continuity across secondary and primary care in relation to the management of heart failure was variable. A number of the specialist nurses could sympathise with GPs, particularly managing those patients in the advanced stages of heart failure or those whose condition was complicated by multimorbidity. The relative rareness of clinically complex patients in each practice, often limits GPs exposure to it and therefore knowledge and experience in being skilled enough to manage it. A recent review of the literature suggests that patients with heart failure can be managed effectively in primary care, provided GPs and specialists work together in a multidisciplinary team (Price, Baker et al, 2014). An obvious barrier to more collaborative working was the lack of effective linkage. Communication was mainly through letters and the postal system and in the absence of a centralised electronic health record, information flows could be disrupted and delayed. An initiative to promote the use of management plans had yet to encourage closer working between general practice and secondary care. This research suggests that attempts at collaboration may have been more successful if the specialist doctors had taken the lead in various aspects of the service, as opposed to the specialist nurses. In recent years a number of change programmes have sought to improve services in general practice and it probably comes as no surprise that many of these cite the importance of GP engagement. Conversely, a number of evaluations have noted the difficulty in engaging GPs and the negative effect on the project when GP engagement has not been adequate (RAND and Ernest and Young Ltd, 2013; Ling, Bardsley et al, 2010). Effective linkage across primary and secondary care is key to promoting more collaborative working around chronic condition management. Initiatives that fail to engage GPs are likely to be less successful than those that do.

5.3.3.2 The patient’s role
The patient participants in this research were largely ‘passive’ recipients of care, they trusted their doctors to know what was best for them, tried to live a healthy life and mostly took their tablets as prescribed. Most did not want to be involved in their care anymore than they already were. A key element in the successful implementation of the chronic care model is self-management. This is a central theme in NHS England’s (2013) new strategy for chronic conditions. Ideally patients are ‘activated’ and proactive, setting goals and discussing treatment options with their practitioner. As well as patient barriers to this role, recent research cites organisational constraints on the clinical staff’s time to attend training sessions as well as an incentivised workload that did not reward self-management support (Kennedy et al, 2013). A recent study by Chew-Graham et al (2013) suggested that the organisation of chronic care into a series of routine monitoring appointments, actually encouraged ‘passivity’ in patients. There
are some gaps in the literature of the effectiveness of self-management in reducing demand on services and/or improving patient outcomes (Hinder and Greenhalgh, 2012; Challis, Bersins and Reilly, 2010). In practice 4, the use of the Stour model did appear to suit both the patient and the doctor and promote more self-management. A short term plan would be discussed over the telephone, for instance a medication change, following which the patient would call back if the problem persisted. The advantage of this approach was the time it freed up whereby the doctor could be more flexible in the length of time he spent talking to each patient. Smith, Holder et al (2013; p35) suggest there is an ‘ethical imperative’ for patients to be more involved in their care and that research using variable measures of success may help to reduce the gaps in the evidence. Whilst self-management support is widely considered to be an important part of chronic healthcare, patients’ attitudes towards, and capacity for, are likely to vary.

5.4 MACRO

5.4.1 Health Policy
The third proposition suggests that managing the care of patients with multimorbidity is constrained by the way services are traditionally structured and organised. A number of activities related to the management of chronic conditions in general practice can be linked to contractual and financial arrangements. Most of the nurses included in this research mentioned the QoF and filling in electronic records and the increasingly ‘prescriptive’ nature of their role. In some instances these arrangements incentivised activity in preference to those of concern to the patients, practice nurses and GPs. Evidence in this area often links the ‘incentivisation’ and the ‘routinisation’ of care to displacing the patients’ concerns during the consultation (Hackett, Glidewell and West, 2014). Few studies make reference to the displacement of professional priorities during consultations. This may be because practitioners ‘make sense’ of their decisions during consultations in relation to perceived patient outcomes. Many of the practice nurses suggested that they often ‘worked around’ the templates in trying to address the individual needs of patients, although these were usually disease specific needs. It is not known whether the displacing of patients concerns are ‘picked’ up at other appointments or whether these are ‘deferred’ until their perceived seriousness becomes a consultation priority. Chew-Graham et al (2013) suggested that only extreme instances such as anticipating death or bereavement, could allow practice staff to deviate from their prescribed consultation routine. Although the nurses included in this research confirmed the pressure they were under to complete their contractual activities as a priority, they discussed a number of scenarios which necessitated ‘work arounds’ to accommodate individual patient needs. ‘Deviations’ from the template were often related to multimorbid, frail elderly patients and a recognition that consultations with these patients often took longer than those those with younger, fitter patients with a single condition.
The heart failure nurses based in secondary care were also constrained in some aspects of their role due to factors outside the clinical arena, typically funding and ‘programmed care’, initiatives that dictated particular activities in preference to others. For instance, the financial pressures to optimise service income meant that patients sometimes remained at the acute trust when, if income had not been an issue, they would have been transferred back to their referring hospital. There is some evidence of a similar issue across healthcare whereby a number of policies such as, the marketisation of the NHS and payment by results are promoting perverse incentives by rewarding certain activities in preference to others (Ham, Imison et al, 2011; Pollock, 2014; Bernadt, 2011). A study by the Policy Exchange in 2012, concluded that there was a significant increase in the number of hospital admissions for patients with diabetes, because GPs and hospitals would be financially worse off if they worked collaboratively in the interests of the patients (Featherstone, 2012). Several studies and policy recommendations mention the value of ‘pooled’ or ‘aligned’ budgets to promote integration and a more collaborative approach to service provision (Department of Communities and Local Government, 2010; Mason, Goddard and Weatherly, 2014). Healthcare policy, in conjunction with funding arrangements, dictate certain activities in both general practice and secondary care, sometimes in contrast to what the staff think should be delivered and patient concerns. Pooled budgets are likely to promote more flexibility within and across services provided.

5.4.2 Health systems and Integrative practices

There was a degree of resignation amongst the practice staff to the external influences that determined certain activities within the practice. From a clinical perspective, divisions in care across primary and secondary sectors are well established. However the increase in responsibilities for chronic conditions in general practice has not been widely accompanied by new delivery systems that reflect the multifaceted issues associated with multimorbidity. Whilst a number of these are clinical issues, there are also important organisational ones, a number of which were identified during this research. A recent study of new models of primary care and more integrative practices suggest that greater organisational scale is needed to be able to support development across organisations in primary care and that many practices require ongoing skilled facilitation, financial advice and help with business planning for changes to existing services (Smith, Holder et al, 2013). At a meso level, when care is shared across providers, multimorbidity creates reciprocal interdependencies (Charns and Schaefer, 1983) whereby, the effectiveness of the overall service is dependent upon the contributing elements working collaboratively. In this research, optimal heart failure management was, to some extent, dependent upon the GPs and the heart failure nurses working collaboratively together. Co-location of providers can often facilitate more integrative care and there is evidence in the UK of primary care purchasing hospital specialists’ time both to advise on individual patient’s care, but also to work with federated practices and networks to improve patient pathways (Smith, Holder et al, 2013). Services for patients with multimorbidity typically span a number of providers, improvements in the linkage between these providers is likely to enhance care.
continuity and co-locating providers, even intermittently, is likely to have a positive effect on promoting closer working practices.

During the observation of activities at the level of general practice, there appeared to be a policy-practice gap in which the conceptualisation of healthcare reforms failed to materialise at a practice level. In lieu of any comprehensive and cohesive implementation strategies, the practices appeared to make sense of the changes required by subsequent policies, within the context of existing general practice activities. So whilst most had absorbed more work, employed more staff and adopted new computer systems, in terms of changes to service delivery and more integrative working, there was little to suggest this had happened in any organised way. A noted barrier to change in general practice is the relative size and independent status of individual general practices and there has been recommendations from a number of sources for practices for improve linkage and collaboration between themselves and other professionals in the form of ‘federated’ networks (Rosen and Parker, 2013). There are a number of examples of newly formed integrated delivery systems within the NHS (Bardsley, Smith and Car, 2013). To date these have mainly been part of government sponsored projects (Ernest and Young and RAND, 2012) and disease (i.e. diabetes) or population (elderly-frail) specific. A number of stakeholders are currently developing options for the delivery of care for people with multimorbidity (NICE, 2014; NHS England, 2014).

The findings of this research resonate with other studies (Broens et al, 2007; Ling, Bardsley et al, 2010) in citing the practical reality of linking services across professionals and organisations as an issue in service delivery. In the analysis of this study, using heart failure services as a tracer condition across different delivery systems, helps to illustrate how the theory of certain care pathways can be disrupted and frustrated by the way they are assimilated or (more usually) ‘bolted on’ (May et al, 2011) to existing ways of working. In the absence of organisational and financial alignment to support coordination, care for patients multimorbidity is reduced to a collection of discrete episodes or as Bower et al conceptualise it, “a sequential additive model” (2011). The growth and ‘centralisation’ of services locally diluted and eroded professional relations between different disciplines and services. Certainly within this research the practice staff talked about the ‘diluting’ of inter-professional relations, particularly with regard to district nursing teams and hospital staff. Howe’s study confirms this finding suggesting communication and professional relations, key aspects of coordination, are actually decreasing and deteriorating between GPs and hospital consultants (Howe, 2012).

Several studies support the relation between the number of organisational and professional boundaries and the problems with communicating and coordinating care across them (Ling et al, 2010; Fabricotti, 2007; Chew-Graham, 2008). When the design and delivery of health services are analysed as a ‘whole system’ that is, incorporating a number of interconnected sub-systems within the wider organisation of care, it is possible to attribute certain structures
and behaviours at a micro level to policy themes at a macro level. In their ‘whole systems’ study of implementing telehealth, May et al (2011) illustrate an important, and empirically evident, barrier to the effective redesign and delivery of services in primary care, as the lack of coherent organisational links between policy and practice. Featherstone’s (2012) review considers the recent restructuration of PCTs into the newly formed clinical commissioning groups as an important driver for the disaggregation of “clinical professional silos”. Unfortunately he suggests that the new structure reflects a continuation (and possible extension) of the historical divisions within the NHS in which certain aspects of care are largely attributed to 3 main sectors, general practice, the community or secondary services. Aspects of healthcare organisation perpetuate fragmentation if the links between them are not actively managed.

This research suggests that because of the way the NHS has been historically organised, fundamental changes in general practice alone are unlikely to be successful in optimising services for people with multimorbidity. The interdependencies created by multiple providers requires effective linkage to improve coordination and efficiencies in care, not just at a clinical level but in the wider organization of care too. Consequently, in redesigning services it is necessary for a whole systems approach in which the interdependencies between different individuals and services are actively managed and appropriately funded to promote continuity and coordination.

5.5 Implications of research

5.5.1 Limitations and strengths

The scope of this research was partly limited by the small number of people interviewed and the number and ‘choice’ of practices included as well as their situation within one health economy. The patients were all self-selecting and likely to be more representative of people with less complex health needs. Younger, functionally fitter and more independent people with chronic conditions are less likely to have the same experience of healthcare as those sicker, less independent people that live alone. However, it is possible that issues regarding the organisation of care are present across the spectrum of patient need and differ only in relation to degree. All the practices were positioned in urban areas and were of a comparable, proportional size in relation to the number of GPs employed and the proportion of registered patients. Practice 4 was a notable exception (atypical) to the other, more traditional, practices, largely because its organisation was determined by a parent company and because it was a new practice with only one full-time GP, the number of registered patients was proportionally smaller. The initial research design had stipulated 4-8 practices and I had anticipated a degree of choice whereby I could have selected a more diverse range, perhaps including a rural practice, or one with a single handed GP. An increased and more diverse range of practices may have demonstrated a greater variation in service provision. As it was, I was limited by the number of positive responses to my initial invitations.
One of the recognised trade-offs of using a small number of cases, is the depth to which those cases can be studied (Stake, 1995). I was able to optimise my time spent in the practices, getting to know staff and their routines and engaging in informal discussions and observations. At first, staff (particularly medical) were distant and sometimes aloof, however as time went on they appeared more friendly and relaxed. Consequently, I was involved in conversations that were less guarded and rehearsed and perhaps more candid than they may have been in a more structured setting that was time limited. So as much as the number of practices was a limitation, it was also a strength in that the long periods of time spent in the company of the practice staff produced a huge amount of rich data, which may have been less so had I had to divide my time over more practices. Even so, the findings of this research are temporally situated within the context of the fieldwork and particular to the prevailing influences at the time. In-keeping with Weick’s concept of the ‘impermanent organisation’ a similar study at a different time may result in different findings, however nuanced (Weick, 2001). This is because different professionals, given a similar situation, may respond differently depending on a number of inter-related individual and contextual factors. The ‘particularisation’ of case study to a particular time and space is an often used criticism of this approach however, the purpose of case study is often not to extensively generalise (Guba and Lincoln, 2010) but to capture ‘reality’ in greater detail (Galliers, 1992).

In their approach to case study research, neither Yin (2009) or Stake (1995) subscribe to the school of grand generalisations. Yin (2009:p15) states that “…case studies are generalisable to theoretical propositions, not to populations or to universes” and suggests that case studies rely on analytical generalisation whereby the researcher is responsible for generalising their results to a wider theory (2009:p43). This process is not automatic but is the result of a theory being tested within a case and replicated in subsequent cases, thus strengthening the theory. Gomm et al (2000) refer to a similar concept of theoretical inference. Stake’s case study approach is largely focused on the individual case and what can be learned about the particular as opposed to generalising to a number of cases. In studying a single case Stake (1995:p85) asserts that ‘…whilst single cases are not as strong a base for generalising to a population of cases […] people can learn much that is general from single cases. Stake’s position on the generalisability of case study findings puts the onus on the readers of case study report to determine whether the results have a wider applicability to other cases. Guba and Lincoln (1989), refer to this as ‘transferability’. This research uses theoretical inference whereby the iterative data analyses, in light of the developing propositions, led to a number of conclusions about how and why services are provided in the ‘particular’ context of the 4 practices studied.

Another possible limitation of the study was the diminishing time spent in each practice. This was partly deliberate in that it was envisaged that the ‘learning curve’ would be less steep in subsequent practices, as would the time to the ‘new knowledge saturation point’ (Bowen, 2008). But also, time was limited as a result of having to adjust the fieldwork schedule to the activity in the practices. For instance, the fieldwork in practice 3 was scheduled in December. The
normal routines in the practice were modified to accommodate the impending bank holidays and the time-off that various staff members had elected to take. Consequently, a number of regular practice meetings were cancelled as key staff members were on holiday and there was less opportunity to interview the remaining staff members as they were busy covering the work of absent colleagues. To some extent this accounts for the differences in the number and cross-section of people interviewed in each practice and the type of meetings attended, which varied between practices. On the other hand, the adjustments made to the data collection in relation to the daily activities of the practices, reflects the complexities of studying ‘real-life’ situations and events.

At the same time as the variance in the roles of those interviewed in each practice could be seen as a limitation, it may also be considered as a strength. Much of the existing research in general practice includes the perspectives of GPs and practice nurses, whereas those of the administrative staff is often absent, marginalized or not considered relevant to service provision. In addition, the interviews with the specialist nurses and the community nurse practitioners added another dimension to understanding service delivery. They too had a vested interest in spanning boundaries but from the opposite direction to general practice. Their inclusion offered additional insights into the related issues associated with providing a more comprehensive programme of care for people with complex needs, particularly across the community-secondary care interface.

The observational data were an interesting addition and, in some instances, a counterpoint to the interview data. For instance, in addition to asking questions about patient access to general practice, it was interesting to note in one practice, the queue of people on the outside the practice each morning hoping to get an appointment that day. Similarly observing interactions with reception and administrative staff over a number of days, gave some indication of the disruption to routines caused by patients and practice staff choosing not to work within those routines. Observing practice meetings suggested a hierarchical structure in which concerns expressed by the administrative staff were often marginalised by the disinterest of the clinical staff. These two observations provided an additional perspective and helped to explain some of the issues that affect service provision, if the data collection had been restricted to interviews alone, these factors may have been missed.

5.5.2 Research

The evidence base for providing services for people with multimorbidity in primary care is relatively small, however in recent years there has been a huge growth in interest globally. There is little empirical data that explores the spectrum of need in multimorbid patients beyond that associated with individual chronic conditions. Even here, models of care are largely biomedical and fail to differentiate between severity of the disease/s and the associated level of need. Further research is required to identify the expectations of patients with multimorbidity in
relation to their aspirations of health and the extent to which they would want to be involved in it. In facilitating effective services, commissioners and providers will require accurate data, not only regarding the number of patients with different individual and combinations of chronic conditions, but an indication of the severity of their overall condition is also required so the intervention and support can be matched to meet it. To be able to do this effectively, biomedical indicators of disease severity will need to be combined with other psychosocial factors associated with health risks such as ethnicity, deprivation, reduced mobility, memory problems and living alone. Different collaborations of professionals will be required to effectively meet the diverse needs of different cohorts of patients. For instance, older patients are likely to benefit from the generalist perspective provided by elderly care professionals at some point in their illness trajectory and yet no similar service is available for younger people at the severe end of the multimorbid spectrum. The cross-cutting nature of ill health in multimorbid patients suggests the need for a multi-agency approach that is centrally funded, supported and evaluated, that draws on the expertise of a number of stakeholders including, health service researchers, organisation theorists, clinical, social and public health professionals. Some national demonstration studies are already underway, although it will be some time before they are ready to report.

As well as calculating population needs and developing models of care to meet these, research is required to establish the likely clinical and cost-effectiveness of proposed configurations of care. In addition, there is limited information regarding what aspects of care patients with multimorbidity value most (Bayliss, 2008). At a micro level, more research is needed to establish the optimal organisation of general practice to provide acute and episodic episodes of care at the same time as providing continuity in care for those people with complex needs. Research into the administration of general practice is required to quantify the bureaucratic burden and its effect on clinical and practice efficiency. As key individuals in general practice, further research into GP perspectives on service redesign will be necessary to optimise their engagement in future configurations of care.

5.5.3 Policy
The evidence from this research suggests that general practice has little spare capacity to respond innovatively and effectively to policy directives that require service redesign. Several commentators suggest clinical staff require more training in the management of multimorbidity and resources to address the increasing complexity of patients managed in general practice (Smith, O’Kelly and O’Dowd, 2010). Policy initiatives aimed at improving services require more detail and should be accompanied by an evidenced framework of implementation which includes a structure of support for clinical and administrative teams. There is a recognition that changes to service delivery need to be flexible to the context of the locality in which they are being introduced. The context and organisation of general practice is a recognised challenge in service development for patients with multimorbidity (Smith and Holder et al, 2013). The need
to extend the organisation of care beyond individual conditions and to promote continuity and consistency of care between different specialists, organisations and sectors of care, is well recognised. A closer alignment of funding streams across services are required to appropriately incentivise and reimburse more favourable care models and to improve the efficiency and effectiveness of care, not least through more collaborative working.

5.5.4 Practice
At a micro level, the predominance of process measures as an incentive to clinical activities needs to be moderated by the inclusion of more functional outcomes of care and patient reported outcomes. It is often not possible to simultaneously optimise every condition a patient has, without adversely affecting another. Many patients with multimorbidity often do not fit well into existing care pathways and have complex needs that clinical staff need time to effectively consider and address. GPs are highly trained with the skills to effectively balance the risks associated with managing complexity at the same time as identifying realistic outcomes. To do so, requires resources and support from other professionals and services. The fragmentation of care across a number of providers creates a number of interdependencies. Linkage between these providers should be formalised through structured relationships whereby the expertise of all those involved is appropriately recognised and used to contribute to a plan of care in which responsibilities are appropriately attributed. A centralised plan of care may be used to formalise care across providers and can function as a coordinating mechanism, whereby all those involved in a patients care work to the same goals and have access to up to date information, irrespective of where that care occurs. In lieu of a centralised electronic record, improved communication between providers is required and a movement away from the current dependency on postal services.

5.5.5 Contribution to knowledge
This research is novel in its study of the influences on service provision for people with multimorbidity in general practice. Previous studies in these areas are typically limited to the clinical aspects of managing individual chronic conditions, without an exploration of the wider influences that determine healthcare provision. General practice is likely to play an important role in the future management of multimorbidity. To be able to do this effectively, a recognition of the particular issues associated with managing this condition, in the context of current care arrangements, is likely to be necessary. At a micro level, patients do not always: follow advice regarding their treatment; want to be involved in their care; or appreciate the value of routine appointments. These factors will need to be addressed if the proposed implementation of self-management are to be successful. The organisation of care across different providers, is only likely to be effective if linkage between them is optimised to promote informational continuity and integrative practices. This linkage needs to be formalised to ensure clear lines of responsibility for different aspects of care are attributed appropriately and to avoid duplications and omissions in care. The administration of care plays an important role in healthcare
efficiencies, this factor appears to be underestimated in the literature. This research suggests that more integrated working between the clinical and non-clinical staff in general practice, is likely to improve the continuity and as well as the efficiency of care. This research provides some evidence, as do other studies, that some GPs have no interest in practice activities outside of their clinical role. This is likely to affect the future arrangements for GPs to coordinate care across organisations. At a macro level, health policy and the financing of care can reduce clinical freedom by determining what services are provided and prioritized. These factors favour an organisation of care that is largely focused on managing demand which is prescriptive and routinised and can distract staff from more patient centred aspects of care. This research provides new knowledge in an area that is currently under researched.

**Chapter summary**

As ‘independent’ providers, it may be assumed that general practices can provide services as they see fit. This research suggests that there are a number of factors external to the practice that overtly influence the organisation and provision of care. Care for people with chronic conditions continues to be largely disease specific and in some instances, fragmented both within general practice but also beyond. Managing an expanding list of chronic conditions is a relatively new responsibility in general practice and one that has mainly been devolved to the nurses and healthcare assistants. In contrast to holistic and individualised patient management, much of the chronic care in general practice reflects that in secondary care and is organised around individual diseases and biomedical templates. It is recognised that these are largely unsuited to people with multimorbidity and that more integrative delivery designs are required to improve the quality of care for this group of people. In the 4 practices included in this research, there was no widespread impetus or intentional structure to change the way chronic conditions were managed. Changing organisational behaviour is notoriously difficult, but the suggestion posed here is that, most GPs continue to focus on the doctor-patient consultation. Whilst this is appreciated by individual patients, the wider issues associated with multimorbidity and collaborative working, are not effectively addressed.

At a micro level, the increasing demand on general practice requires the division and routinisation of various activities to allow the staff to complete their daily workload. This has necessitated an organisation of care that optimises the management of demand rather than one that promotes holistic and patient centred care. Self-management is considered a key element to optimising the management of multimorbidity, but there was some evidence that patients did not want to be further involved in their care and that practice staff had difficulty in finding the time to support it. At a meso level, the requirement for more integrative working across services was undermined by the lack of linkage, the absence of a centralised electronic record and an over-reliance on letters, was compounded by multiple providers situated across a large geographical area. Within general practice the administrative workload was onerous and disruptions and delays to treatment could result from disruptions and delays in information flows.
across services. The efficiencies of systems within general practice were sometimes undermined through a lack of engagement of some GPs in non-clinical activities. Working collaboratively to provide heart failure services in the area was made more difficult by the lack of formalised linkage between different providers. At a macro level, a certain amount of general practice activity was determined and constrained by the wider organisation of care in which they are situated. Health policy and funding arrangements dictate to a large extent, how services are provided and where, as well as the extent to which linkages are formalised. The lack of a whole systems approach to the provision of services for people with multimorbidity, mitigates against joint working and patient centred care.
CHAPTER 6 CONCLUSION

This thesis has explored the provision of services for people with multimorbidity in 4 general practices and in relation to the wider NHS, within which it is situated. It originated from an interest in, and an empathy with, people with multimorbidity and the apparent disconnection of services across primary and secondary care. Multimorbidity is associated with increased disability and frailty, a poor quality of life and high levels of mortality. Various models converge on characteristics of care for people with chronic conditions that suggest care should be individualised, continuous and coordinated. Services organised to address these characteristics require formalized linkage to work efficiently and effectively across different management and finance structures. Conceptually, multimorbidity is relatively new, but the rising incidence and prevalence ensures it is of primary concern to many governments and societies around the world, particularly in relation to the provision of services. In the absence of services specifically related to multimorbidity, this research used the ‘overlapping’ management of chronic conditions to explore the organisation of care in general practice. In advanced healthcare systems, the organising paradigm has been an acute care model, with services for people with chronic conditions being divided into disease specific programmes. It is recognised that this model of care is unlikely to meet the needs of people with multimorbidity, is often inefficient and probably not sustainable.

The advancement and subsequent specialisation of medicine, as well as the division of chronic care into individual chronic conditions, suggests that a certain amount of fragmentation of services is evident, particularly for people with multimorbidity. The challenge for stakeholders is to reduce this fragmentation by improving the linkage between different clinical staff and services. Systems of care can promote linkage, optimise communication flows and promote continuity and coordination of care across providers. Collaboration and integration are considered to be key aspects of effective and sustainable healthcare. Healthcare is increasingly complex and linking the various parts is often multifaceted, challenging, and dependent upon a number of factors working synergistically, not least electronic databases. For people with multimorbidity, there is a recognition that good care is likely to include a number of key factors that extend beyond the clinical aspects of discrete diseases. Models of care can help to identify the key components of a system, however an umbrella of organisational structures at a strategic and operational level are required to guide and support more integrative approaches if continuity is to be more widely experienced at a service delivery level.

General practice was chosen as the focus of this research because most formal care for people with multimorbidity occurs outside of hospitals. In addition, the prevailing policy context at the time of this research was one whereby services are increasingly shifting from the acute sector to the community. Stakeholder recommendations for the management of multimorbidity consistently identify GPs and general practice as the obvious provider, not just to address the
clinical aspects of care, but to coordinate patient care through the wider healthcare system. The aims of this research were to explore the provision of care for people with multimorbidity in general practice. Specifically to examine how services were provided and the factors that influence and determine their form. It was anticipated that a number of factors external to the practice would influence the configuration of services and that, in response to the growing responsibilities for chronic conditions, new models of care would have emerged.

How services for patients with multimorbidity are configured and delivered is dependent upon how practice staff make sense of what is needed and what is possible in the given changing diurnal context. In general, clinical staff would assess individual patients’ needs and provide for these as best they could in the context of a time limited consultation that was structured around activities dictated by contractual arrangements. There is a growing recognition that patients play an important role in healthcare outcomes and that their attitudes and behaviours regarding their health have important implications for healthcare utilisation and the sustainability of services. Self-management support is aimed at helping patients to be more actively involved in their care to the extent that they are able make informed decisions about their treatment. There are a number patient related barriers that prevent patients from being more involved in their care. Whilst it could be assumed that patients would want to be more involved in their care, this research suggests that this is not always the case. The patients included in this research presented a spectrum of health states and whilst it may have been expected that those with more advanced conditions would be less interested in self-management, none of the participants wanted to be involved in their healthcare anymore than they already were. The reasons for this were not very clear but would need to be explored further if the intended introduction of self-management programmes are to be successful. From a service perspective, self-management usually requires a programme of support. Whilst practice staff often recognised the need for self-management, time and workload was often an issue that restricted a number of activities. Other research has indicated that time is not only necessary for the delivery of self-management support, but also to allow staff to attend training programmes which, if not directly related to financial reimbursement, was hard to justify within general practice.

There was a tension between meeting contractual arrangements, particularly the QoF and providing patient centred care. Although the nurses tried to work around structured appointments they were often constrained by the routinisation of care and the financial imperative of completing activities that were directly reimbursed. The organisation of services into disease specific appointments largely reduced the scope of the consultation, but facilitated organisational efficiencies whereby large numbers of patients could be processed quickly. However, this format ‘assumed’ that people with the same condition had the same level of need. In some instances, patient and professional preferences were displaced and there was a ‘retreat’ towards the biomedical model as opposed to care that was more patient centred.
Divisions of labour have emerged to optimise the daily throughput of patients. In some respects this makes more effective use of highly skilled medical and nursing staff, however it can disrupt continuity in care and creates a number of additional, routine appointments which may burden patients. The sub-specialisation of practice staff extended their skills and expertise in certain conditions and would benefit a number of patients, particularly those with a single condition. However, the likely downside to this organisation of care is that it reduces their exposure and therefore experience of managing other conditions, including multimorbidity.

Whilst most doctors and nurses interviewed expressed little interest in the organisation of services, their input and cooperation was critical to the overall functioning and effectiveness of the practice. Their engagement in the organisation of care is likely to be critical in promoting more collaborative working around multimorbidity. Healthcare services in this research were distributed over several providers and facilities that were geographically dispersed. As well as the inconvenience this caused the patient, there were a number of logistical problems associated with retrieving and receiving information. Administrative activities occupied some part of everyone’s day, including the clinical staff and most thought the volume of this work had increased in recent years. There was some evidence that inefficient administrative practices created additional work for both clinical and non-clinical staff in the practice and that if administrative systems were better supported by the medical staff, improved efficiencies could possibly allow more time to be spent on clinical activities. The lack of engagement from the medical staff in non-clinical activities suggests some challenges to the implementation of future plans for the management of multimorbidity in general practice. This research highlights the importance of administration to the overall functioning of general practice and healthcare in general. Its importance is probably empirically underestimated and it is likely that gains could be made in terms of efficiencies if clinical and non-clinical aspects of care organisation worked more collaboratively.

The Chronic Care Model did not feature strongly in the provision of services for people with chronic conditions, either in general practice or across the primary and secondary care interface. The complexity of provision with different management and funding streams made formalised linkage difficult and practice staff had some difficulty in justifying time on activity not directly reimbursed. A key factor in management models is integrative working across systems of care which can be aided by co-location of services. New models of primary care are facilitating more collaborative ways of working whereby specialist services are, at least temporarily, situated in primary care and working with general practice to enhance chronic care. For fundamental changes to be made to the way services are delivered, organisational and financial support are likely to be required as well as securing more integrative ways of working whereby generalists and specialists share their expertise in managing multimorbidity. A whole systems approach is required whereby organisational structures that span providers are
required to align financial and managerial streams that support integrative practices and service development.

The organisation of services for people with multimorbidity in general practice is only partially determined by how practice staff makes sense of patients' needs and what can be delivered within the context of a busy organisational environment. Increasingly, practice activity is determined and constrained by external factors such as contractual agreements and financial incentives. Integrative working across organisations can be undermined by the lack of formalised linkage and by health policies and financial incentives that direct and reward particular activities. In some instances, these arrangements are prioritised over professional judgement and patient concerns. The non-clinical aspects of healthcare play an important role in promoting efficiency and more collaboration with the clinical aspects of service delivery is probably necessary if future services are to be efficient and effective. The future organisation of services for people with multimorbidity is likely to require a whole systems approach whereby the factors that influence care outside of general practice are appropriately developed, managed and financed, to optimise service delivery within it.
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Appendices

Appendix 1: Invitation letter for practice managers

Dear

**Optimising care for people with multiple chronic conditions including heart failure: A comparative case study of organisational delivery systems in general practice**

Your practice has been identified by your PCT as a possible participant in the above study. Would you and your practice be willing to participate in a research study to explore how care is organised for people with multiple chronic conditions in general practice? The project is part of the Greater Manchester ‘Collaboration of Applied Health, Research and Care’ (CLAHRC), a nationally sponsored program aimed at improving health services in primary care. We will be interviewing staff and patients from up to 8 general practices across Greater Manchester, as well as undertaking observational studies and documentary analysis.

Please read the attached information and feel free to discuss it with other staff members. Please return the response form in the pre-paid envelope provided as soon as possible. If I do not hear from you, I hope you will not mind me contacting you directly? Thank you for your time.

Yours sincerely

Rachel Lewis
Doctoral researcher

**Attachments:**
Information sheet
Response sheet
Appendix 2: Invitation letter for practice staff

Dear

**Optimising care for people with multiple chronic conditions including heart failure: A comparative case study of organisational delivery systems in general practice**

You have been identified as a professional with an interest in, or a responsibility for, patients with chronic conditions. Would you be willing to participate in a research study to explore how care is organised for people with multiple chronic conditions, including heart failure, in general practice? The project is part of the Greater Manchester ‘Collaboration for Leadership in Applied Health Research and Care’ (CLAHRC), a nationally sponsored program aimed at improving health services in primary care. We will be interviewing staff and patients from up to 8 general practices across Greater Manchester, as well as undertaking observational studies and documentary analysis.

Please read the attached information and feel free to discuss it with colleagues. Please return the response form in the pre-paid envelope provided as soon as possible. If I do not hear from you, I hope you will not mind me contacting you directly? Thank you for your time.

Yours sincerely

Rachel Lewis
Doctoral researcher

**Attachments:**
Information sheet
Response sheet
Appendix 3: Participant information sheet for practice staff

Optimising care for people with multiple chronic conditions including heart failure: A comparative case study of organisational delivery systems in general practice

Would you be willing to participate in a research study to explore how care is organised for people with multiple chronic conditions in general practice? The project is part of the Greater Manchester ‘Collaboration for Leadership in Applied Health Research and Care’ (CLAHRC), a nationally sponsored program aimed at improving the uptake of evidence into primary care. We will be interviewing staff and patients from up to 8 general practices across Greater Manchester.

The aim of the research

With the government’s emphasis on moving services closer to home, we are interested in how general practices have responded in providing care for people with multiple conditions. We are also interested in how patients experience this care and how it fits with services they receive from other health organizations.

Participants

You have been invited to participate because your practice is involved in organising care for people with chronic conditions. We will also be interviewing a small number of patients from each of the practices involved.

Participation

Participation involves an interview with the researcher which is expected to last around 40 minutes. In addition, the researcher is interested in observing any meetings related to chronic disease management both with other health care professionals and/or patients, in which you are involved. Notes will be taken during and after the observed event and the researcher may ask questions for clarification. Your permission will be sought for the researcher to observe these meetings. Your involvement is voluntary and if you do choose to participate, you can withdraw at anytime during the study.

If you are willing to participate, please telephone the researcher and/or return the attached form in the prepaid envelope. You will then be contacted by the researcher, Rachel Lewis and arrangements made to meet at your convenience. Interviews will take place at the practice in which you work, although arrangements can be made if you prefer to be interviewed elsewhere.

Consent

Before you are interviewed you will have the opportunity to ask any questions regarding the research. You will be asked to sign a consent form. Your permission will also be sought to digitally record the interview using a voice recorder.
Ethical approval has been given to access patient notes (insert ethical approval) and patient consent will secured by the researcher on an individual basis.

**Possible benefits of participating in the study**
We believe front-line staff have an important contribution to make in designing future health care services. We are therefore very interested in hearing your views around service delivery in general practice. It is hoped that this research will contribute to improved services in the future.

**Risks associated with participating in the study**
We do not anticipate any disadvantages of you participating in the study, although we do appreciate your busy schedule and the researcher will work around this as much as possible. Should you have any complaints regarding the research or the researcher you are encouraged to discuss this with the researcher or the NHS research governance manager based at Salford Royal University Trust.

**Confidentiality**
All the information collected during the course of the study is highly confidential and will be treated as such. Any information stored by the researcher will have any identifiable details, removed. All data collected during the study period will be securely stored and destroyed after a period of time.

**The results of the study**
The results of this research will be published in appropriate journals. None of the participants or practices involved in the research will be indentified in subsequent publications. Following the completion of the study, you may wish to request a copy of the study report which will be sent to you.

**Thank you for your time** should you have any questions or concerns please do not hesitate to contact the researcher below:
Appendix 4: Invitation letter for patients

Dear

Optimising care for people with multiple chronic conditions including heart failure: A comparative case study of organisational delivery systems in general practice

Your GP or practice nurse has identified you as a possible participant in the above study. Would you be willing to participate in a research study to explore how care is organised for people with multiple chronic conditions in general practice? The project is part of the Greater Manchester ‘Collaboration for Leadership in Applied Health, Research and Care’ (CLAHRC), a nationally sponsored program aimed at improving health services in primary care. We will be interviewing staff and patients from up to 8 general practices across Greater Manchester, as well as undertaking observational studies and documentary analysis.

Please read the attached information and feel free to discuss it with relatives or friends. Please return the response form in the pre-paid envelope provided as soon as possible. If I do not hear from you, I hope you will not mind me contacting you directly? Thank you for your time.

Yours sincerely

Rachel Lewis
Doctoral researcher

Attachments:
Information sheet
Response sheet
Appendix 5: Participant information sheet for patients/carers

Optimising care for people with multiple chronic conditions including heart failure: A comparative case study of organisational delivery systems in general practice

Would you be willing to participate in a research study to explore how care is organised for people with multiple chronic conditions in general practice? The project is part of the Greater Manchester ‘Collaboration for Leadership in Applied Health, Research and Care’, a nationally sponsored program aimed at improving the uptake of evidence into primary care. We will be interviewing staff and patients from up to 8 general practices across Greater Manchester.

The aim of the research
With the government’s emphasis on moving services closer to home, we are interested in how general practices have responded in providing care for people with multiple conditions. We are also interested in how patients experience this care and how it fits with services they receive from other health organizations.

Participants
You have been invited to participate because you are under the care of a practice involved in the study and a doctor or nurse at that practice has identified you as a possible participant. We are aiming to interview a small number of patients from each of the practices involved.

Participation
Participation involves an interview with the researcher which is expected to last around an hour. If you regularly attend a clinic at your general practice surgery, your permission will be sought to observe your appointment with your nurse/doctor/other member of staff. Your involvement is voluntary and if you do choose to participate you can withdraw at anytime during the study. Whether you participate or not, the care you currently receive will not be affected.

If you choose to participate, please return the attached form. You will then be contacted by the researcher, Rachel Lewis who is also a nurse, and arrangements will be made to meet with you. Interviews will take place at your general practice surgery, although arrangements can be made if you prefer to be interviewed at home. Should you wish a relative or friend to be present during the interview, this is perfectly acceptable.

Consent
Before you are interviewed you will have the opportunity to ask any questions regarding the research. You will be asked to sign a consent form. Your permission will also be sought to digitally record the interview using a voice recorder and to the researcher will ask your permission to check your patient records to see how the practice staff organize your care.

Possible benefits of participating in the study
Although there are no direct benefits to being involved in the study, you may find it helpful to talk about your experiences to someone not involved in providing your care. It is hoped that this research will contribute to improved services in the future.

*Risks associated with participating in the study*

Whilst we do not anticipate any disadvantages of you participating in the study, some people do become upset when discussing their health and well being. Should this happen the researcher will offer appropriate comfort and reassurance. The interview may be discontinued or rescheduled at your request. Should you require further support your appropriate health care worker will be contacted. Should you have any complaints regarding the research or the researcher you are encouraged to discuss this with your health care worker, the researcher or the NHS research governance manager based at Salford Royal University Trust.

**Confidentiality**

All the information collected during the course of the study is highly confidential and will be treated as such. Any information stored by the researcher will have any identifiable details removed. Notes taken during the interview and observation period, and the digital recordings will be securely stored and destroyed after a period of time.

**The results of the study**

The results of this research will be published so that other professionals can benefit from the findings. None of the participants or practices involved in the research will be indentified in the proposed publications. Following the completion of the study, you may wish to request a copy of the study report which will be sent to you.

**Thank you for your time.** Please feel free to discuss the study with others. Should you have any questions or concerns please do not hesitate to contact the researcher below:

Rachel Lewis  
C/O Post Graduate Research Office  
Manchester Business School  
Booth Street  
Manchester  
M15 6PB  
Tel.  
Rachel.lewis@postgrad.mbs.ac.uk
Appendix 6: Participant response form practice staff

Please insert a cross as appropriate:

I **agree** to being contacted regarding participation in this research project*

I

I **do not agree** to being contacted regarding participation in this research project.

Name.......................................................................................................................

Address..................................................................................................................

.............................................................................................................................

…………………………………………………………………………………………

Telephone Number…………………………………………………………………….

Email......................................................................................................................

*Please indicate the best times for me to contact you

.............................................................................................................................

.............................................................................................................................

Thank you for taking the time to consider this invitation. Please return this form in the stamped addressed envelope provided and return to:
Appendix 7: Participant response form patient

Optimising care for people with multiple chronic conditions including heart failure: A comparative case study of organisational delivery systems in general practice

Please insert a cross as appropriate:

I agree to being contacted regarding participation in this research project*

I do not agree to being contacted regarding participation in this research project

Name ............................................................................................................................

Address....................................................................................................................

Telephone Number................................................................................................

Email .....................................................................................................................

*Please indicate the best times for me to contact you

Thank you for taking the time to consider this invitation. Please return this form in the stamped addressed envelope provided and return to:
Appendix 8: Consent form practice staff

Version 6: 3rd November 2010
Researcher: Rachel Lewis

Centre number:
Study number:
Patient number:

Title of the Research:

Optimising care for people with multiple chronic conditions including heart failure: A comparative case study of organisational delivery systems in general practice

1. I have read and understood the research information (staff version 6; 31110) and agree to participate in the above research study.

2. I understand my participation is entirely voluntary and I may withdraw at anytime without giving a reason and without detriment to my employment or legal rights.

3. I agree to the interview being voice recorded on a digital machine on the understanding that these will be securely stored, encrypted and destroyed when no longer required

4. I agree to the researcher, Rachel Lewis, observing my sessions with patients with chronic conditions.

____________________    ______________
Date                  Name       Signature

____________________    ______________
Date                  Researcher Name    Signature
Appendix 9: Consent form patients

Version 6: 3rd November 2010
Researcher: Rachel Lewis

Centre number: 
Study number: 
Patient number: 

Title of the Research:

Optimising care for people with multiple chronic conditions including heart failure: A comparative case study of organisational delivery systems in general practice

1. I have read and understood the research information (patient version 6: 31110) and agree to participate in the above research study.

2. I understand my participation is entirely voluntary and I may withdraw at anytime without giving a reason and without detriment to my health care or legal rights.

3. I agree to the researcher, Rachel Lewis (Manchester Business School), reading my notes where required.

4. I agree to the interview being voice recorded on a digital machine on the Understanding that these will be securely stored, encrypted and destroyed when no longer required.

5. I agree to the researcher, Rachel Lewis, observing my appointments with practice staff.

____________________    ______________
Date                             Signature

Patient Name

____________________    ______________
Date                             Signature

Researcher Name

3 Copies:  Patient Copy
Researcher Copy
Copy medical
notes
Appendix 10: Consent form carers’

Version 6: 3rd November 2010
Researcher: Rachel Lewis

Centre number: Study number: Carer number:

Title of the Research:

**Optimising care for people with multiple chronic conditions including heart failure: A comparative case study of organisational delivery systems in general practice**

1. I have read and understood the research information (patient/carer version 6;31110) and agree to participate in the above research study.

2. I understand my participation is entirely voluntary and I may withdraw at anytime without giving a reason and without detriment to my legal rights.

3. I agree to the interview being voice recorded on a digital machine on the Understanding that these will be securely stored, encrypted and destroyed when no longer required.

____________________    ______________
Date Carer name      Signature

____________________    ______________
Date Researcher Name  Signature

3 Copies: Carer Copy
Researcher Copy
Appendix 11: Methods of data collection

<table>
<thead>
<tr>
<th>Research Objective</th>
<th>Source of data</th>
<th>Data Collection</th>
<th>Rationale of Method</th>
<th>Sampling strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>To understand how processes of care are constructed and delivered for patients with multiple conditions, including heart failure, in general practice</td>
<td>PCT website</td>
<td>Documentary analysis</td>
<td>Identify national, regional, local policy priorities for people with chronic conditions</td>
<td>Ask practice staff to identify relevant data sources and documents that inform or explain service provision</td>
</tr>
<tr>
<td></td>
<td>Local registries of services</td>
<td>Documentary analysis</td>
<td>Should provide information that helps to explain current structures</td>
<td></td>
</tr>
<tr>
<td></td>
<td>General practice: patient pathways; clinical guidelines; protocols, service specifications</td>
<td>Documentary analysis</td>
<td>Templates for how care should be operationalised with practices. May diverge from what actually happens</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Multidisciplinary practice staff</td>
<td>Semi structured interviews</td>
<td>Different professionals will have different responsibilities for organisation of care are these role specific?</td>
<td>Ask practice manager and each participant to recommend potential participants</td>
</tr>
<tr>
<td></td>
<td>Patient records</td>
<td>Documentary analysis</td>
<td>Provides record of referrals to other services, may record justification of management plan unknown/forgotten by patient</td>
<td>Potential patients will be identified by practice staff. Patient consent will be sought before accessing patient records</td>
</tr>
<tr>
<td></td>
<td>Practice meetings</td>
<td>Non-participatory observation of meetings relating to chronic care management</td>
<td>An insight into how processes of care are decided upon and by whom. Identification of the constraining/facilitating factors to service change.</td>
<td>Relevant meetings will be indentified by practice staff</td>
</tr>
<tr>
<td></td>
<td>Professional/patient consultation</td>
<td>Non participatory observation including doctor/patient, nurse/patient, healthcare assistant/patient</td>
<td>Self reported behaviour can sometimes differ from what happens in reality. These differences may be observable. How doctors/nurses manage care on an individual patient basis. Is the interaction dependent on professional role?</td>
<td>Clinical staff included in the interview scheduled will be observed during patient consultations following consent from those involved</td>
</tr>
<tr>
<td>Research Objective</td>
<td>Source of data</td>
<td>Data Collection</td>
<td>Rationale of Method</td>
<td>Sampling strategies</td>
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<tr>
<td>--------------------</td>
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</tr>
<tr>
<td>To identify and explore the internal and external organisational factors that influence the way services are organised</td>
<td>Health policies: national, regional, PCT and practice level</td>
<td>Documentary analysis</td>
<td>Identify external drivers</td>
<td>Observe key meetings in each practice identified by practice manager</td>
</tr>
<tr>
<td>Practice staff</td>
<td>Semi structured interviews</td>
<td>To establish how practices prioritise drivers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Practice manager to indentify key staff involved in chronic disease management, both clinical and administrative. Key meetings also identified. Each participant will be asked at end of interview of anyone else the researcher should speak to.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To understand how practice staff make sense of service provision</td>
<td>Practice staff involved in services for people with chronic conditions. Managerial/administrative staff</td>
<td>Observation Interviews</td>
<td>Provides opportunity for discussion around focus of research and possible emergence of new themes</td>
<td></td>
</tr>
<tr>
<td>Opportunity to elicit different roles and perspectives and whether a contrast with clinical staff</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To understand how patients with multiple conditions experience their care</td>
<td>Patients and carers</td>
<td>Semi structured interviews</td>
<td>To map and describe how care across services is experienced by patient and family</td>
<td>Patients and carers may feel too overburdened to consider participating in a research project. Practice staff to recommend patients who may be interested in being involved.</td>
</tr>
<tr>
<td>Observation of consultations</td>
<td>Extent to which patient /carer influences professional intervention/behaviour</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Appendix 11: Methods of data collection
### Appendix 12: Provisional Topic Guide for Focus Interviews – practice staff

<table>
<thead>
<tr>
<th>Topic Area</th>
<th>Focus</th>
</tr>
</thead>
</table>
| **General**                        | Practice size/population  
Situation urban/rural  
Structure, PMS, GMS, GPwsi, advanced practitioners, how changed in response to national, regional, local drivers  
Strategic plan, local delivery plan, QoF, PCT  
How prioritised  
Financial incentives |
| **Services chronic disease management** | Services in place  
Use of IT  
Service specification, protocols, guidelines  
Structure, who responsible for what, links with other services  
Referral procedures |
| **Health and social care**         |                                                                 |
| **Change**                         |                                                                 |
| **Heart failure**                  | Register  
Mapping of services  
Evaluation  
Who responsible for what  
Patient management – perception of tensions ‘competing conditions’  
Formal/informal relations with other services |
| **How staff make sense of services** | What does ideal pathway of chronic care look like  
Role of practice in this pathway  
Role of individuals, influence of staff on how care structure  
Factors facilitating  
Factors impeding  
Time in post, experience in post, level of responsibility |
Appendix 13: Provisional Topic Guide for Focus Interviews – Patients/Carers

<table>
<thead>
<tr>
<th>Topic Area</th>
<th>Focus</th>
</tr>
</thead>
</table>
| **General**                       | Medical history, particularly chronic conditions  
                                  | Social circumstances – mobility, transport                                                                                           |
| **Services**                      | How services linked  
                                  | Chronic conditions – access to services, who provides them and where  
                                  | How regularly do you receive them  
                                  | How well do they know you  
                                  | Who is your key healthcare professional  
                                  | What care do you receive  
                                  | If you were unwell who would you contact  
                                  | Practice staffs involvement in management of heart failure and other conditions |
| **Health and social care**        |                                                                                                                                 |
| **Heart failure – patient perspective** | How services experienced by patient  
                                  | Key person  
                                  | Care plan  
                                  | Self management                                                                 |
| **Informal care and support**     | Care and support from family and friends                                                                                             |
| **Sensemaking**                   | Which services do you receive most benefit from, in what way  
                                  | Which services could be better and how could they be better                                                                          |
Appendix 14: Sampling and fieldwork schedule

Ethical Approval

PCT research Governance Approval

Identification of potential practices: researcher in discussion with heart failure stream CLAHRC

Letters and study information to practice managers of potential practices/follow up telephone calls

Up to 8 practices agree to participate

Practice 1  Practice 2  Practice 3  Practice 4  Practice 5…  Practice …. 8

0 1 2 3 4 5 6 12 months

Introductory meeting with practice manager/staff. Information sharing.
Identification of key meetings, documents, clinics, consultations

Identification of key staff/patients:
6-8 members of staff
(cross-section of staff, will vary from practice to practice)
2-4 patients and carers

Letters and study information to key staff and patients
Follow up telephone call where necessary

Timetable of interviews, key meetings, observational schedules

Process repeats within each practice. Non-linear as researcher accommodates schedules of potential/participants
May need to recruit additional participants due to unforeseen events
Some crossover between practices to capture key participants and events
### Appendix 15: Models and Framework: *Source Ham and Singh (2006)*

<table>
<thead>
<tr>
<th>Model</th>
<th>Origin</th>
<th>Key Components</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Broad Frameworks</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| NHS and Social Care | UK | • Risk assessment  
 • Targeting frequent users  
 • Case management by matrons  
 • Multidisciplinary teams  
 • Self Management |
| The Chronic Care Model and revised ‘Care Model’ and ‘Expanded Chronic Care Model’ | US | • Community resources  
 • Healthcare system  
 • Self-management  
 • Decision support  
 • Delivery system redesign  
 • Clinical information systems |
| Innovative Care for Chronic Conditions Model | WHO | • Micro level (individual, family and health staff)  
 • Meso level (community and health care organisations)  
 • Macro level (policy) |
| The Public Health Model | US | • Population-wide policies  
 • Community activities  
 • Health services |
| Continuity of Care Model | US | • Tracks intervention needs from general population through to those needing palliative care |
| **Service delivery approaches** | | |
| Kaiser Model | US | • Care provided based on risk assessment  
 • Case management for those with complex needs  
 • Care management for 20-30%  
 • Supported self care for most |
| Evercare and Pfizer models | US | • Focuses on identifying those at highest risk for hospitalisation and providing nurse led case management (Evercare) or telephone support (Pfizer) |
| Strength Model | US | • Self empowerment  
 • Identifying people’s capacities |
| Veteran’s Affairs | US | • Similar to Chronic Care Model but applied to particular population segment |
| Guided Care | US | • Nurse-led care |
| PACE | US | • Integrated care for the elderly  
 • Targeting day centre users  
 • Single access point |
### Components of chronic care model

<table>
<thead>
<tr>
<th>Components of chronic care model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community</td>
<td>Matching of community resources to patient needs. Patients should be encouraged to be involved in local community programmes. Health services should work with wider community to avoid duplication of efforts in provision.</td>
</tr>
<tr>
<td>Organisation of health care</td>
<td>Safe, high quality and effective healthcare is promoted through effective organisation and whole system approach that reward outcomes as well as processes of care. Incentivise continuity and coordination across systems</td>
</tr>
<tr>
<td>Support for self management</td>
<td>Provide support mechanisms that encourage patients and their families to manage and facilitate their own health and care needs.</td>
</tr>
<tr>
<td>Design of delivery system</td>
<td>Effective use of team (including non-clinical staff) with clearly defined roles and responsibilities. Division between acute and planned care. Availability of case management for people with complex needs.</td>
</tr>
<tr>
<td>Decision support</td>
<td>Use of evidence, clinical information systems and patient preferences in clinical decision making. Integrate specialist knowledge and primary care.</td>
</tr>
<tr>
<td>Clinical information systems</td>
<td>Use of patient and population data to inform and evaluate practice. Share information with patient and providers to facilitate coordination of care.</td>
</tr>
</tbody>
</table>

*Source: Singh and Ham (2006)*
### Appendix 17: Chronic care model in practice

<table>
<thead>
<tr>
<th>Components of CCM</th>
<th>Practice 1</th>
<th>Practice 2</th>
<th>Practice 3</th>
<th>Practice 4</th>
<th>Heart failure services</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Community</strong></td>
<td>Primary health care team meetings. Largely community nurses and case managers</td>
<td>Senior Dr suggested the ‘top down determination of services’ prevented practices from tailoring services to the needs of their particular population</td>
<td>Recognition that some practices are too small to support an infrastructure with the appropriate skills to meet needs of pts with multimorbidity. As yet no mechanism to develop more collaborative working</td>
<td>No primary healthcare meetings</td>
<td>Variation in services across the city. The 4 practices were located within 3 different PCTs. Only one PCT provided a heart failure support group</td>
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<tr>
<td></td>
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<td></td>
<td>There was some evidence that one trust worked with a charity to support vulnerable pts following discharge</td>
</tr>
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</tr>
<tr>
<td><strong>Organisation of care</strong></td>
<td>Currently reimbursement mainly focused on process measures (i.e. QoF)</td>
<td>Organisation of care around individual conditions made it difficult to coordinate across different providers</td>
<td>Changes made in primary care not routinely relayed to specialist services in</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Primary health care meetings usually weekly regularly involved district</td>
<td>No multidisciplinary</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Process of care</td>
<td>Incentivise continuity and coordination across systems. (Macro)</td>
<td>Continuity disrupted by variable responsibility for different aspects of different conditions</td>
<td>Collaborative approaches with other practices within cluster around cardiology management (horizontal linkage) but not with secondary care</td>
<td>Few mechanisms through which to systematically influence service delivery within general practice and and across sectors of care</td>
<td>The impression given by the lead GP and the practice nurse was that the newness of the practice meant they were in the early stages of creating links with the wider community team.</td>
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<tr>
<td>Sold patients through ‘clearing house’, not in power of general practice to coordinate aspects of care</td>
<td>Clinical roles largely task specific</td>
<td>Continuity disrupted by variable responsibility for different aspects of different conditions</td>
<td>No formal/centralised management plan for individual patients</td>
<td>No formal/centralised management plan for individual patients</td>
<td>No formal/centralised management plan for individual patients</td>
</tr>
<tr>
<td>Active case managers worked with a number of complex patients to try to keep them out of hospital</td>
<td>Clinical roles largely task specific</td>
<td>Clinical roles largely task specific</td>
<td>Clinical roles largely task specific</td>
<td>Clinical roles largely task specific</td>
<td>Clinical roles largely task specific</td>
</tr>
<tr>
<td>ANP working with GPs in practice to try to keep people out of hospital, focus on individual pts at high risk admission</td>
<td>ANP working with GPs in practice to try to keep people out of hospital, focus on individual pts at high risk admission</td>
<td>The fragmentation of care across different providers promotes</td>
<td>The fragmentation of care across different providers promotes</td>
<td>The fragmentation of care across different providers promotes</td>
<td>The fragmentation of care across different providers promotes</td>
</tr>
<tr>
<td>QoF has encouraged the use of disease registers which mandate a number of process measures</td>
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<td>QoF has encouraged the use of disease registers which mandate a number of process measures</td>
<td>QoF has encouraged the use of disease registers which mandate a number of process measures</td>
</tr>
<tr>
<td>Support for self management</td>
<td>Provision of support mechanisms that encourage pts and families to manage and facilitate their own health and care needs. (micro)</td>
<td>Ad hoc and unformalised within practices, largely disease specific and clinically focused.</td>
<td>Nurses and healthcare assistants ran a number of disease specific clinics mainly diabetes and respiratory ones as well as a number of lifestyle sessions including weight management and smoking cessation. No formalised education programme largely opportunistic.</td>
<td>Practice nurses and assistant nurse practitioner. No formalised educational programmes, but opportunistic and tailored to individuals’ learning needs. A number of ‘joint’ clinics between the doctors and nurses, mainly respiratory and vascular. The doctors would review pt and medications, nurses would provide disease specific management support and explain doctors treatment decisions.</td>
<td>Senior doctor provided ongoing telephone support for those pts who needed it in acute situations. Ongoing support was provided by the practice nurse, mainly respiratory and vascular conditions. Not formalised.</td>
</tr>
<tr>
<td>Design of delivery system</td>
<td>Effective use of team (inc non-clinical staff) with clearly defined roles and responsibilities. Division between acute and planned care. Availability of case management for people with complex needs.</td>
<td>Despite increasing emphasis on chronic condition management delivery systems largely continue to reflect acute and episodic care with focus on discrete conditions. Little evidence of coordination and continuity for most patients.</td>
<td>HCA were trained to undertake a number of roles. Admin staff effectively excluded from contributing to practice meetings.</td>
<td>No ‘whole’ practice meetings. Doctors felt administrative issues ‘boring’ and of no interest to them. Division between acute and planned care.</td>
<td>Administrative staff concerns secondary to clinical agenda. Ongoing admin issues sidelined in practice meetings.</td>
</tr>
</tbody>
</table>
### Decision support

Use of evidence, clinical information systems and patient preferences in clinical decision making. Integrate specialist knowledge and primary care.

| (micro) | Nurses in particular used disease specific guidelines and managed disease registers. Some links with respiratory specialist in secondary care. Most pts openly deferred decisions regarding their care to the clinical staff, although when at home some chose which aspects of advice to follow. | Previous joint working between psychiatry and the practice but currently very little. No formalised system between specialist knowledge and primary care. | Number of electronic alerts to remind staff of a number of outstanding or due health checks, but the practice had turned many of them off. Practice nurses previously worked closely with community specialist diabetic nurse, position decommissioned. | Heart failure services in one region provided a programme of EBL, however these were poorly attended by doctors. |

### Clinical information systems

Use of patient and population data to inform and evaluate practice. Share information with patient and providers to facilitate coordination of care.

- Patient electronic record limited to general practice
- All practices had disease registers (QoF) which helped to quantify number of pts with chronic conditions
- PCTs used data to compare activities across general practice and to identify where improvements could be made, for instance, those practices who were high referrers to secondary care for some chronic conditions were compared with practices who referred less for the same condition and to try to establish the reasons for this
- Electronic system to identify pts at high risk of admission, not specific to heart failure

| | No access to patient's electronic record in general practice Information largely relayed through postal system. Less often, telephone |
| care. | Data systems in practices would allow certain amount of data extraction in relation to targets reached  
|       | Sharing of information at individual rather than system/or population levels  
|       | Within disease specific templates the recording of process measures helped to ensure that patients were monitored according to national recommendations  
| communication | Two way information hampered by pt level data being sent to medical lead  
|       | Recent initiative to introduce patient held management plan, evidence of it use in general practice limited.  
|       | Information largely relayed through postal system. Less often, telephone communication  
|       | Two way information hampered by pt level data being sent to medical lead  
|       | Recent initiative to introduce patient held management plan, evidence of it use in general practice limited. |
**Appendix 18: Extract from analysis framework practice 1**

Practice 1 Analysis Framework 20.1.2012

GP, Practice Nurse, Researcher, Practice manager, admin, Heart failure nurse, patient

<table>
<thead>
<tr>
<th>MACRO: Wider organisation of healthcare, DH, SHA,PCTs, professional colleges/organisations.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Evidence for CCM Literature, health policy</strong></td>
</tr>
<tr>
<td>Whole systems approach to care</td>
</tr>
<tr>
<td>Collaboration Working together within and across systems</td>
</tr>
<tr>
<td>Coordination</td>
</tr>
<tr>
<td>Continuity – equity of care</td>
</tr>
</tbody>
</table>
| PCT Contracts | doctors, you see someone and you’ll think, oh god I didn’t do whatever… [...] the more we can shift that sort of thing onto nurses the better”

We still use a lot of the guidelines … I have them in my desk, we have protocols on our desk top that are written around guidelines we’re always looking at the NICE guidelines around what we should do and if we’re not sure what to do we would go to a GP and say we’re thinking this, the guidelines say this, what do you think and they would have the final say about a pt,

Since they have brought in this new system there are very specific contracts and the pressure is on you to send people in certain directions and the choice is much more limited and sometimes there is no choice at all. You refer someone to physio and they have got to go to Cutts and they’re saying, but I went to North Manchester last time and that is where I want to go (GP1). | Degree of consistency in care across practice nurses

Referral practices dictated by local provision which is increasingly ‘centralised’ locally

Inference that GPs do not need to know where their pts are managed

Contractual obligations, regulation, reimbursement documentation occupy a lot of administrative time and incurs opportunity cost

Inference that GPs do not need to know where their pts are managed

Contractual obligations, regulation, reimbursement documentation occupy a lot of administrative time and incurs opportunity cost

GPs have little control over patient pathways once referred to services not provided by general practice

Fragmentation, service reconfigurations and referral brokers all disrupt continuity of care | Downward role substitution allows more effective use of human resources but fragments care and can increase number of practice visits for pts.

Much of the CDM is dealt with by the practice nurses using national guidelines. Deviating from the guidelines requires to meet the individual needs of pts requires agreement of GPs |
<table>
<thead>
<tr>
<th>Shift in management of chronic conditions to primary care</th>
</tr>
</thead>
<tbody>
<tr>
<td>To be honest, off the top of my head, I don’t know [where pts are referred for HF services]. I’m pretty sure most of the hospitals provide a service, but as I say I couldn’t tell you if our patients are using them or not. (GP1)</td>
</tr>
<tr>
<td>Practices obliged to be financially viable, therefore, important to consider money generating activity</td>
</tr>
<tr>
<td>A lot of it is making sure all the data is completed, the amount of monitoring is really time consuming. The PCT monitor all the pts that are admitted to hospital and those that go to the walk in centres, or A and E, and those that keep doing that so we look and see if these are legitimate visits or whether they should be coming here.</td>
</tr>
<tr>
<td>Certain non-clinical activity has to be documented to ensure reimbursement. Waste of clinical time</td>
</tr>
<tr>
<td>There’s locally enhanced services, LES and DES […] and the PCT can put out like a tender saying we want this achieving do you want to do it? And the practice as a whole, the partners, look at it and say, we could earn extra money by doing this and offer a better service. So that’s an extra service that we do on top of our other work that’s how we’re bringing them in.</td>
</tr>
<tr>
<td>So although it might be seen as an opportunity I don’t think it is going to be one because we are just too busy doing our work and I suppose they can try and get the opinions of GPs […] but there is just too much of it I don’t think it will work. I can just see things getting worse and worse until somebody says this is a bad idea and changes the system again really. (GP1)</td>
</tr>
<tr>
<td>Scientific bureaucracy</td>
</tr>
<tr>
<td>Lots of bureaucracy involved in ensuring practice is paid for what they do. Have to provide evidence that they have done what they are contracted to do.</td>
</tr>
<tr>
<td>Inference is that, clinical staff may not be convinced by the benefits of undertaking routine health checks, but it generates income</td>
</tr>
<tr>
<td>CV health checks, primary prevention, financial incentives.</td>
</tr>
<tr>
<td>Discontinuity in support</td>
</tr>
<tr>
<td>Period of instability due to wider NHS changes and impending dissolution of PCTs. PCTs facilitating</td>
</tr>
</tbody>
</table>
| New commissioning arrangements | Practice meeting Discussion regarding the management of pts on particular medication. The PCT is responsible for this, but there is not much support... (GP) It's a sinking ship (HCA), say no more, it makes by blood boil (GP). It was quite clear the nurses couldn't do all the work and it seemed obvious to offer it to the some of the younger admin staff who were keen to try different things.

It's a lot more complex these days,

I think it is going to be total chaos. I don't think it is going to work, I don't know how anybody in their right mind could think up a system like that because the overwhelming thing as far as I am concerned is, you know, you have lots of doctors trained to see patients and do all that kind of thing and then you're trying to make them into managers. (GP1).

I think the idea is quite good but the... getting there would be virtually |

---

new ways of working with pharmacies, but delay on pharmacies side and practice have no leverage over them.

Our health, Our care Our say

Shifting focus of CDM from secondary to primary care

Suggestion that changes are politically motivated, comparison to GP fund holding, will have to go through this huge upheaval before Government realise its not going to work and then change system to something else.
impossible cause I think GPs as a whole are not business minded they’re clinical and they haven’t got the time to do it and they’ve not necessarily got the inclination to do it…