The acceptability and implementation of a PhysioDirect service: A qualitative investigation of multi-perspectives

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Declaration

The thesis was undertaken as a nested qualitative study within the large, multi-centre, randomised control trial (RCT) of PhysioDirect. This study was collaboration between the University of Keele and the University of Bristol. It was funded by the Medical Research Council (MRC) and the Acorn studentship.

Although the qualitative study was nested within the RCT of PhysioDirect, I was responsible for the design of the qualitative study and the collection and analysis of the data. The majority of the interview transcriptions were carried out by Claire Ashmore, and later interviews were transcribed by the Transcription Company. I checked and anonymised all the transcripts against the recordings and carried out all of the data analysis. The interpretations and discussions of findings in the thesis are my own.

Abstract

In response to long waiting lists and problems with access to primary care physiotherapy, several Primary Care Trusts (PCTs) developed physiotherapy-led telephone assessment and treatment services. The MRC-funded PhysioDirect trial was a randomised trial in four PCTs, with a total of 2252 patients that compared this approach with usual physiotherapy care. This nested qualitative study aimed to explore and understand the key issues that determine the acceptability of PhysioDirect services from the perspectives of patients, physiotherapists, physiotherapy managers, (General Practitioners) GPs and commissioners.

Semi-structured interviews were conducted with 57 purposively sampled patients with musculoskeletal problems participating in the randomised trial. Sixteen physiotherapists, four physiotherapy managers, eight GPs and four PCT commissioners were interviewed. The Framework method was used to analyse the qualitative data.

All stakeholder groups perceived the PhysioDirect service as helpful in improving access to physiotherapy care by reducing physiotherapy waiting times. Patients' expectations of PhysioDirect influenced how they evaluated the service. Acceptability was often determined by the trade-offs patients made between the less acceptable features of the PhysioDirect service and those that were acceptable. The physiotherapists and physiotherapy managers perceived that physiotherapists could safely diagnose patients with musculoskeletal problems over the telephone. However, both patients and physiotherapists felt that the lack of visual information impaired their ability to effectively communicate their health problems over the telephone and impaired continuity of care. Physiotherapy

managers found the unpredictable nature of the timing and volume of patient calls to the PhysioDirect service difficult to manage. The GPs and commissioners perceived it as a triage service which preceded face-to-face contact. Physiotherapy managers, GPs and commissioners had divergent views about the information needed to support future implementation of a PhysioDirect service.

The PhysioDirect service was perceived by the patients, physiotherapists, physiotherapy managers, GPs and commissioners as broadly acceptable. All three groups felt that the PhysioDirect service improved access to physiotherapy services. The key challenges to the implementation of PhysioDirect services were managers' ability to accurately allocate physiotherapy time to the service and the provision of the range of data that commissioners expected from a new service. Despite these reservations, all stakeholders could foresee PhysioDirect as one option for access to future physiotherapy services.

Table of contents

List of Figures

List of Tables

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Glossary

Agenda for Change (AfC)

Any Qualified Provider (AQP)

Chartered Society of Physiotherapy (CSP)

Chronic obstructive pulmonary disease (COPD)

Clinical Commissioning Groups (CCG)

Department of Health (DoH)

Did not attend (DNA)

Disability Living Allowance (DLA)

Healthcare Professional (HCP)

General Practitioners' (GP)

Information technology (IT)

In vitro fertilisation (IVF)

Medical Research Council (MRC)

Musculoskeletal assessment and treatment services (iCATs/MCATs/CATs)

National Health Service (NHS)

National Service Frameworks (NSF)

Normalisation Process Theory (NPT)

Out of Hours (OOH)

Patient Advice and Liaison Service (PALS)

Primary Care Trust (PCT)

Osteoarthritis (OA)

Randomised control trial (RCT)

Randomised Intervention of Pupil Peer and Sex Education (RIPPLE)

Research and Development (R & D)

Service Level Agreements (SLA)

Quality Adjusted Life Years (QALY)

Quality and Outcomes Framework *(QOF)*

Whole Systems Demonstrator (WSD)

Chapter One: Introduction

1.1 Chapter introduction

This introductory chapter is structured to provide insights into the purpose of the qualitative research. Firstly, it details the prevalence of musculoskeletal problems in England and Wales, along with a review of recent evidence of physiotherapy treatment. This chapter provides an overview of the PhysioDirect randomised control trial (RCT) and why it was developed. The details of the RCT are described along with an explanation of the role and main purpose of this nested qualitative research. Finally, an overall account of the structure of the thesis is presented, which helps to guide the reader in understanding this thesis.

1.2 Musculoskeletal problems

Musculoskeletal pain problems are extremely common in the population. Up to 30% of all General Practitioners' (GPs) consultations in the UK involve a musculoskeletal problem (Department of Health, 2006a), and over a quarter of registered patients will consult their GP for a musculoskeletal problem in a one-year period (Jordan *et al.,* 2010). The most common musculoskeletal complaints include back, knee and shoulder pain, with the greatest prevalence of musculoskeletal problems being in working-age adults (Department of Health, 2006a; McCormick *et al.,* 1995). Musculoskeletal problems are not only a common cause of pain and disability for patients, but also impact upon the economy, as these conditions are second only to mental health conditions as a root cause of days absent from work (Health and Safety Executive, 2011). By way of example, back pain accounts for 120 million certified absences from work each year in the UK, and 50% of all back pain patients who are absent for more than six months never return to employment (Maniadakis and Gray, 2000, Andersson, 1999).

Musculoskeletal problems are mostly managed within primary care by GPs and other health professionals, particularly physiotherapists.

1.3 Physiotherapy for musculoskeletal problems

Many patients with musculoskeletal problems are referred to physiotherapy, with 6.7 million new referrals made to physiotherapy services each year in the National Health Service (NHS) (Government Statistical Service, 2006, Jones and Jenkins, 2011a). A physiotherapist uses a range of techniques and treatment modalities to treat patients with musculoskeletal problems. These treatments include education, advice, manual or manipulative therapy, exercise therapy, acupuncture, injection therapy, electrotherapy, hydrotherapy and cold or heat therapy (Chartered Society of Physiotherapy (CSP) Physiotherapy Framework, 2010)=-00. Recent evidence about the effectiveness of physiotherapy interventions for common musculoskeletal problems has shown mixed results. By way of example, in the case of acute low back pain, manual therapy provided by physiotherapists offers clinically important short-term improvements in pain compared to sham therapy, but no additional benefit to any conventional advocated therapies such as physiotherapy exercises or back school (Assendelft *et al.,* 2004, van Tulder *et al.,* 2006). There is some evidence that physiotherapy-led exercise is effective in sub-acute and chronic back pain for those with mild to moderate symptoms (van Tulder *et al.,* 2006, Hayden *et al.,* 2005, Airaksinen *et al.* 2006). In addition, some trials have shown that a single session of physiotherapy is as effective as a routine course of physiotherapy (Frost *et al.,* 2004, Rivero-Arias *et al.,* 2006). A Cochrane systematic review showed that exercise combined with manual therapy in the treatment of shoulder rotator cuff disease is effective (Green *et al.,* 2005), and a recent review showed that physiotherapy exercises are effective in the

management of subacromial impingement syndrome (Hanratty *et al.,* 2012). In older adults with knee pain associated with osteoarthritis (OA), advice and exercise led by physiotherapists is superior to advice alone and usual GP care in reducing pain and improving function (Hay *et al.,* 2006, Foster *et al.,* 2007, Hurley *et al.,* 2007). Current national guidelines, such as those for the management of low back pain and OA recommend treatments correctly provided by a physiotherapist (Savigny *et al.*, 2009, Conaghan *et al.,* 2008). These treatments include education, support for self-management, exercise and manual therapy. The aging population, the rise in risk factors such as low levels of physical activity, obesity and the population's increasing healthcare expectations mean that the burden of common musculoskeletal problems and the demand for physiotherapy services are set to rise (Department of Health, 2006a). Given the rising demand, supporting patients in good self-management is a key strategy in current Department of Health (DoH) health policies (Darzi, 2008a, Department of Health, 2009b, Department of Health, 2009c, Department of Health, 2009a).

1.4 Self-management for musculoskeletal problems

The term self-management was first used in the 1960s by Thomas Creer, a clinical psychologist, who, along with his colleagues, used it when referring to treatment within their paediatric asthma programme. Creer was heavily influenced by Bandura's work on self-efficacy (the belief in one's ability to succeed in different situations) (Lorig and Holman, 2003, Creer *et al.,* 1976, Bandura, 1977). Since then the term self-management has evolved and is a common term used when describing both health education and promotion (Lorig and Holman, 2003). Lorig and Holman (2003) suggested that self-management means being responsible for day-to-day management of living with a chronic disease or engaging in some

activity that promotes health. Self-management includes the learning of skills such as problem solving and decision making in response to fluctuating signs and symptoms, and taking action, i.e. learning how to change behaviour (Lorig and Holman, 2003). Bodenheimer *et al.* (2002) identified that self-management support is not only viewed as a portfolio of techniques that help patients choose healthy behaviours, but also as a collaborative partnership between the patient and carer.

Supporting patients to self-manage their health conditions is integral to physiotherapy practice, especially for patients who have musculoskeletal problems (Department of Health, 2006a). Typically, this involves providing information to patients about their musculoskeletal problem and teaching patients exercises and activities that can help reduce pain and improve function. The evidence base for self-management as a health intervention has been growing and is reflected within recent White Papers, UK national policies and clinical guidelines regarding patients who have chronic, long-term conditions (Department of Health, 2006b, Department of Health, 2001, Conaghan *et al.,* 2008). A systematic review of the evidence for the effective management of chronic low back pain reports that there is strong evidence for the advice to remain active. This advice, along with specific exercises or functional activities, will promote the active self-management of patients with chronic low back pain (Liddle *et al.,* 2007). Crowe *et al.* (2010) found that people with chronic low back pain use a number of self-management strategies to help prevent exacerbation of their problem. The most common strategies used by patients to manage their chronic low back pain were medication, exercise and application of heat. In addition, Crowe and colleagues suggested that patients actively make decisions that combine their personal experience of back pain with recommendations from health professionals, such as

physiotherapists and GPs. There is also evidence that early access to physiotherapy care reduces pain and improves function for patients with musculoskeletal problems (Nordeman *et al.,* 2006, Bleakley *et al.,* 2010).

1.5 Access to physiotherapy

Traditionally, in the UK, NHS primary care patients referred to physiotherapy by GPs wait for the next available appointment for a face-to-face consultation with a physiotherapist. Arrangements concerning how and when patients access physiotherapy services vary across the UK, depending on local factors, including which Primary Care Trust (PCT) is providing the service. However, many physiotherapy services have long waiting lists, resulting in many patients waiting from several weeks to months for treatment. In a recent survey of musculoskeletal services in the UK, the Chartered Society of Physiotherapy (CSP) found that the majority of patients waited 6 to 8 weeks for their first physiotherapy appointment (Jones and Jenkins, 2011b). The shortest wait for physiotherapy services was less than one week, compared to the longest waiting time of 30 to 40 weeks (Jones and Jenkins, 2011b). Long waiting times for physiotherapy are a problem for patients, referring GPs, physiotherapy service providers, service commissioners and the NHS.

Delay in accessing physiotherapy care is a concern, as many musculoskeletal problems cause patients to experience significant pain and disability. It may be that some patients require brief advice and reassurance to help them self-manage their symptoms; such patients may only need one or a few advice and treatment sessions, whereas others may need more lengthy physiotherapy care. There are often multiple explanations for the lengthy waits for physiotherapy, including

financial pressures on the NHS, frozen and unfilled posts and rising patient demand, which all contribute to the fact there is inadequate staffing to meet demand (Jones and Jenkins, 2011a, Jones and Jenkins, 2011b). The delay in care may result in many patients and GPs feeling dissatisfied with physiotherapy services. They may choose to seek physiotherapy care elsewhere, for example in the private sector, re-consult their GP or continue to try to cope with their problem without seeking further advice. Long delays may not only lead to dissatisfied patients, but may also cause GPs to choose not to refer to physiotherapy services. They may opt instead to refer to other services, for example orthopaedics or the relatively new interface musculoskeletal assessment and treatment services (iCATs/MCATs/CATs) or advise patients to seek care in the private sector (Department of Health, 2006a). Overstretched physiotherapy services with long waiting lists and patient delays have long been a problem in the NHS. Several initiatives have been developed to help address this problem, including the introduction of direct access or self-referral services for patients, employment of additional, short-term locum physiotherapists, waiting list ‘blitz’ initiatives and physiotherapy-led telephone advice and treatment services known as ‘PhysioDirect’ services.

1.6 PhysioDirect

The PhysioDirect service enables patients to have early access to a physiotherapist who assesses their musculoskeletal problem over the telephone. The word is really an umbrella term coined in relation to a variety of physiotherapy-led telephone services. The PhysioDirect service tested in a recent RCT is a typical service model, in which there are several possible outcomes from the initial telephone call: in some cases, at the end of the call the physiotherapist invites the

patient to attend a face-to-face appointment or posts a relevant advice leaflet about self-management and exercises to the patient, encouraging them to phone back to report progress after about two to four weeks, if appropriate. If the patient phoned back they would be re-assessed and given further advice or a face-to-face consultation would be arranged if it was reasoned necessary. Thus, PhysioDirect is a service that provides a package of care, rather than only telephone assessment and advice.

One of the first PCTs to develop a PhysioDirect service was Huntingdon, in Cambridgeshire. In 2001, after a successful pilot with two GP practices, they rolled out the service across the PCT. The service was highlighted by the Commission of Health Improvement and the NHS Working in Partnership programme as an example of good practice (Department of Health, 2006a). Subsequently, a number of PhysioDirect services developed in other PCTs, including Hull and Gateshead along with several companies in the private sector (Connect Physical Health, 2012, The Community Musculoskeletal Physiotherapy Service, 2012, PhysioHull Hull's MSK Partnership Service, 2011). Some services have developed a PhysioDirect service in conjunction with systems of self-referral to physiotherapy (NHS North East Essex, 2012, NHS Wales, 2011). Other services have used PhysioDirect within already existing integrated musculoskeletal patient pathways, for example in an interface assessment and treatment service (The Community Musculoskeletal Physiotherapy Service, 2012).

An audit of the Huntingdon service by Gamlin and Duffield (2001) showed that 63% of patients were completely managed by telephone contact, telephone consultations took half as long as face-to-face consultations, waiting times

reduced from four weeks to ten days and did not attend (DNA) rates dropped from 15% to 1%. Patient satisfaction was reported to be high, with 80% of patients reporting the service as good or excellent. Since then, other local audits and small studies have also suggested that these services are popular, with patient satisfaction reported to be high (Taylor *et al.,* 2002, Clayson and Woolvine, 2004). Reassuringly, a study by Turner (2009) suggested that diagnoses made by physiotherapists over the telephone are comparable to diagnoses made face-to-face, regardless of the experience of the musculoskeletal physiotherapist. However, that study also identified less agreement in the management decisions reached by less experienced physiotherapists over the telephone compared to those reached in face-to-face consultation.

Despite several PhysioDirect services developing throughout the UK in the last decade, until very recently there were no large-scale, high quality research evaluations of this model of care for musculoskeletal patients. A recent internet search (01/09/2012) identified nineteen physiotherapy sites in the UK (excluding the four sites established for the PhysioDirect trial) which appear to be providing a service based on initial telephone assessment and advice for musculoskeletal problems. It is assumed that this internet search will provide an underestimate of the total number of physiotherapy services providing physiotherapy in this way. This highlights the urgent need to provide high quality research data about this type of physiotherapy service. The key argument for PhysioDirect is that it facilitates prompt access and provides an efficient and effective service with shorter waiting times, leading to increased patient satisfaction and patient empowerment to self-manage their musculoskeletal problem.

1.7 The Medical Research Council (MRC) PhysioDirect trial

In a collaboration between the primary care academic departments at Bristol and Keele Universities, the first RCT of PhysioDirect services has recently been undertaken (Salisbury *et al.,* 2009). The study was a multi-centre, pragmatic trial investigating the clinical and cost-effectiveness of PhysioDirect compared with usual physiotherapy care as patients joined local service waiting lists for physiotherapy. As part of the trial, new PhysioDirect services were established in four PCTs in England and 32 physiotherapists were trained to deliver the PhysioDirect service. Adult patients who were referred from their GP or who self-referred to physiotherapy with musculoskeletal problems were invited to participate in the trial. Patients who consented to the trial were then randomised to PhysioDirect or usual care (see Salisbury *et al.,* 2009, Salisbury *et al.,* 2013a, Salisbury *et al.,* 2013b for further details of the RCT).

Although there are several variations of PhysioDirect services, the model adopted in the RCT, in which this PhD is nested, was based upon the Huntingdon PhysioDirect service. This model was chosen as it was well established in its structure and system format. It had been running for almost ten years and had previously won national awards for innovation and good practice (Department of Health, 2006a). The Huntingdon PhysioDirect model benefited from a level of computerised support not yet developed in other services in the UK. In addition, their experienced staff members were willing to provide support and training to physiotherapists involved in delivering the new PhysioDirect service in the trial. The PhysioDirect service involved patients being invited to telephone a physiotherapist for initial assessment and advice. During the telephone call, the physiotherapist was supported through a systematic assessment of the patient's

musculoskeletal problem using a structured and computerised approach to determine the priority of need (or triage). Traditional physiotherapy assessments differ as they tend to take place in an outpatient department or community clinic in face-to-face consultations. A description of how usual assessments are performed is described below in order for the reader to understand the key differences between an assessment on the telephone and a face-to-face consultation.

Traditional physiotherapy appointments generally start with a subjective assessment in which the patient is asked to describe their problem to the physiotherapist, who takes the patient's full medical history, followed by the history of the present condition. The physiotherapist then asks about how the problem started, the perceived causes, how the problem has progressed and whether the patient has had any previous treatment. The physiotherapist records information from the patient about any medication and relevant aspects of their social history (Petty and Moore, 2001). It is good practice for physiotherapists to ask about the patient's expectation for treatment and to negotiate agreed, achievable goals (Cott and Finch, 1991, Rothstein, 2001). The physiotherapist then conducts an objective assessment which includes observation and palpation around the site of pain or problem, assessing movement and pain response during movement, both active (in which patients move themselves) and passive (with the physiotherapist controlling the movement), and further special tests that examine muscles, tendons and ligaments in order to inform the differential diagnosis of the problem (Hammond and Wheeler, 2008, Thomson, 2003). From the findings of both the subjective and objective assessments the physiotherapist then usually gives the patient their impression of the diagnosis and develops a treatment plan based on the problems identified (Petty and Moore, 2001, UK Health Centre, 2011).

There were key differences in the patient assessment in the PhysioDirect service. On the telephone, the physiotherapist asked the patient to move the body part nearest the site of the musculoskeletal pain, and raised questions about the pain response to particular movements and the range of movement able to be achieved. The physiotherapist was unable to observe, palpate or conduct special tests that required face-to-face consultations. Those patients who were subsequently invited for a face-to-face appointment after the initial telephone call received these other additional aspects of the objective assessment. Although the physiotherapist was supported by the PhysioDirect computer software to structure their patient assessment over the telephone, ultimately their clinical judgement determined the level of care appropriate for each patient based upon their clinical reasoning from their telephone assessment.

The most common approach for patients in the PhysioDirect trial was physiotherapy advice on how to cope with and self-manage symptoms at home without the need for further face-to-face physiotherapy contact. The physiotherapists provided advice and simple exercise-based interventions, supported by postal patient advice and exercise leaflets. Patients were advised to call back if the problem did not resolve and were given appropriate time frames to facilitate understanding of their prognosis. The RCT is further described in the methods section, which can be found in Chapter 3, section 5.2. The MRC PhysioDirect RCT was designed to investigate the clinical and cost-effectiveness of PhysioDirect, based on validated quantitative outcomes over six months of patient follow-up. The qualitative study, nested within the RCT, aimed to explore the acceptability and implementation of PhysioDirect from the perspectives of patients, physiotherapists, physiotherapy managers, GPs and commissioners.

1.8 Research question

Is the PhysioDirect service acceptable and implementable within the context of the NHS?

1.9 Aims of the PhD

The key aims of this PhD are to understand the issues that determine the acceptability of PhysioDirect and the key factors which affect the implementation of the new service. The perspectives of patients, healthcare professionals and managers were sought in order to provide a deeper understanding of the factors (personal, professional, patient-related and organisational) that influence both the acceptability and the implementation of PhysioDirect. These findings will provide a greater understanding about how the PhysioDirect service was viewed by these key stakeholders and will contribute to the growing evidence about telephone-based services to improve access to healthcare.

1.10 Structure of the thesis

In order to provide a more detailed understanding of the gaps in the current literature pertaining to the acceptability and implementation of PhysioDirect, Chapter 2 reviews the literature relevant to the acceptability of both musculoskeletal and telehealth services. Literature relating to the implementation of new healthcare services is also included in this review. Chapter 3 provides the justification for the methodological approach taken in this qualitative investigation to explore the acceptability and implementation of the PhysioDirect service, including the benefits of adding this type of qualitative study to RCTs.

The data for each key stakeholder group are presented in Chapters 4, 5 and 6. Chapter 4 examines the findings from the perspectives of the patients, eliciting, in

particular, their views on acceptability. Chapter 5 evaluates issues of both acceptability and implementation of the new PhysioDirect service from the perspectives of the physiotherapists and physiotherapy managers. The last data chapter (Chapter 6) discusses the findings from the perspectives of the GPs and service commissioners, highlighting more contextual issues of how the PhysioDirect service fits within the NHS provision of a musculoskeletal health service. Qualitative data about the organisation of the PhysioDirect trial itself are not included within these data chapters, as such data was excluded from the analysis.

Chapter 7 compares and contrasts the findings from each of the stakeholder perspectives. The perspectives of the patients, physiotherapy managers, GPs and commissioners are combined, adding to the understanding of the acceptability and implementation of the PhysioDirect service. In addition, the results of the quantitative study are woven into the discussion, helping to contextualise both the quantitative and qualitative findings. The strengths and limitations of this thesis are discussed alongside suggestions for future research and implications for clinical practice. Finally, Chapter 8 presents the key conclusions from this thesis.

Chapter Two: Literature review

2.1 Chapter introduction

The previous chapter highlighted the prevalence of musculoskeletal problems, the role of physiotherapy as a treatment, including self-management advice, and the problems that some patients have when accessing physiotherapy services. It introduced the PhysioDirect trial and the qualitative research nested within it. Currently, there is little qualitative literature on the acceptability and implementation of PhysioDirect. Therefore, it is necessary to understand the theoretical underpinnings of the acceptability and implementation of both musculoskeletal and telehealth services in order to explore the differences between traditional physiotherapy services and physiotherapy provided over the telephone.

The first section of this chapter offers an investigation of the acceptability of physiotherapy and musculoskeletal services from the perspectives of patients and healthcare professionals. There were no models of acceptability found within the physiotherapy literature. However, in the wider literature Campbell *et al.,* (2000) suggests that acceptability is an outcome of the evaluation of the quality of healthcare. This review therefore focuses upon both patient and professional literature relating to quality of care in order to introduce the concept of acceptability of health services. There is a particular focus upon the clinical effectiveness and the role of interpersonal relationships within the patient experience as these are central to the concept of acceptability. Then, the chapter considers both patient and professional acceptability of telehealth services. The third part of the literature review focuses upon implementation of telehealth services along with contextual National Health Service (NHS) policy information. In considering the

implementation of telehealth services, the Normalisation Process Theory (NPT) (May *et al.,* 2007) was examined, as it explores how complex interventions are implemented and normalised into the NHS. Finally, the last section of this chapter provides a summary and critical overview of the gaps within the literature.

2.2 Patient acceptability of physiotherapy services

There are multiple definitions of acceptability. Generally, acceptability is defined as "able to. be accepted, satisfactory" (Soanes and Stevenson, 2006: 7). The medical definition of acceptability is "an overall assessment of a service/treatment to a person or group, which includes accessibility, cost, quality, results, convenience and attitudes of professionals and patients" (The Free Online Medical Dictionary, Thesaurus and Encyclopedia, 2008). As multiple definitions exist, it is important to consider all these different aspects and components (satisfaction, cost, quality, convenience, attitudes) when exploring how acceptable the PhysioDirect service is to patients, physiotherapists and physiotherapy managers, General Practitioners (GPs) and commissioners.

From the patient perspective, Campbell suggested that healthcare acceptability is linked to how patients experience and evaluate the quality of care they receive (Campbell *et al.,* 2000). This is useful to consider when investigating the patient experience of the acceptability of the PhysioDirect service. Campbell *et al.* (2000) suggested that there are two dimensions to quality of care. These are access, meaning whether patients can get the appropriate care they need when they require it, and effectiveness, which relates to whether it is effective when they receive it. Campbell *et al.* (2000) stated that healthcare users' attitudes cannot be separated from, nor properly understood without, a reference to the experiences

with which they are connected, and such evaluations may influence future decisions about accessing care. In terms of acceptability of healthcare services, Campbell *et al.* (2000) rejected acceptability as a basic component of quality or as an attribute of care, and suggested that it is more appropriately considered as an outcome or consequence, arguing that acceptability is a component of the users' evaluation. It is, therefore, important to consider what the component parts of acceptability might be in both musculoskeletal and telehealth services. There does not appear to be any existing frameworks or models that specifically explore acceptability in musculoskeletal services. In addition, most of the literature focuses upon satisfaction rather than acceptability, and the literature is based upon the patients' perspective rather than that of the professionals (Hush *et al.,* 2011, Tousignant *et al.,* 2011a, Knight *et al.,* 2010, Hills and Kitchen, 2007d, Hills and Kitchen, 2007a, Hills and Kitchen, 2007b, Beattie *et al.,* 2005, Beattie *et al.,* 2002, May, 2001, Goldstein *et al.,* 2000). There are, however, models of acceptability in telehealth services (Field, 1996b) which are further explored in section 2.6. While most evaluation models within musculoskeletal service focus upon satisfaction, it is important to consider the links between satisfaction and acceptability, and these are further discussed in the following section.

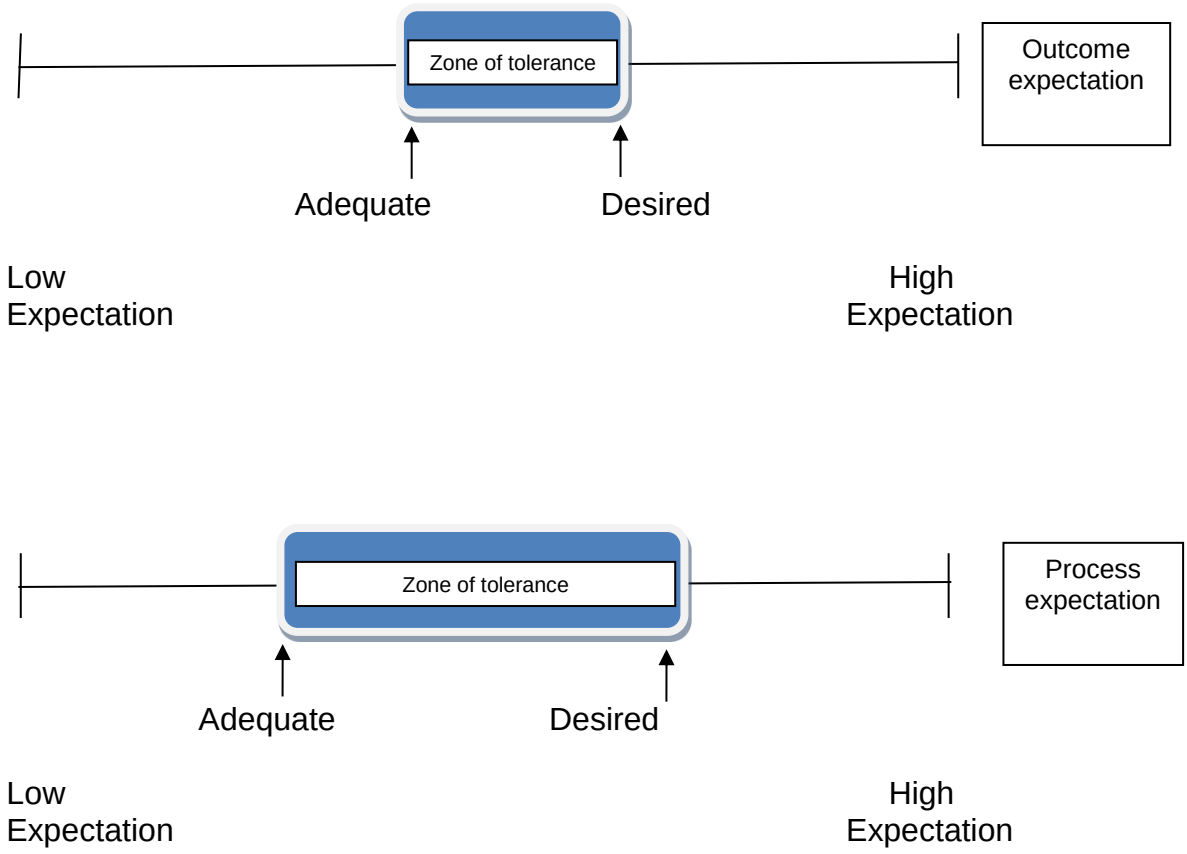
2.2.1 Satisfaction, acceptability and expectations of physiotherapy services

There is a close link between acceptability and satisfaction, and it was considered important, for this PhD, to understand the similarities and differences between these concepts. Satisfaction is defined as the "fulfilling expectation or needs; acceptable" (Soanes and Stevenson, 2006: 1277). The differences between the definitions of acceptability and satisfaction appear to be evaluative: satisfaction appears to indicate pleasure, whilst acceptability is associated with tolerability or

meeting minimum requirements. It should be highlighted that within the definition of acceptability there is an element of satisfaction, which may indicate that both terms exist on the same scale.

The available literature on satisfaction suggests that a patient's expectations may influence their satisfaction with a service. The 'zone of tolerance', a marketing model by (Parasuraman *et al.,* 1991) may help to explain how acceptability links to satisfaction. They explored how expectations are related to and have an effect upon the level of felt satisfaction with a service outcome or process. On a continuum from low expectation to high expectation, they defined an area in which they termed the 'zone of tolerance' (an area ranging from adequate to desired levels of satisfaction); see Figure 1. This model makes the distinction between service outcomes and processes, for example processes of care are the actual delivery and receipt of care, whilst outcomes are the consequence of that care (Campbell, 2000). This separation between outcome and process in the 'zone of tolerance' model increases its utility for health service research (Thompson and Sunol, 1995). The model therefore may be relevant to this exploration of the acceptability and implementation of the PhysioDirect service, and highlights the fact that patients may have expectations about a number of specific aspects of the service (processes, outcomes), which they may evaluate in terms of satisfaction, and whether they find these elements and the service acceptable or not. It is proposed that it is within this "zone of tolerance" that services are evaluated as acceptable.

Figure 1: Zone of tolerance model



Sourced from (Parasuraman *et al.,* 1991)

In order to understand the relationship between satisfaction and expectations, Thompson and Sunol (1995), reviewed the literature (of the UK and the US) from a wide range of disciplines, including psychology, sociology, social policy, healthcare services and management, and marketing. They identified four types of expectation: these are ideal, predicted, normative and unformed. These types have also been used in physiotherapy literature to help explain patient expectations of physiotherapy. Barron *et al.* (2007), and Thompson and Sunol (1995) found that there were many basic conceptual models that showed how expectations were developed and modified. The more developed models were

those in the marketing literature; the most relevant was the Servqual model (Parasuraman *et al.,* 1985). The theory was based upon the concept that satisfaction or dissatisfaction was the result of comparison between prior expectation and perceptions of the actual product. They hypothesised that the greater the divergence between the two, the more apparent the satisfaction or dissatisfaction. It is, therefore, important to consider that patients' expectations of PhysioDirect may influence satisfaction with and acceptability of the service.

The empirical literature has provided some evidence to support the view that expectations do influence patient satisfaction with physiotherapy services. A study by Curry and Sinclair (2002) used the Servqual model to assess the quality of three different types of physiotherapy (community rehabilitation, musculoskeletal physiotherapy and GP practice-based physiotherapy) service provision in Dundee, Scotland. They found that patients across the three groups had high expectations of being treated safely during their treatment. Patients also expected physiotherapists to understand their specific needs and show a genuine interest in solving their problems. Patients seemed to be less concerned about and had lower expectations of the appearance of the ward and the equipment that was used. This suggests that the manner in which care is delivered is the most important to patients in their evaluation of quality in physiotherapy. Therefore, these aspects are important when exploring the potential links between individual patients' prior expectations of PhysioDirect and their subsequent satisfaction with the service.

Further evidence supports the link between patients' expectations of healthcare and their subsequent expressed satisfaction. McGregor and Hughes (2002) evaluated patient expectations of and satisfaction levels with surgical management

of nerve-root compression in 84 patients with low back pain caused by spinal stenosis.[1] The researchers asked patients to rate their expectations in terms of improvement in pain, general health and function. They were also asked to rate their satisfaction levels at each stage of post-operative review and their satisfaction with improvement. They found that patients had very high expectations of surgery, particularly in terms of pain and function, yet patient satisfaction with surgery varied considerably. This seems to suggest that some patients had unrealistic expectations of their surgery and, as a consequence, they tended to express lower levels of satisfaction. This study highlights that patients with unrealistically high expectations of a service might be more likely to report dissatisfaction if the service does not meet their expectations.

Most patients are likely to have some expectations about what physiotherapy is and what physiotherapy treatments might involve, and this can be independent of whether they have had any previous experience of physiotherapy (Metcalfe and Moffett, 2005). The CSP recommends that patients' expectations are identified and considered in order to ensure quality care and the best possible patient outcome (The Chartered Society of Physiotherapy, 2005). In a postal survey, of 285 patients referred to physiotherapy for musculoskeletal care Metcalfe and Moffett (2005) found that those who had suffered with a trauma-related problem, had more acute conditions, a higher locus of control, no previous experience of physiotherapy, had expressed greater satisfaction with previous healthcare, and women rather than men tended to have higher outcome expectations of physiotherapy. They also found that the responders who had degenerative lower

[1] Spinal stenosis is narrowing of the spinal column that causes pressure on the spinal cord or narrowing of the openings where spinal nerves leave the spinal column. Spinal stenosis usually occurs as a person ages and the discs become drier and start to bulge. At the same time, the bones and ligaments of the spine thicken or grow larger due to arthritis or long-term inflammation (PubMed Health, 2013).

limb conditions, for example those with osteoarthritis (OA), were more likely to have lower expectations of physiotherapy, suggesting that previous experience of physiotherapy may alter patients' perceptions. Whilst the survey had some limitations – a low response rate of 44% and a response bias in favour of older women – it nevertheless provides some evidence that patients' expectations of physiotherapy vary according to key patient characteristics. This highlights the importance, for the purpose of this PhD, of seeking out the perspectives of a wide range of patients who differ across a number of variables, including gender and age and patients with and without previous experience of physiotherapy care.

2.2.2 Patient satisfaction with physiotherapy services

Patient satisfaction has also been used as a major indicator in the evaluation and improvement of quality in healthcare (Aharony and Strasser, 1993, Carey and Seibert, 1993, Hall and Dornan, 1988, Säilä *et al.,* 2008). Therefore, patient satisfaction with physiotherapy services is an important factor in understanding patient acceptability. Hills and Kitchen have also explored the theoretical literature in relation to the links between expectation and satisfaction (Hills and Kitchen, 2007a, Hills and Kitchen, 2007b, Hills and Kitchen, 2007c, Hills and Kitchen, 2007d). From these studies they developed models of patient satisfaction with physiotherapy care (Hills and Kitchen, 2007a). This three part study of care by Hills and Kitchen (2007a) involved initial unstructured interviews with patients, based upon a convenience sample of patients with acute, sub-acute and chronic musculoskeletal problems. From the results, they developed a topic guide for a series of focus groups aimed at understanding patient satisfaction amongst patients who had chronic and acute musculoskeletal problems. They found that the patients distinguished between the content/process and the outcomes of care.

Patients were found to be satisfied with the physiotherapist and the treatment they received, but not necessarily satisfied with the result of that treatment (i.e. their symptoms did not improve). Therefore, the authors developed two models: one focused on the process of care, which the authors referred to as 'the therapeutic encounter', and the other focused on the clinical outcome of care.

The first model was informed by the marketing model of Burns (1986), and includes the following key components: the therapeutic encounter with the physiotherapist, the expectation of treatment, the communication of information, the explanation of the physiotherapy process, the content of the consultation and the results of the treatment. In order to interpret the model, an example of satisfaction with the process of physiotherapy care is provided. A patient with a chronic condition, who has high unrealistic expectations, who experiences an impersonal interaction with the physiotherapist and who has low engagement with the treatment is more likely to be dissatisfied with the process of care.

The second clinical outcome of care model, developed by Hills and Kitchen (2007a), shows that patient satisfaction with the outcome of treatment is dependent on patients' expectations of physiotherapy and the outcome of that treatment. The model predicts four possible outcomes, describing how those patients who have positive expectations and a positive outcome will have complete clinical effectiveness and be completely satisfied, as their positive expectations are met. There would also be patients who have positive expectations but negative outcomes, suggesting that the treatments are clinically ineffective, that the patients are dissatisfied and that their positive expectations are not met. Those who have negative expectations but have a positive outcome will

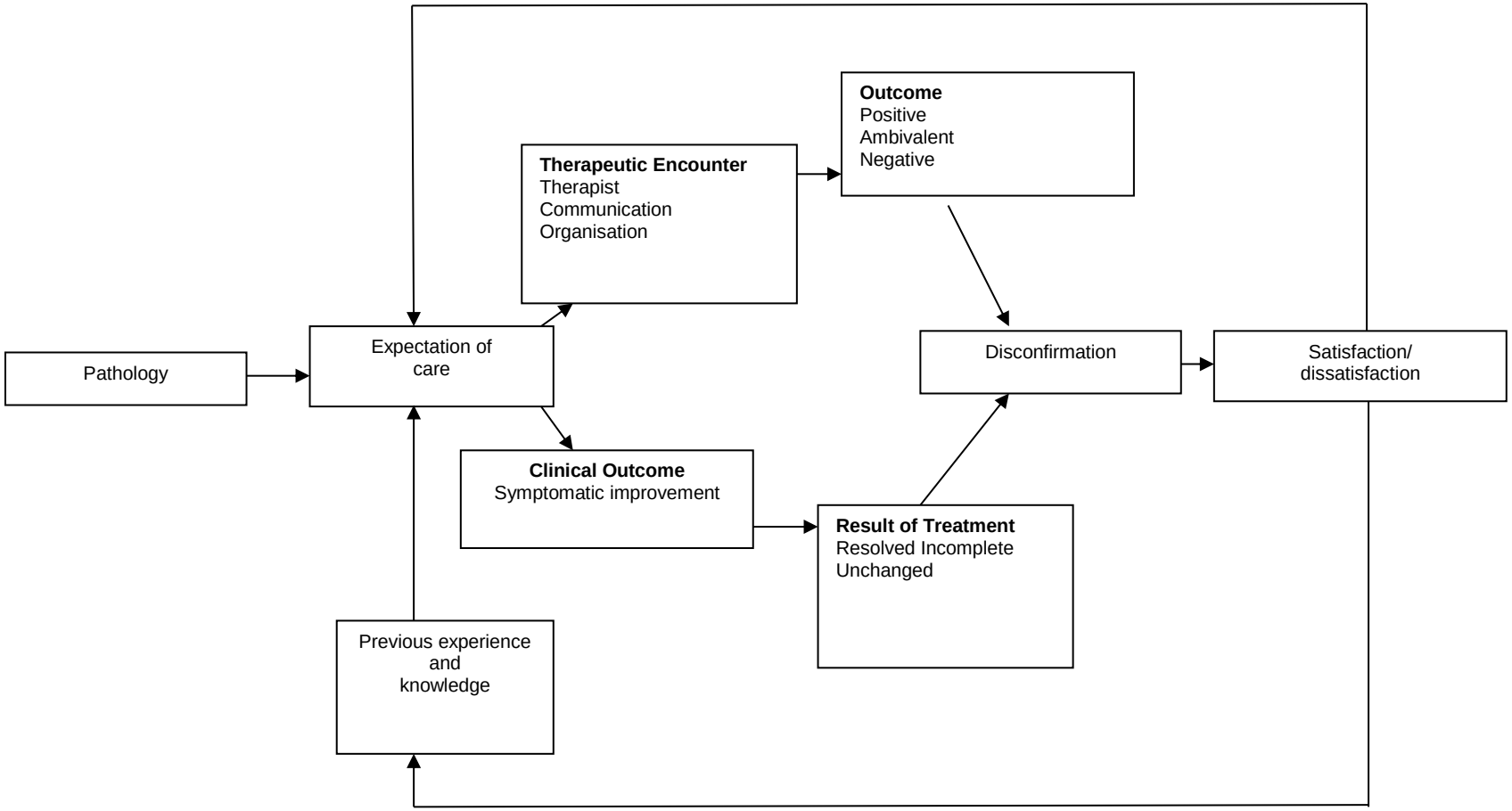
probably be satisfied with the treatment even though they were not expecting the treatment to be helpful. The last group are those who have negative expectations and a negative outcome; the authors suggested that this group will probably be completely dissatisfied, having their negative expectations of the treatment confirmed.

Hills and Kitchen (2007a) then used these two models to conduct the final stage of their study, in which they interviewed 66 patients with musculoskeletal complaints. The results showed that there were differences in expectations depending on the chronicity or duration of their problem. Patients with a chronic condition had greater expectations which were linked to their current musculoskeletal problem and their prior knowledge of physiotherapy. They also found that patients who had positive or loosely formed expectations of benefit from physiotherapy tended to report more positive outcomes if the encounter with the physiotherapist was positive and the treatment either met, or exceeded, their expectations. The opposite occurred when patients had unrealistic or negative expectations of musculoskeletal physiotherapy, in which case patients were dissatisfied when the treatment did not work and their musculoskeletal problem did not improve. These results enabled the formation of the Hills and Kitchen's model of patient satisfaction with musculoskeletal physiotherapy (see Figure 2, page 25).

As previously highlighted (in section 2.2) there is no existing model of acceptability for physiotherapy care. Therefore, Hills and Kitchen's model provides a theoretical basis for how patients may evaluate musculoskeletal physiotherapy in terms of its acceptability. In relation to this study, the model might also aid in the understanding of how patients evaluate a telephone-based physiotherapy service,

especially in relation to their expectations of the service, aspects of the therapeutic relationship and satisfaction with service outcome. However, the research had some limitations, particularly with respect to their sampling methods, which meant that men were underrepresented. This may mean that the subsequent model may have been more applicable to women than men. Additionally, there was no reference to whether or not there was any diversity in terms of the participants' spoken language or ethnicity within the sample. Nevertheless, the Hills and Kitchen model of patient satisfaction with musculoskeletal physiotherapy services potentially provides a way in which to understand how patients might evaluate the PhysioDirect service.

Figure 2: Model of patient satisfaction with musculoskeletal physiotherapy (Hills and Kitchen 2007)



Reproduced with permission by Hill and Kitchen (2007c)

The previous sections highlighted satisfaction as an important component in understanding the acceptability of new health services. Two recent systematic reviews Hush *et al.* (2011) and Hall *et al.* (2010) provided evidence that patients are highly satisfied with musculoskeletal physiotherapy care delivered across outpatient settings in northern Europe, North America, the United Kingdom and Ireland. The review suggested that the key determinants of patient satisfaction are the interpersonal attributes of the physiotherapist and the processes by which the patients receive care. Interestingly, the authors concluded that treatment outcome was rarely associated with patient satisfaction, and therefore recommended that physiotherapists could improve the quality of patient-centred care by understanding that the ability of the physiotherapist to communicate effectively with patients affects their satisfaction. The review by Hall *et al.* (2010) also found a strong association between satisfaction and the relationship between the physiotherapist and patient. It appears that a good therapeutic relationship correlated with improved treatment outcomes, pain disability and treatment satisfaction with treatment for physical rehabilitation. However, they suggested that more research is needed to determine the strength of this association. There are some qualitative studies that have explored the patient satisfaction with musculoskeletal services.

Patient-centred physiotherapy is considered important in order to maintain patient satisfaction and the acceptability of musculoskeletal care. A qualitative study of satisfaction with musculoskeletal physiotherapy services by Kidd *et al.* (2011) established five main components of patients' perspectives of patient-centred physiotherapy. Firstly, the ability of the physiotherapist to communicate with patients was an important component, as was their confidence, knowledge and

professionalism. It was also established that it was important for physiotherapists to empathise with patients. However, Kidd and colleagues theorised that these components of patient-centred care did not occur in isolation, but formed a composite picture of patient-centred physiotherapy from the patient's perspective. These findings are relevant to this thesis, given that patient-centred care is found to be important in terms of how patients evaluate physiotherapy. However, it is not known whether patient-centred physiotherapy care can be delivered through PhysioDirect, as the telephone may reduce the physiotherapists' ability to communicate effectively.

Patients' satisfaction with musculoskeletal treatment also seems to be linked to clear communication and procedures and treatment plans. A study by McCracken *et al.* (2002) prospectively evaluated the predictors of satisfaction of 62 adults seeking treatment for chronic pain. They found that the strongest predictor of satisfaction was when patients felt that the clinician explained the assessment fully to them and when patients understood why they were performing such clinical procedures. In addition, patients were also satisfied when they found a treatment that helped to improve their daily activities. Clearly, in this instance, communicating with patients about what treatment they were going to receive, and why they were having the procedure influenced how satisfied they were with the treatment. This view is supported by May (2001), who undertook a qualitative study in order to describe which aspects of physiotherapy care were considered important by patients with back pain. The author interviewed 34 patients with long histories of back pain and found that there were five related aspects of satisfaction with musculoskeletal treatment. These included the personal and professional

manner of the therapist, the explanation and teaching which occurred during the episode, whether the treatment was a consultative process, access to and time with the physiotherapist and clinical outcome. May (2001) concluded that patients' satisfaction with physiotherapy is related to the quality of that care, paying particular attention to the therapeutic relationship that develops between the patient and physiotherapist. Therefore, it is important to consider the effect of communication between the physiotherapist and patient.

2.2.3 Non-verbal communication

There are two types of non-verbal communication. Firstly, there is physical non-verbal communication such as facial expression, smiling, eye contact, head nodding, hand gestures and postural positions. The second method of communicating non-verbally is paralinguistic speech; this includes speech rate, loudness, pitch pauses and speech dysfluencies (Knapp and Hall, 2009). Roter *et al.* (2006) suggested that there is a way of assessing emotions, (feelings, desires and mood) by assessing patients' non-verbal communication cues. Beach (2006} argued that assessing emotions is an important aspect of interpersonal care. Donabedian (1980) describes interpersonal care as management of the social and psychological interaction between healthcare professionals and users or their carers. A study by Griffith[3rd] *et al.* (2003) exploring the relationship between patient outcomes and non-verbal behaviour found higher patient satisfaction with clinicians who were more expressive in their non-verbal communication. Interestingly, they found that clinicians' non-verbal communication explained more patient satisfaction than their verbal communication. Roter *et al.* (2006) also suggested that there are three interrelated ways in which emotions play a part in the process of medical care: that both the clinicians and the patients have, show

and judge emotions. Roter *et al.* (2006) explained that emotions have an influence on experiences, cognition and behaviours, including recall, decision making, persuasion, information process and interpersonal attitudes. Roter and Hall (2006) considered that it is more common that feelings of warmth and enthusiasm are expressed both by the patient and the clinician through non-verbal means of communication. Tone of voice and eye-contact issues also seem to be important in the literature. Bensing *et al.* (1995) found that clinicians who gazed at their patients more frequently in their consultations were more successful in recognising psychological distress. Roter *et al.* (2006) agreed and suggested that the use of eye contact in consultations increases the ability to synthesise and interpret verbal and non-verbal cues of patients more accurately. This is an important consideration when exploring the acceptability of the PhysioDirect service. As previously described the service removes the visual component of an assessment. It may be that such issues may affect the service's acceptability to both patients and physiotherapists. Another consideration which may affect the acceptability of the PhysioDirect service is the loss of continuity of care. The relevant literature related to continuity of care in physiotherapy is discussed in the following section.

2.2.4 Continuity of care

Continuity of care is an important aspect of interpersonal care, and it appears to influence how patients evaluate their experience. Gulliford *et al.* (2006) described how continuity of care is concerned with the quality of care over time. He reported that there are two differing views of continuity of care: the patients' perspective and that of the professional. The patients' view of continuity of care is idealised within their experience of a 'continuous caring relationship' with an identified

healthcare professional. This is further dissected into continuity as an experience of the interpersonal aspects of care and the coordination of that care.

A growing body of research has suggested that greater continuity of healthcare is positively associated with patient satisfaction, improved satisfaction and clinical outcomes (Russell, 2012, van Walraven, C. 2010, Freeman and Hughes, 2010). However, Campbell *et al.* (2000) urged caution, stating that continuity of care from an ineffective professional who has poor interpersonal skills would not represent high quality care. Nevertheless, a recent systematic review by van Walraven *et al.* (2010) found there was a significant association between increased continuity, decreased hospitalisation and emergency visits, and patient satisfaction. Russell *et al.* (2012) carried out a study investigating patient outcomes with provider continuity in home-based physical therapy services. They found that patients with lower levels of provider continuity had significantly higher odds of hospitalisation. This suggests that improved continuity is associated with better patient outcome. In terms of patient satisfaction with musculoskeletal physiotherapy services and continuity of care, Beattie *et al.* (2005) found that patients who received their entire course of musculoskeletal physiotherapy from the same physiotherapist were approximately three times more likely to report complete satisfaction with care than those who received care from more than one physiotherapist. The PhysioDirect service tends to provide one-off advice rather than multiple assessments and treatments by the same physiotherapist. Therefore, the lack of continuity of care may affect PhysioDirect's acceptability.

Continuity of care has been shown to be an important aspect of healthcare to both healthcare professionals and patients. Medina-Mirapeix *et al.* (2011) conducted a

qualitative study to explore ambulatory outpatient experiences and perceptions in post-acute care settings. After interviewing 57 adults undergoing outpatient rehabilitation for musculoskeletal problems who had more than ten physiotherapy treatment sessions, they found that participants described three main themes in relation to continuity of care. These were relational, informational and management continuity. Although this was a study of a service designed to provide multiple sessions, it showed that there were differences between continuity of care and it also provided some evidence that patients perceived that over time their care came to feel disconnected. There is very little known about the professional's view of continuity of care. However, Gulliford *et al.* (2006) suggested that the provider's perspective of continuity of care is different. They view continuity of care in a system and the ideal as the delivery of a 'seamless service' through integration, coordination and the sharing of information between different providers. Further literature regarding professional acceptability of musculoskeletal services is now presented.

2.3 Professional acceptability of musculoskeletal services

There appears to be very little written on physiotherapists' perspectives of providing musculoskeletal physiotherapy. One qualitative study of eleven physiotherapists highlighted the variation in physiotherapists' experiences of client participation in physiotherapy interventions (Larsson *et al.,* 2010). Three categories were identified to explain the differences in how physiotherapists viewed their interventions and goal setting with patients. Firstly, they described an 'equal partnership' category operationalised from a biopsychosocial perspective, where both the patient and the physiotherapists were responsible for deciding upon the most suitable goal and appropriate intervention. The second category

was operationalised from a biomedical perspective. In this, the patient was ‘guided’ by the physiotherapist in an unequal partnership in which the physiotherapist suggested those interventions which were the most suitable. Lastly, the category ‘expertise’ was identified, in which participation arose from a paternalistic and biomedical view of intervention. The patient saw the physiotherapist as an expert who decided on and controlled the intervention and goal setting. This may mean that musculoskeletal physiotherapists have different styles of assessing and treating patients over the telephone.

It appears that the beliefs and preferences of the physiotherapist influence how they treat and manage patients with musculoskeletal problems. A recent summary of the available evidence by Main *et al.* (2010) showed that a clinician’s beliefs, preferences and expectations do influence the consultation, the interventions and the treatment outcome from the perspective of both the patient and the healthcare practitioner. More recently, Darlow *et al.* (2012) conducted a systematic review to investigate associations between healthcare practitioners’ attitudes and beliefs and the attitudes and beliefs, clinical management of and outcomes of patients with low back pain. They found seventeen studies from eight countries which investigated the attitudes and beliefs of GPs, physiotherapists, chiropractors, rheumatologists, orthopaedic surgeons and other paramedical therapists. The results provided strong evidence that healthcare practitioners’ beliefs about back pain are associated with the beliefs of their patients. They showed moderate evidence that healthcare professionals with a biomedical orientation or with elevated fear-avoidance beliefs are more likely to advise patients to limit work and physical activities, and are less likely to adhere to treatment guidelines. They also found moderate evidence that healthcare professionals’ attitudes and beliefs are

associated with patient education and bed-rest recommendations. There is moderate evidence that Healthcare Professional (HCP) fear-avoidance beliefs are associated with reported requests for sick leave prescription and that a biomedical orientation is not associated with the number of sickness certificates issued for low back pain.

There is even less information regarding GPs' perception of both physiotherapy and musculoskeletal services in the UK. The GP's role in musculoskeletal services in the UK is to assess and treat patients with musculoskeletal problems and decide who can self-manage and who needs to have further care and be referred to other services, for example orthopaedics and physiotherapy. Clemence and Seamark (2003) investigated HCP and patients views on the referral system to physiotherapy for patients who have musculoskeletal problems. They conducted a qualitative study and interviewed patients, physiotherapists and GPs. They found three different types of referral to physiotherapy, including what they termed appropriate referral, 'load sharing' and 'dumping referrals'. Both the GPs and the physiotherapists suggested that GPs often 'dump' refer patients with chronic musculoskeletal patients to physiotherapy when they do not know what else to do for the patient, even when they feel physiotherapy is unlikely to help the patient. The GPs were aware of how physiotherapists often report that GPs inappropriately refer patients to physiotherapy, and suggested that physiotherapists could improve their communication of what is an appropriate referral. It was also reported that some GPs in the sample had limited knowledge of physiotherapy. They appeared to be unsure of the range of physiotherapy techniques that can be used to treat patients with musculoskeletal problems. GPs suggested that generally they were unable to manage patients' expectations, as they felt limited in their understanding

of physiotherapy despite referring patients for physiotherapy treatment. The lack of GPs' awareness of physiotherapy may have an impact of how the PhysioDirect service is understood and is ultimately accepted. Currently, there is no available literature regarding managers' and commissioners' perspectives of musculoskeletal services.

In summary, recent evidence supports the view that patients are generally satisfied with musculoskeletal physiotherapy (Hush *et al.,* 2011) and that patient satisfaction with the process of care is not necessarily linked to their clinical outcomes (Hills and Kitchen, 2007a) from care and may be more likely to be associated with aspects of their interpersonal relationship with the physiotherapist (Hush *et al.,* 2011, Hall *et al.,* 2010). It is not known whether patients' and providers' views about acceptability are similar or different when physiotherapy is provided over the telephone. These aspects of acceptability are therefore clearly important to consider when delivering physiotherapy in new ways, such as PhysioDirect. Accordingly, the next section draws from relevant literature exploring both patients' and providers' acceptance of telehealth services

2.4 The role and definition of telehealth services

There are a number of ways in which telehealth can be used, for example making telephone calls to the GP, emergency services, NHS Direct, out-of-hours (OOH) GP services, remote monitoring of cardiac problems and some real-time diagnostics using video technologies and internet-based technologies (McCarthy 2000). Confusingly, there are a number of terms related to telehealth that are often used interchangeably. It is therefore important to establish an understanding of the

definitions used to describe the different technologies. In order to discuss the acceptability of telehealth care, a definition is explored and discussed.

Telehealth is a term used to describe the process in which healthcare professionals evaluate, diagnose and treat patients using telecommunicative technologies (AMD Global Telemedicine, 2012)**.** In 1996 the Institute of Medicine broadly defined telemedicine as "the use of electronic information and communication technologies to provide and support healthcare when distance separates the participants". This definition embraces the elements of information and telecommunication technologies, distance between participants, and health or medical uses (Field, 1996a). More recently, in the UK, the Department of Health (DoH) and the King's Fund defined telehealth as the delivery of healthcare at a distance using electronic means of communication, usually from service-user to clinician, and telecare as the continuous, automatic and remote monitoring of real-time emergencies and lifestyle changes over time in order to manage the risks associated with independent living (Department of Health, 2009b, Giordano *et al.,* 2011, Davies and Newman, 2011). Others have defined telecare as a range of technologies and associated services; at its most basic, it is an alarm worn around the neck or the wrist that connects to a hub linked to the telephone line at home which is connected to the remote monitoring centre (Roberts *et al.,* 2012).

All of these definitions share the core concept of providing healthcare services to patients from a distance. It is important to consider how PhysioDirect fits in with these definitions. In order to achieve this, the most recent reviews of telehealth are of relevance. The earlier of the two reviews, Sood *et al.* (2007) considered 104 peer-reviewed definitions of telemedicine and suggested a new definition of

modern telemedicine. The authors suggested that telemedicine is a branch of e-health that uses communication networks for delivery of healthcare services and medical education from one geographical location to another. It is deployed to overcome issues such as uneven distribution and shortage of infrastructural and human resources. The second and more recent literature review explored the concepts of telehealth, telecare and telemedicine (Solli *et al.,* 2012). The authors redefined telecare as the use of information, communication and monitoring technologies which allow healthcare providers to remotely evaluate health status, give educational interventions or deliver health and social care to patients in their homes. The term 'telehealth' is used in relation to the PhysioDirect service throughout this thesis. However, when referring to specific telehealth literature, the terms used by the relevant authors are made clear.

2.5 The evidence for telehealth

There are several systematic reviews evaluating the role and effectiveness of telehealth. A recent study of 80 systematic reviews in the field of telemedicine across a number of health conditions concluded that, due to the lack of high-quality studies, the evidence for telehealth interventions is inconclusive (Ekeland *et al.,* 2010). The authors suggested that future studies should focus on the cost-effectiveness of such interventions. Although one review by Åkesson *et al.* (2007), found that telehealth users felt more confident in their own knowledge about their condition, Ekeland *et al.* (2010) concluded that there was a need for qualitative data to better understand patient satisfaction outcomes. None of the available reviews or primary studies investigated PhysioDirect services, but several are relevant given the similarities in the service being evaluated to PhysioDirect. The first of these Kairy *et al.* (2009) reviewed 28 studies on physiotherapy-led

telerehabilitation interventions, including cardiac and neurological rehabilitation, as well as spinal cord injuries and speech and language impairments. Unfortunately, the review excluded studies that used telephone intervention as the primary intervention. They concluded that telerehabilitation is as good as usual care in terms of clinical outcomes, and that both patients and professionals are satisfied with telerehabilitation services. The authors qualified this, and suggested that the term satisfaction was both poorly defined and reported in the original studies.

One of the key arguments for the use of telehealth in delivering healthcare is that it reduces the number of face-to-face consultations. A systematic review by Bunn *et al.* (2004) found that telephone consultations in primary care appear to reduce the number of patients making contact general practice surgery contacts and out-of-hours visits by practitioners. However, this review again highlighted that there are many unknowns regarding service use, safety, cost and patient satisfaction. Another review, by Paré *et al.* (2007) found that home telemonitoring for chronic disease management produced accurate and reliable data, empowered patients, influenced their attitudes and behaviours and potentially improved their medical condition. Again, Paré and colleagues point out a similar limitation, which is that there is a need for further evidence regarding its clinical effects, cost-effectiveness, impact on service utilisation and acceptance by healthcare providers. There have been further developments within the evidence base of telehealth that can answer questions of clinical and cost-effectiveness, which include a recent cluster RCT commissioned by the DoH that explores the remote management of patients with chronic conditions (AMD Global Telemedicine, 2012, Bower *et al.,* 2011) and the chronic obstructive pulmonary disease (COPD) RCT (Pinnock *et al.,* 2009).

2.6 Acceptability of telehealth

There are evaluative frameworks that explore the acceptability of telehealth. The framework by McCarthy *et al.* (2000) consists of quality, accessibility, cost and acceptability. Willingness to use a service is also a consideration in terms of how acceptability when evaluating telehealth solutions is defined (McCarthy *et al.,* 2000). McCarthy *et al.* (2000) defined acceptability as the degree to which patients, clinicians or others are satisfied with a service or are willing to use it. McCarthy drew upon the work of Field (1996a), who not only explored patient acceptability of telehealth services, but also provided a clinician's dimensions of acceptability. In terms of provider acceptability, Field (1996a) offered a similar framework. This includes asking the provider whether they are comfortable with telehealth equipment and procedure, for example convenience in terms of scheduling, physical arrangements and location, timeliness of consultation results and the technical quality of the service. Quality of communication and patient confidentiality were considered by Field (1996a) to be critical factors of professional acceptability of telehealth services. Field (1996a) explained that clinicians need to believe that the telehealth application makes a positive contribution to patient care. Critically, she suggested that provider acceptability of telehealth services is related to whether or not the provider is satisfied overall with the service and would be willing to use the service to provide their care in the future. An overview of both patients' and providers' views on the acceptability of telehealth was provided.

Field (1996a) suggested that telehealth should be evaluated in terms of patients' physical and psychological comfort with the application. This meant whether or not they felt comfortable in terms of discussing their problem via the telehealth system.

Convenience of the encounter should also be explored, in terms of its duration, timeliness and cost, along with both the personal skills and manner of the professional. Assessing the lack of face-to-face contact with a clinician was an important construct of acceptability. A clear patient explanation of the problem was also considered an important factor, as was whether patients felt that their information was private and protected during the process. One of the components of patient acceptability was in terms of patients' willingness to use the telehealth service again and how satisfied they were with the telehealth services they received. It is clear from the statement above that satisfaction is an important element of the acceptability of telehealth services. This might be one of the reasons why studies on telehealth conclude that a service is acceptable and report high levels of satisfaction. There are a number of criticisms of this approach given the concerns about the validity of the measures of satisfaction, specifically in relation to telehealth services (Ekeland *et al.,* 2010). Moreover, it is noted that although many services are reported as acceptable, they fail after they are implemented (Giordano *et al.,* 2011). In this respect this qualitative work has been devolved to understand the key stakeholders' attitudes and overall experience of the PhysioDirect service and whether or not they evaluate it as acceptable.

Another anxiety about telemedicine is diagnostic accuracy. This was a major theme in a study by McKinstry *et al.* (2009), who explored the perspectives of patients, GPs, nurses and administration staff involved in telephone consulting in primary care. They carried out fifteen separate focus groups, and the results and information generated from the interviews were triangulated by the findings of a questionnaire administered to health staff across Scotland. Clinicians reported concerns about the loss of visual cues whilst consulting with patients on the

telephone, and they felt that the lack of the visual component of patient assessment made it difficult to establish who may be seriously unwell (McKinstry *et al.,* 2009). The questionnaire showed that 70% of clinicians and 60% of patients had concerns that clinicians might give an inaccurate diagnosis during a telephone consultation. Some patients were reluctant to pursue the matter further with the GP, even though they still felt unwell, highlighting a concern that patients might feel that they have had the telephone consultation and received some advice, but then still do not get better and do not re-consult. The results also highlighted that clinicians and patients felt that telephone consulting would be unsuitable for patients with hearing, speech and cognitive impairments and where the GP and patient did not speak the same language. Older patients surveyed were significantly more likely to perceive telephone consulting to be ‘second best’ compared with face-to-face contact. They also stated they might not be able to accurately describe their symptoms, or to understand or recall advice.

Such concerns about clinical safety were also reported in the qualitative study of Mair *et al.* (2008), which investigated the views of patients and nurses about the implementation of a telemedicine service for patients with an acute exacerbation of COPD. The authors found that patients preferred the telemedicine system to the nurse contact. A key concern for nurses was the fear that the telemedicine system would not be as clinically safe as traditional face-to-face contact, which caused them to worry about potential litigation. The relatively few comparable studies about PhysioDirect services highlight that some physiotherapists have expressed concerns about the accuracy of patient diagnosis from telephone assessments (Gamlin and Duffy, 2001). As reported earlier, one recent study has shown good

agreement between the diagnoses reached over the telephone and in face-to-face consultations (Turner, 2009).

A further concern about the introduction of telehealth is that it may impact on communication between the patient and the professional. Miller (2001) reviewed the effect telemedicine had upon doctor–patient communication. They coded findings from each study according to 23 categories developed from the literature review, applying a positive or negative rating to each communication result. It appears that approximately 80% of abstracted findings favoured telemedicine, with all but two of the 23 categories analysed: these were non-verbal behaviour and lack of touch. This was particularly important in relation to physiotherapy, in which patient assessment and treatment traditionally involves significant physical contact. Due to the potentially impaired communication, another concern is that the telehealth services may have an impact on the therapeutic relationship between the patient and the professional. This is also acknowledged by Ekeland *et al.* (2010), who suggest that the introduction of telehealth changes the traditional relationship between the patient and the HCP.

There is evidence of clinicians having mixed views about the role of telemedicine and the ability to form good therapeutic relationships over the telephone. The above studies have shown that telehealth can impair the ability of some patients to describe and communicate their problem to the health professional, which may in turn affect the patients' and the physiotherapists' ability to build a good therapeutic relationship. The inability to form good therapeutic relationships with patients may, in turn, have a negative effect upon professionals who value such interactions. This is highlighted in data from a Belgian study that showed that nurses place

greater value on compliments from patients than on financial incentives (De Gieter *et al.,* 2006). These are similar findings to the Mair and Whitten (2000) review on patient satisfaction with telemedicine. They concluded that teleconsultation (healthcare over the telephone) is acceptable to patients in a number of situations. However, they suggested that patient satisfaction needed further investigation from the perspectives of both service-users and providers.

Another example in the literature explored whether physical separation and technology used during telemedicine has a negative impact on physician–patient communication (Agha *et al.,* 2009). The authors conducted a non-inferiority randomised clinical trial in which patients with a range of medical conditions were randomised to receive a single consultation with one of nine physicians, either in person or through the telemedicine system. They found that patients were equally satisfied with a physician's ability to develop rapport, use shared decision making and promote patient-centred communication during telemedicine and face-to-face consultations. This suggests that despite physical separation, physician–patient communication during telemedicine is not inferior to communication during face-to-face consultations. This study provided a service in which patients and physicians could see each other through video technology; therefore, facial expressions and eye contact were still maintained. Another recent study by Tousignant *et al.,* (2011a) explored satisfaction in patients following knee replacement surgery in relation to those who received either home-based telerehabilitation delivered by physiotherapists or usual physiotherapy care. They found no significant difference in satisfaction between the groups. Again, this study highlights relatively high satisfaction with telehealth technologies and the potential role of delivering physiotherapy services at a distance.

It may be that the PhysioDirect service's new working practices might be viewed as undesirable by the physiotherapists delivering such services (Lyall, 2007, Gamlin and Duffield, 2001). Lyall (2007) reported that physiotherapists articulated their concerns regarding professional identity and potential de-skilling, in particular, of their role in the provision of manual therapy. Mair *et al.* (2008) also found that nurses felt that telemedicine could negatively affect their professional identity, perceiving that the service might change a nurse's role. It has been shown that nurses and other healthcare professionals construct their professional identity around their working practices (Fagermoen, 1997). It is reported that it is particularly difficult to change the working practices of clinicians (Martin *et al.,* 2009). Reasons for this include professional status, the influence of the cultural organisation, links between profession and identity and the influence of small group behaviours on practice (Fagermoen, 1997, Martin *et al.,* 2009, Carlile, 2004, Barley, 1986, Lamb and Davidson, 2005, Levy, 2001). Cooperation amongst professionals is clearly an important factor in the successful implementation of telehealth services, as is the up-skilling of professionals in the skills that they need to deliver telehealth services (Giordano *et al.,* 2011). Acceptance of these services seems to be related to how the professionals feel that they impact upon their professional identity. Primary healthcare clinicians need to engage with and align their needs with the telecare service in order for it to work effectively (Gornall, 2012). The implementation of these services, however, may cause other organisational and professional concerns. These issues are presented and discussed in the following section.

2.7 Implementation of telehealth services

PhysioDirect is a new telehealth service. The MRC RCT was testing the effectiveness of this new model of care. In terms of implementation literature there are many theoretical models that help to understand the implementation process of new healthcare services (Damschroder *et al.,* 2009). It is not within the scope of this literature review to critique all of these models; however, the normalisation process theory (NPT) was identified as the most relevant to the introduction of the PhysioDirect service (in the trial and once the trial was completed), as it helps to understand how complex intervention health services, including services that use technology, are implemented and are routinised into normal practice, whilst others are not (May *et al.,* 2007). May *et al.* (2007) described the NPT model as one that includes a focus not only on the outcomes and effectiveness of the new healthcare practice but also on social processes (relationships between people or groups).They reported that complex interventions often deliberately attempt to introduce new behaviour and modify existing patterns of collective action in healthcare. There are three components of such an interaction; these are actors, objects and contexts. Actors are the individual and groups that encounter each other in healthcare settings, for example the patient, healthcare professionals and managers. Objects are the method by which knowledge and practice are applied, for example trial protocols, clinical guidelines and electronic medical records. Finally, contexts are the physical and organisational structures that facilitate and resource people and procedures. Examples include new professional roles, mechanisms that mediate between organisations and professional groups, and organisational structures. In terms of the PhysioDirect service, the actors are the patients and professionals involved in the study, the object is the PhysioDirect service itself and the context is the physiotherapy service.

It appears that there are five empirical, generalisable attributes of the NPT model which may be useful in order to understand how the PhysioDirect service was implemented (in the trial and once the trial was completed), within the four Primary Care Trusts (PCTs). These are implementation, adoption, translation, stabilisation, and normalisation of the telemedicine service. May (2009) suggested that implementation depends on a positive link with the policy-level sponsor to ensure that the appropriate infrastructures are developed. Adoption is dependent on the successful structural integration of the service into healthcare delivery. Translation of the service into clinical practice is dependent on the actors' acceptance into compliant groups, where their roles and responsibilities are identified from the existing power and structural norms. Stabilisation is reliant upon the integration of professional knowledge and practice, where clinicians are able to further develop their activities through new procedures and protocols. The final stage is the normalisation of telemedicine as a method of delivering healthcare, and normalisation is dependent on the four previous stages. Therefore, if the collective 'work' of the intervention leads to it becoming embedded and continued in practice, this process is referred to as being normalised. Interestingly, May *et al.* (2007) argued that normalisation does not necessarily imply effectiveness of the new way of working. In particular reference to the implementation of the PhysioDirect service it is important to consider all the generalisations (implementation, adoption, translation and stabilisation) of the NPT. However, the ultimate test of the implementation of PhysioDirect may be whether the physiotherapists who used it in the trial wanted to continue to use it after the trial was completed.

There are a number of empirical studies that have explored the usefulness of NPT in understanding health conditions (Kuo and Shyu, 2010, Blakeman *et al.,* 2012), implementing new models of care (Kennedy *et al.,* 2010, Gunn *et al.,* 2010, Forster *et al.,* 2011), new clinical guidelines (Franx *et al.,* 2012, Taft *et al.,* 2012) and new healthcare technologies (Montero-Marin *et al.,* 2013, Finch *et al.,* 2012, Sanders *et al.,* 2011, Hendy *et al.,* 2012). NPT has been used recently by (Hendy *et al.,* 2012) to understand the implementation of telecare and telehealth in the Whole Systems Demonstrator (WSD) trial. Hendy *et al.* (2012) interviewed 115 participants, examined 92 strategic documents and conducted 174 hours of ethnographic observations. They found three main themes: whole systems re-design, implementation challenges in the context of an RCT and organisational learning.

One of the aims of the WSD was to integrate telehealth and telecare across both NHS and social care services (Bower *et al.,* 2011). The findings of the nested qualitative work showed that in order for staff to work across the different sectors new data-sharing systems had to be developed. The results showed that such sharing systems failed to develop. It appeared that the selection criteria of the RCT appeared to impede these developments, as did the ability of staff to work seamlessly across each sector. The authors also considered that the PCTs did not have the ‘organisational readiness’ to develop its services. It appears that the managers’ perspective of the concept of the WSD affected this ‘readiness’. The managers thought that such service re-design was unfeasible and unrealistic. They were more concerned about the expansion of telehealth and telecare within their own services than about working collaboratively with the other healthcare sectors.

The authors suggested that although the service failed to implement large-scale service redesign, they found that it appeared to strengthen the links and working relationships. Hendy *et al.* (2012) also suggested that the protocolised nature of the WSD trial caused barriers to future implementation of the telehealth and telecare services after the trial was completed. They suggested that the standardisation of the trial protocols meant that the WSD trial was poorly aligned with the specific needs of the PCT. In addition, members of staff delivering the intervention were unable to implement changes to the system that they thought were necessary. The authors reported that this led to reduced morale, with staff feeling unmotivated to continue using the service in the future. This resulted in local plans that were developed within the WSD trial being replaced by new models created by the staff or reverting back to previous models. These findings may help to provide some insights into what factors help or hinder the implementation of the PhysioDirect service in the trial and after the completion of the trial.

The NPT model has been particularly useful in deciphering professional concerns when implementing healthcare technologies. In a qualitative investigation, Murray *et al.* (2011) found NPT a useful theoretical framework in which to understand the difficulties of implementing new e-health technologies where senior staff had clear views that either promoted or inhibited the normalisation of these new technologies. The theory helped to identify the degree to which the new technologies fitted within the profession and patient interaction and how they affected relationships between staff groups and organisational processes. This highlights the importance of understanding how new services impact on professional collaboration, healthcare processes and interactions with patients, as

it is these factors which can either facilitate or inhibit the implementation of new services.

The wider literature also suggests that one of the main barriers to the implementation of telehealth services is that healthcare professionals are reluctant to provide them. Zanaboni and Lettieri (2011) argued that many of the reasons why healthcare professionals are less than enthusiastic regarding the provision of telehealth are linked to the lack of support systems and procedures. Therefore, in order to help facilitate continued delivery of services whilst telehealth technologies are introduced, healthcare professionals should have protected time and additional resources to allow staff time to learn how to safely use the new technologies (McLean *et al.,* 2011, Casas *et al.,* 2006). Another reason why telehealth can be challenging to implement is that it involves more complex interactions between clinicians and the new technologies. van Gemert-Pijnen *et al.* (2011) identified that the development of new technologies often disregards the complex interaction between technology, human characteristics and the socio-economic environment, and this results in poor uptake of these technologies. In PhysioDirect, physiotherapists need to both change their usual way of assessing and treating patients (from face-to-face care to telephone-based care) and become familiar with the PhysioDirect computer support system, which prompts them to ask specific questions and simultaneously type in patient responses. However, in the NHS, this rarely happens. Low levels of utilisation of telehealth by professionals have been observed, and many authors have suggested that several applications have been poorly adapted for clinical needs (de Bont and Bal, 2008, Giordano *et al.,* 2011). This challenges the generally positive findings from patients and providers, who report that they find the telemedicine service satisfactory and

acceptable (Doze and Simpson, 1997). It is hoped that this qualitative study will help to explore some of the professional concerns relating to the implementation of the PhysioDirect service.

The implementation of new health services is challenging, and the issues which facilitate implementation are multifaceted and complex. Singh *et al.* (2010) highlight a number of facilitating factors, including collaboration within and across organisations, clear leadership and development of alliances within the community and external partners. There should also be identification of critical service, (such as information technology (IT) support staff) and engagement of external specialists who have a shared vision for the new service (Giordano *et al.* 2011). Others have argued that it is the relationship between technical and social factors that determines the success of implementation (Obstfelder *et al.,* 2007). A recent case study by Lettieri *et al.* (2012) explored the impact of three new technologies on the performance of a rehabilitation hospital. The technologies they implemented were biomedical technologies, which were employed for diagnosis and treatment; information and communication technologies, which enabled the delivery of telemedicine; and green technologies, which allow for ecological sustainability. They used interviews with a range of stakeholders, including managers, healthcare professionals and technology suppliers, as well as document analysis and observations. They found that attention to organisational design, change management and learning mechanisms were essential when introducing the new technologies. Thus it appears that for successful service implementation to occur, a number of processes have to work simultaneously. Issues such as good management, positive professional behaviours (motivation, engagement and promotion of sharing), the relationship between the

physiotherapist and the new technology, the current professional culture and organisational pressures all need to be considered when evaluating the implementation of the PhysioDirect service in the four participating PCTs.

There have been further developments within the evidence base of telehealth that answer questions of clinical effectiveness and cost-effectiveness, which include a cluster (RCT), commissioned by the DoH, that explored the remote management of patients with chronic conditions (AMD Global Telemedicine, 2012, Bower *et al.,* 2011) and the COPD trial (Pinnock *et al.,* 2009). There are also a number of recent telehealth innovations currently being investigated within the field of physiotherapy (Demmelmaier *et al.,* 2010, Chumbler *et al.,* 2010). As the evidence base grows and developments in technology continues to advance, there appears to be growing political will for the implementation of telehealth into healthcare in the UK (Department of Health, 2011c, Department of Health, 2005a) and elsewhere (North and Varkey, 2009, Koch, 2006). However, Gornall (2012) argues that telehealth services should be systematically implemented across the NHS.

In order to facilitate such developments the government signed a concordat with the telehealth industry on the 19th January 2012 to develop its scalable telehealth initiative “three million lives programme” (Department of Health, 2012a). The government suggested that this means of providing telehealth and telecare to patients with long-term conditions can help to reduce hospital admissions and save the NHS up to £1.2 billion over five years (Department of Health, 2012a, Deaperment of Health, 2012c). However, Gornall (2012) and Car *et al.* (2012) critiqued the government’s plan to implement telehealth, and both suggested that the evidence is insufficiently robust and that the government’s race to provide

telecare is ungrounded and potentially foolish. Car *et al.* (2012) suggests that telemedicine's grandiose claims of large savings for the NHS are unfounded and that the WSD trial results currently show that only modest savings were made (Steventon *et al.,* 2012). Nevertheless, this highlights how the government intends to move forward with its plans to shape the care of people with long-term conditions, which include musculoskeletal pain conditions. This may mean that PCTs might be more inclined to provide telemedicine type services, believing that the introduction of PhysioDirect may reduce the cost of providing physiotherapy services and lead to increased patient choice.

2.8 Patient choice and the expansion of telehealth

The government reported that since 2010 it has been committed to improving patient choice and increasing personalisation within the NHS (Department of Health, 2010). It delivered on this commitment of patient choice by legislating "Any Qualified Provider" (AQP) (Department of Health, 2011b). This policy directive means that patients will have the choice of providers for a particular service they require, for example physiotherapy services. This approach is already in place for routine elective procedures, for example total hip and knee replacements. The government hopes to extend patient choice of provider to other healthcare settings, with the intention of empowering patients and their carers, improving both patient outcomes and experience. Patient choice seems to be particularly important to enable those who have had a bad experience of local healthcare services to exercise their choice to go elsewhere (Dixon, 2010). It was also highlighted by Dixon *et al.* (2010) that few patients use their ability to choose to go to a non-local provider. In addition, they found that those patients who had negative experiences of a healthcare service valued their ability to choose whether

or not to receive future care from the same or a different healthcare provider. The government not only suggested that patients should have a choice of provider but that they should also have a choice regarding the mode of delivery of the healthcare concerned. This is particularly in relation to patients who have long-term conditions. One of the main aims of the PhysioDirect service was to provide patient choice in terms of access to physiotherapy. Therefore, choice, in terms of access, will hopefully improve patients' satisfaction with and acceptability of the PhysioDirect service.

It may be those in rural locations who value the opportunity to choose whether or not to access their physiotherapy care at home rather than travelling into a physiotherapy department for a face-to-face appointment. Therefore, it is important to consider the importance of socio-economic factors when introducing and implementing a telehealth service. Examples of such factors include population demographics, prevalence of diseases and availability of local facilities. Due to dispersed populations, rural areas may be more receptive to telehealth technologies providing their healthcare. Rural health services can be more challenging to maintain due to the size of the area they cover and the distribution of the population (Moscovice and Rosenblatt, 2000, Deaville, 2001). Telehealth care can be useful for these communities as it reduces the travelling distance needed to access healthcare services (Watanabe *et al.,* 1999). Martin *et al.* (2012) explored the differences in the readiness between rural hospitals and primary care providers for telemedicine adoption and implementation. Their study explored readiness to adopt telemedicine, telemedicine training needs, the current use of technology for patient care and environmental concerns about facilities for telemedicine. They found that rural hospitals were significantly more likely than

primary care providers to report higher rates of telemedicine knowledge, planning for or implementing telemedicine and their disaster recovery data systems (and availability and location of outlets and connections as adequate for telemedicine). Rural hospitals were less likely to report having no telemedicine education needs. This study suggests that telemedicine continues to be a viable solution, particularly for bridging geographic access gaps in healthcare. In rural areas, hospitals appear to best embody characteristics of facilities that successfully implement telemedicine and have the greatest degree of readiness (Martin *et al.,* 2012). This may indicate a potential difference between the rural and urban PCTs delivering PhysioDirect services. Rural PCTs, for example, might find the PhysioDirect service more acceptable than the urban PCTs as it improves access for patients who have to travel long distances to attend physiotherapy appointments.

The introduction of telehealth services in local areas may help to increase the profile of healthcare in the local area. Nesbitt *et al. (*2005) investigated the perceptions of local healthcare quality in seven rural areas of underserved communities in the US. They found that the introduction of telemedicine increased the population's perceptions of the quality of health services in their area and that satisfaction with telemedicine was rated as high by both rural providers and patients. This study was undertaken in the US, so its relevance to the UK is unclear. The expansion and development of telehealth services must be appropriate and sensitive to the needs of the population that it intends to service. Therefore, it is necessary to consider the literature that underpins the commissioning of healthcare services.

2.9 Commissioning services

In 2009 there was a governmental change from Labour to a coalition of Conservatives and Liberal Democrats. This change meant that a number of new health policies were introduced. Currently, PCTs in England and Wales commission NHS healthcare services (Department of Health, 1997). However, the new government initiatives for England are to fundamentally change this system. The PCTs are to be disbanded in 2013 and in their place will be the newly formed clinical commissioning groups (CCGs) (Department of Health, 2010, Department of Health, 2012d, Department of Health, 2012a). These CCGs consist of GPs, nurses and allied health professionals whose role is to make sure that NHS services are efficient and of high quality, waiting times are minimal and services meet specific targets. These organisations will have the power and freedom to commission services in England from a number of different providers (Department of Health, 2010). Therefore, if commissioners are influential in deciding which services are commissioned within the NHS, it is important to consider their perspective on commissioning and implementing new telehealth services like PhysioDirect.

One barrier could be that clinical commissioning in the UK is complex (Murray, 2009). The Cabinet Office (2006) defines the commissioning process *as* 'the cycle of assessing the needs of people in an area, designing and then securing appropriate services'. This involves a cycle consisting of monitoring and evaluation, strategic planning and procuring of services (The NHS Information Centre, 2012). Commissioners not only have to make decisions about physiotherapy and musculoskeletal services, they also make decisions about the

full range of healthcare services, for example in vitro fertilisation (IVF) and cancer services (Bungay, 2005).

Recently there has been a move to create clinical commissioning competencies by detailing a model that highlights the many domains of a commissioning framework (Wade, 2011). It is not within the scope of this PhD to fully explore each domain and how they relate to musculoskeletal services. However, in reference to this qualitative investigation the current physiotherapy commissioning is based on 'block contract' commissioning rather than tariffs[2]. The new NHS reforms essentially allow such block contracts to be dismantled in favour of a pay-by-procedure, national tariff-based system (Department of Health, 2011b). These changes will have a significant impact on how physiotherapy and other services are commissioned. There are many critiques of these NHS reforms (Light and Connor, 2011, Walshe and Ham, 2011, Delamothe and Godlee, 2011, Pollock and Price, 2011) and there may, of course, be further review and revision of the plans. Of particular relevance to this research, however, is the clear expectation that patients' outcomes and experiences of services, and the overall cost-effectiveness of services, will inform commissioning decisions (Wade, 2011, McCafferty *et al.,* 2012).

2.10 Conclusion

Whilst several NHS services have introduced PhysioDirect, very little is known about how acceptable and implementable these services are. Therefore, the main objective of this chapter was to identify the available literature relating to the acceptability and implementation of similar telehealth and musculoskeletal

[2] Local tariffs – similar to pay by results, that is, paying for what is done but on a locally negotiated basis, are subject to rules set by the Department of Health.
Block contracts – a fixed amount to cover treatment for a population of patients (Monitor, 2010)

services. A thorough appraisal of the literature identified that there are no existing frameworks for the acceptability of physiotherapy services. There are, however, models of patient satisfaction with musculoskeletal physiotherapy and patient acceptability of telehealth. The model of musculoskeletal physiotherapy showed that patient expectations affect how they evaluate their physiotherapy treatment, which ultimately determines how satisfied they are with the care they received. In addition, on appraising the expectation literature it was acknowledged that there were various links between satisfaction and acceptability. Therefore, it will be interesting to explore whether the expectations of the PhysioDirect service are as influential as they appear to be in traditional face-to-face care. Other highlighted gaps which relate to the acceptability of the PhysioDirect service include loss of visual cues, the interpersonal relationship between patient and physiotherapist and continuity of care. The literature has revealed that very little is known about how GPs and commissioners evaluate and accept physiotherapy and other telehealth services. Therefore, it is important to explore how they perceive the new PhysioDirect service within the context of providing musculoskeletal services in the NHS.

This review also appraised the relevant health service implementation literature. It was identified that the implementation of telehealth services is complex, and the review showed that there are a number of models which can help to guide the process. It was considered that the NPT model was best suited to evaluate the implementation of the PhysioDirect service, as it has often been used to understand how complex interventions are introduced and normalised into the NHS. It was shown that there are a number of professional barriers which have led to the low utilisation of telehealth services. It is hoped that the qualitative study will

explore some of these professional concerns relating to the implementation of PhysioDirect within the PCTs involved in the trial. The review also found that recent government policy drivers may encourage the implementation of new telehealth technologies. Therefore, interviews with the GPs and commissioners will investigate these drivers and question how musculoskeletal services fit within the demands of providing other healthcare services. Overall, this chapter has successfully reviewed a wide range of acceptability and implementation literature and has identified a number of gaps that this thesis hopes to explore. The next chapter explains the methods used to achieve this PhD's main aims and objectives.

Chapter Three: Methodology and Methods

3.1 Chapter introduction

This chapter presents an overall justification of the qualitative methods selected to investigate the acceptability and implementation of PhysioDirect. It explains the approach that underpins the study and describes the methods that have been chosen to collect and analyse the data. The structure of the chapter is as follows: firstly, an overview of the studies underpinning the methodology is explained, then the methods used and their selection are justified, and finally an account of what happened practically in the study, along with a reflection upon the methods that were employed to gather the data are described. Akin to Silverman (2005) description of the importance of reflection in research, a section of the chapter is written in the first person, enabling the reader to understand key reflections whilst providing insights into the research process.

3.2 Underpinning methodology

In order to investigate whether a PhysioDirect service is acceptable and implementable within the context of the National Health Service (NHS), this qualitative study explored the experience of PhysioDirect from the perspective of patients, physiotherapists, physiotherapy managers, General Practitioners (GPs) and commissioners. It is argued that qualitative methodology best fits the needs of this type of research (Silverman, 2005, Patton, 2002). Qualitative research is concerned with understanding the meanings which people attach to phenomena within their social world and directly involves individuals to include their perspectives (Hansen, 2006). It has the ability to describe life worlds by contributing to a better understanding of social realities and drawing attention to processes and meanings (Flick *et al.,* 2004). Qualitative research draws on

methods which investigate meaning and interpret social and cultural norms, gathering rich detailed description, usually in the form of talk, observations, visual images and documents (Hansen, 2006, Jordens and Little, 2004).

Qualitative research is underpinned by epistemological and ontological assumptions (Ritchie and Lewis, 2003). Ontology is defined in philosophy as a branch of metaphysics that deals with the nature of being and epistemology is the branch of philosophy that investigates the origin, nature, methods and limits of human knowledge (American Psychological Association (APA), 2011, Mays and Pope, 2000, Richards and Emslie, 2000). Hanson (2006) further described ontology and epistemology in the context of qualitative research, with ontology being the nature of social reality and epistemology being how that reality can be achieved. Qualitative research assumes that there is no single reality or truth but a range of possible realities that change over time and are in accordance with social context (Hansen, 2006). There are, within qualitative research, varying degrees as to how those assumptions are defined. Therefore, it depends upon how those assumptions are described as to which collection and analysis methods are used (Hansen, 2006; Silverman, 2005).

The philosophical approach underpinning this study is that of subtle realism; this is defined as an existing reality independent of our beliefs and understanding (Hammersley, 2002). Subtle realism accepts that the social world exists independently of an individual understanding, but is only accessible through respondents' interpretations (Mays and Pope, 2000, Ritchie and Lewis, 2003). The epistemological standpoint of this study is that of interpretivism; the researcher and the social world impact on each other and facts and values are not distinct

and may be influenced by both the respondent's and the researcher's perspective and values. Thus, in qualitative research, the researcher interprets the data within his or her own reference of knowledge and experience. Further discussion regarding the author's own background is presented later in this chapter in section 3.10.3**.**

3.3 Qualitative research in randomised control trials (RCTs)

RCTs are the most reliable and rigorous way to determine the effectiveness of interventions (Oakley *et al.,* 2006, Campbell *et al.,* 2000). The Medical Research Council (MRC) has developed and revised guidelines regarding the design of complex interventions (Medical Research Council, 2000, Craig, *et al.,* 2008). Complex interventions have characteristics of which evaluators must be aware. They include a number of interacting components within the experimental and control interventions; the number of and difficulty in behaviours required by those delivering or receiving the intervention, the number of groups or organisational levels targeted by the intervention, and the number and variability of outcomes (Craig *et al.,* 2008).

There has been an increasing awareness of and use of qualitative research in healthcare (Mays and Pope, 2000), along with a growing awareness of the role of qualitative research in trials (Oakley *et al.,* 2006). There is particular interest in understanding how qualitative research nested within trials can show how the intervention works in practice (Campbell *et al.,* 2000; Lewin *et al.,* 2009). Lewin *et al.*'s (2009) investigation of the role of qualitative research in RCTs reported that there were relatively few RCTs that included qualitative research. The authors reported that within a sample of 100 trials published in the Cochrane register, 30

had associated qualitative papers, of which only nineteen had been published. Lewin *et al.* (2009) highlighted that most RCT-linked qualitative studies were carried out before the trial commenced in order to explore what outcome measures were most relevant and appropriate. The review stated that qualitative research can also take place post-trial, possibly to form part of evaluating the trial experience, to ascertain what was successful and to identify areas which may need amendment or further development for the future. Lastly, qualitative studies have been embedded or nested in trials where they contribute to understanding the trial process, the acceptability of the interventions being tested and the potential explanations for the main trial results (Lewin, 2009).

One of the most recognisable and cited qualitative studies nested within a feasibility RCT is the ProtecT study by Donovan *et al.* (2002). They conducted the qualitative study to investigate patient recruitment to a trial comparing treatments for prostate cancer. Participant interviews explored the interpretation of the trial information given to patients and reported that recruiters found it difficult to discuss trial equipoise, presented treatments equally and, unknowingly, used terminology that was misinterpreted by patients. Subsequently, changes were made to the information given to potentially eligible patients and the trial recruitment rate increased from 40% to 70%. Although trial recruitment is not the focus of the qualitative work in this PhD, the ProtecT study highlighted the potential power of qualitative research to explore and expose aspects of research design that would otherwise remain undetected if statistical methods alone were used. It can also enable the researcher to investigate contextual intricacies of the intervention, permitting different interpretations of these within the individual's own frame of reference (Lewin *et al.,* 2009).

The RIPPLE (Randomised Intervention of Pupil Peer and Sex Education) study was a cluster RCT comparing peer and teacher-led sex education to pupils aged sixteen to seventeen years old. It incorporated a process of evaluation and used several methods to collect the data, including questionnaire surveys, focus groups, interviews, researcher observations and structured field notes. The researchers subsequently integrated both the process and the outcome data to maximise their ability to interpret results. The process data revealed what the dimensions of sex education were; subsequently the researchers examined these in relation to each trial arm. The process study revealed the circumstances in which peer-led sex education was most effective. Importantly, the researchers were able to show that exploring the processes of the study areas through qualitative methods further validated the trial findings (Bradley *et al.,* 1999, Oakley *et al.,* 2006). One of the benefits of qualitative research in a RCT is that it can enable views and opinions, in their extremes, to be documented, providing stories behind the numbers and averages that the RCT provides (Mays and Pope, 2000). In order to assist the reader in understanding both the new implementation of the PhysioDirect service and the MRC PhysioDirect trial, the following section provides an overview of both.

3.4 Contextual information about the PhysioDirect trial

The PhysioDirect service has been previously described in section 1.7; however, in order to remind the reader about it, a brief summary is provided. Once the patient was referred from the GP and consented to take part in the trial, and randomised to the PhysioDirect arm they contacted the PhysioDirect service. The physiotherapist responding to the telephone call followed a computer-assisted assessment system to assess the patient’s musculoskeletal problem and record

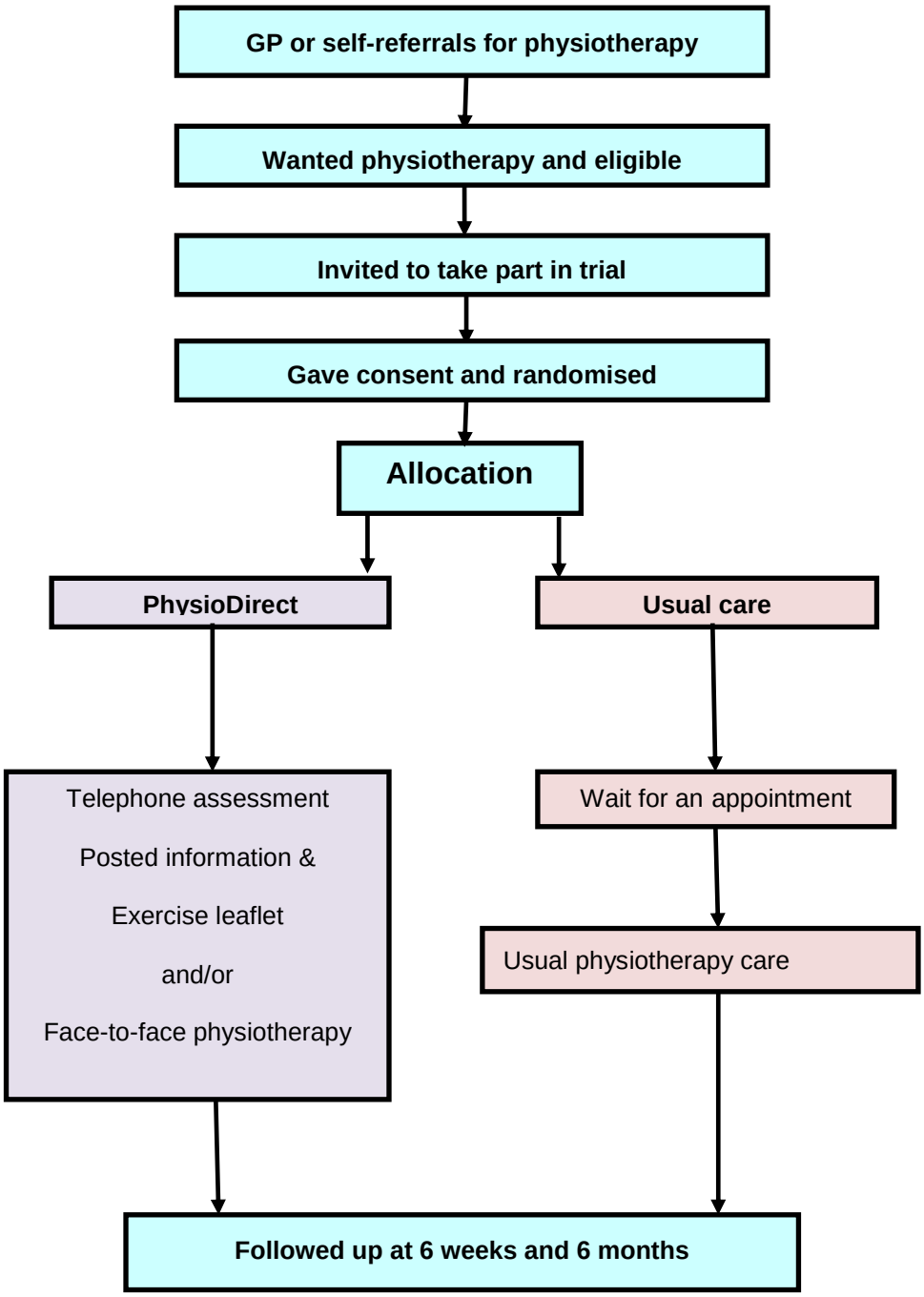
the findings of that assessment. There were several possible outcomes of the initial telephone call. In a number of cases, at the end of the call the physiotherapist posted a relevant advice leaflet about self-management and exercises to the patient, inviting them to phone back to report progress after about two to four weeks if their condition did not improve or if they wanted further advice. If the patient phoned back, they were given further advice or were booked in for a face-to-face consultation if necessary. In other cases, the telephone assessment established that a face-to-face assessment by a physiotherapist was needed. This was arranged either by putting the patient on the PhysioDirect waiting list for face-to-face care or by organising an urgent appointment if it was felt appropriate.

3.4.1 The PhysioDirect RCT

The PhysioDirect RCT was designed to test the PhysioDirect service and is summarised below in Figure 3 (page 64). It shows the patient pathway through the RCT, for example a patient who visited their GP with a musculoskeletal problem was informed of the PhysioDirect study. The GP and healthcare professional in the relevant practices referred patients to physiotherapy in their usual way. Patients who were eligible were then sent postal information informing them of the PhysioDirect trial (see Appendix A), a consent form (see Appendix B) and a baseline questionnaire. Then, patients who consented to participate in the trial were randomised either to PhysioDirect or to the usual care trial arm. Patients who were randomised to the usual care arm received usual physiotherapy and waited for their appointment. Those who were allocated to the PhysioDirect treatment arm received a letter inviting them to telephone an experienced physiotherapist for an initial assessment and advice. This was combined with written information explaining the times during which the PhysioDirect service was available each

week and information summarising the PhysioDirect treatment pathway. All patients were followed up by the PhysioDirect trial team at a period of six weeks and six months (Salisbury *et al.,* 2013a, Salisbury *et al.,* 2013b).

Figure 3: Flow of participants through the RCT



3.4.2 Primary Care Trusts (PCTs) involved in the trial

In four PCTs in England new PhysioDirect services were developed for the purposes of the trial. Patients from 94 general practices participated in this study, which covered a total population of approximately 625,000 people. The participating general practices were typical of National Health Service (NHS) general practices in England, and therefore represented a wide range of practice sizes (the smallest serving a population of 2121 and the largest 28,599 people). These practices covered several types of geographical areas, including inner city, suburban, market towns and rural areas. None of the PCTs involved in the study had a high proportion of patients from non-white ethnic backgrounds. The physiotherapy services that participated in the trial were typical of NHS primary care-based physiotherapy in the UK (Salisbury *et al.,* 2013a).

3.4.3 Physiotherapy training for the PhysioDirect trial

All 32 physiotherapists across the four participating PCTs that delivered the PhysioDirect telephone service participated in a training programme. It involved attending a two-day course of teaching, demonstrations of the PhysioDirect system and observation of live calls, led by senior physiotherapists who had been delivering the PhysioDirect service for more than eleven years in Huntingdon (Musculoskeletal Physiotherapy Services, 2010). This included the history and structure of the PhysioDirect telephone service, training on the assessment of patients over the telephone and the bespoke information technology (IT) platform supporting the PhysioDirect service. Moreover, the experienced call handlers suggested that those attending the course aimed for their telephone calls to last no longer than twenty minutes, as that facilitated the efficiency and effectiveness of

PhysioDirect. The physiotherapists in the trial also received medication training in order for them to safely advise PhysioDirect patients on what pain relief medication they could take. The physiotherapists were given the opportunity to listen into the calls while observing the computerised algorithm that the Huntingdon physiotherapists used to assess patients.

On their return to their own services, the physiotherapists practised using the PhysioDirect IT system for approximately four to six weeks prior to using the service in the trial. They telephoned patients on their usual physiotherapy waiting lists, referring to this process as ‘cold calling’, given that the patients were unaware that they would be contacted by physiotherapists to assist in the PhysioDirect training. Patients who agreed to be assessed were still brought in for a face-to-face assessment. This enabled the physiotherapists to check if their diagnoses were correct. Following this period of ‘practice’, each physiotherapist was then assessed by the PhysioDirect trainer working in Huntingdon across a range of core competencies developed in Cambridgeshire.

The competency check consisted of the trainer assessing 53 aspects of the telephone assessment process and the completion of a checklist indicating whether each aspect was performed to a satisfactory level. This included the physiotherapists’ ability to communicate with patients over the telephone, including recording their social situation, their assessment of symptoms, aggravating and easing factors and the daily pattern of symptoms, asking general health and special questions, noting relevant social history, history of the current condition and past history, and exercising clinical reasoning skills (Bishop *et al.,* 2012). In addition, the trainers also observed the way the physiotherapist introduced

themselves and how they explained the telephone assessment and advice service to the patient. Aspects of administration were also assessed, for example how the physiotherapist completed the computer algorithm screens and how they judged which postal information was best suited to be sent to each patient. The Huntingdon physiotherapists also assessed the trial physiotherapists' telephone assessment process skills, for example their tone of voice and both their listening and questioning skills, noting their appropriate use of open and closed questions. In order to do this, the trainer listened in on and facilitated a problem-solving session. If physiotherapists did not reach the required competency at the first site visit, a further visit to re-check competency was carried out approximately six weeks after the initial training. Each competency was evaluated on a 'yes' or 'no' basis, with overall comments about performance, issues to be addressed and an agreed action plan if required. All physiotherapists had to be found competent to provide the PhysioDirect service before they assessed patients in the trial.

After each of the physiotherapists had completed their training and had been signed off as competent in the new service, they were able to take live calls from patients. Based on advice from the Huntingdon PhysioDirect team, it was decided for the purpose of the PhysioDirect trial that only experienced physiotherapists would be involved in providing the PhysioDirect telephone service. Each participating PCT trained eight senior staff who were on Agenda for Change (AfC) Band six or above to deliver the PhysioDirect telephone service. These were, therefore, experienced musculoskeletal physiotherapists who in previous years would have been referred to as senior I or II physiotherapists. Once the training was completed and all the physiotherapists had been trained and assessed as competent to assess and advise patients via PhysioDirect, each physiotherapy

service commenced PhysioDirect as part of a run-in period of at least one month. This enabled the physiotherapists to become familiar with the PhysioDirect system and to ensure everything was running smoothly before the start of the main trial. It also enabled the testing of all RCT procedures of recruitment and randomisation. Following the run-in period at each PCT, recruitment to the main trial commenced.

3.5 The PhysioDirect qualitative study

The recent PhysioDirect trial tested a new service that can be described as a complex intervention, in line with the MRC guidance (Campbell *et al.,* 2007). Therefore, linked qualitative work within the PhysioDirect trial was undertaken to explore acceptability and implementation of the new service from the perspectives of patients, physiotherapists, physiotherapy managers, as well as GPs and commissioners. Campbell *et al.* (2007) supports the view that qualitative research within a trial can explore both patient and professional behaviours towards the intervention in order to ascertain whether there are any practical barriers to the implementation of the intervention. The findings of the qualitative study will help to understand the success, or otherwise, of the PhysioDirect service.

Within the qualitative study, the key informants' views and experiences were collected at different time points. Table 1 shows the dates of the PhysioDirect data collection and data analysis alongside the time frames of the RCT. Interviews with the physiotherapists delivering the new PhysioDirect service were carried out during the trial's run in period, before the main trial commenced. Data from these interviews were analysed shortly after they were completed. Subsequently, the patient interviews took place alongside the main trial to capture their experience of

physiotherapy as soon as possible after it was delivered. Initial analysis of the patient data occurred simultaneously.

Table 1: The natural history of the qualitative study

Date	Trial	Data collection	Data analysis
Apr 2009	Trial run in period		
Apr -May 2009		Physiotherapist 1st interviews	
May – Aug 2009			Physiotherapist 1st interview data analysis
Jul 2010	Start of the main trial		
Sep 2009 – Jul 2010		Patient interviews	
Oct 2009 –Jan 2010			Patient data analysis
Dec 2009	Recruitment stopped		
Feb – Jul 2010		Physiotherapist 2nd interviews	
Mar – Jul 2010			Physiotherapist 2nd data analysis
Aug – Sep 2010		Physiotherapist manager interviews	Physiotherapist manager data analysis
Oct 2010 – Jan 2011		Commissioner interviews	
Nov 2010 – Ma 2011		GP interviews	
Jan – Apr 2011			GP and commissioner data analysis
May- Aug 2011			Patient data analysis
Sep – Dec 2011			Physiotherapist 1st, 2nd and physiotherapy manager data analysis
Jan – Mar 2012			GP and commissioner analysis
Apr 2012 Dec 2013			Combined analysis and synthesis of data from the three stakeholders

Interviews with physiotherapy managers and the follow up interviews with physiotherapists took place when patient recruitment and treatment in the RCT had been completed and analysis of this data occurred shortly after. Finally, to inform an understanding of some of the contextual issues concerning the acceptability of PhysioDirect GPs and commissioners were interviewed following

the end of the trial; again, initial data analysis occurred shortly after the interviews. All the qualitative interviews took place prior to the main results of the trial being disseminated to the interviewees. Finally, once all the data was collected from each of the groups and analysis completed from each of their perspectives, a combined analysis of the data from all three groups was undertaken. Literature related to the key stakeholder's interviews informed the interview topic guides. In addition, literature associated to the findings of the research was gathered during both the data collection and analysis process.

3.6 Qualitative study sample

Qualitative research sample selection has a profound effect on the ultimate quality of the data (Coyne, 1997). Patton (2002) argued that the logic and power of purposive sampling is in the selection of information-rich participants in order to learn about issues which are centrally important to the research. Ritchie and Lewis (2003) observed that qualitative research samples only work well if there is sound theoretical reasoning behind the selection process. They suggested that participants are chosen in accordance with the sampling criteria because they have key characteristics or features that are being investigated. The criteria used may be demographic information, circumstances, attitudes or beliefs, and should be influenced by the research question, the aims of the study and data manageability (Ritchie and Lewis, 2003). Silverman (2006) supported purposive sampling, and extended this by suggesting that the sampling criteria can change through the course of the research as new factors emerge and by increasing the sample to explore these more fully.

3.6.1 Participants – patients

The sampling approach was developed to make sure that the voice of the patients who accessed the new PhysioDirect service was heard. A sample of between 48 to 64 patients was proposed in order to provide approximately 12 to 16 patient interviews per PCT. Although the trial was randomising patients into one of two groups, either PhysioDirect or usual care, there were actually 4 patient groups that were key to the interview study. If a patient was randomised to PhysioDirect, they may have had telephone contact only or they may have had both telephone contact and then have been seen by a physiotherapist in a face-to-face consultation. The third group included those who had been randomised to PhysioDirect but who, for whatever reason, subsequently chose not to ring the service. It was important to interview all three of these patient groups in order to provide a full understanding of the range of patient experiences of the PhysioDirect service. In addition, in order to facilitate comparisons between the new PhysioDirect service and the usual physiotherapy service, a smaller number of patients randomised to usual care were also sampled and invited to take part in the qualitative interviews. Those participants randomised to receive usual care were particularly relevant for the qualitative study and were treated as a control group in order to compare their experiences with those randomised to PhysioDirect. Ritchie and Lewis (2003) suggested the value of control groups in qualitative research and proposed in some instances that this may be of considerable assistance to the research. They suggested that control groups might be appropriate to research associated with new interventions that look at exploring their effect, and may be a tool to identify what happens in the absence of the new intervention.

The sampling criteria for patients were considered in detail, with many criteria being thought to be important. For example, the geographical area (or PCT), the trial arm (PhysioDirect or usual care), age, gender, socio-economic group, the site of the musculoskeletal complaint, severity of symptoms and not having English as a first language were all initially considered to be important potential sampling criteria. However, in order to make the sampling method practical, these wider criteria were reduced and prioritised to the following: PCT, trial arm, gender, age and site of complaint. The sampling matrix (a template showing the sampling criteria mapped out vertically and horizontally – see Appendix C) was developed and used for each PCT. The matrix was initially divided into four patient groups: those in usual care, PhysioDirect telehealth only, PhysioDirect telehealth plus face-to-face contact and patients who were randomised to PhysioDirect, but who never contacted the service. Following this, the patient's age, gender and site of musculoskeletal complaint were used to further divide the matrix. The secondary criteria of not having English as a first language and socio-economic group were assigned as variables to be monitored as patient recruitment progressed in order to ensure variation within the sample.

The main PhysioDirect trial database held the key information about trial participants, and this was used to identify potentially eligible participants for the nested qualitative study. Patients meeting the relevant criteria were identified from the database and invited to take part in the qualitative interviews by letter (see Appendix D). In total 388 patients were invited to take part in the qualitative interview study over a period of 9 months from August 2009 to April 2010, with 82 agreeing to be interviewed, resulting in the final number of 57 interviewees (see Table 2, page 73). There are several explanations for the difference between the

number agreeing to be interviewed and the final number of interviews. In some cases, for example, it was difficult to arrange interviews at mutually convenient times and dates, and some patients cancelled their previously arranged interviews. Further details of response rates to the invitations for interviews are documented in Appendix E.

Table 2: Summary of patient characteristics according to the interview sampling criteria

Patient characteristics		Number	Percentage %
Gender	Male	26	46
	Female	31	54
Age	Mean (SD)	58 (16.88)	
	Range	19-87	
Trial arm	PhysioDirect arm telehealth only	25	44
	PhysioDirect arm telehealth + face-to-face care	13	23
	PhysioDirect arm: Did not ring the service	10	17
	Usual care arm	9	16
PCT	PCT A	17	30
	PCT B	15	26
	PCT C	13	23
	PCT D	12	21
Site of musculoskeletal complaint	Lower limb	23	40
	Upper limb	14	21
	Cervical spine	5	25
	Lumbar spine	12	9
	Multiple areas of pain	3	5

Table 2 provides a summary of the characteristics of patients who took part in interviews, showing their key characteristics according to each of the sampling criteria. The number of women interviewed was slightly higher than the number of men. The average age was 58 years old, and there was a large range of ages,

with the youngest person interviewed being 19 years old and the oldest being 87 years old. More patients were interviewed in the group that were randomised to the new PhysioDirect service than to usual care; this included those who received some or all of the components of the new service, as well as those who were randomised to the new service but never telephoned or made contact. The decision to include patients who were randomised but chose not to contact the service was deliberate, as the study aimed to fully explore patients' perceptions of the new service and it was felt that this group in particular might have some useful insights. The interviews were conducted with patients from each of the four participating PCTs and patients were sampled to ensure a breadth of musculoskeletal problems affecting different bodily regions. From these processes, it was identified that some of the older patients (those above 75 years in particular) appeared to be unable to clearly remember the PhysioDirect telephone call. It was decided at that point to purposively sample and invite more elderly patients in order to explore this issue further. Silverman (2006) supported the use of sampling in this way, as he suggested that sampling can change through the course of a piece of research when new factors emerge.

3.6.2 Participants – physiotherapists and physiotherapy managers

The aim was to interview physiotherapists with a wide range of clinical experience in musculoskeletal problems and in the use of telephone services in order to create breadth across the sample. Prior to the study, 32 physiotherapists were invited to complete a questionnaire which collected data on gender, year of qualification, AfC clinical banding,[3] experience of musculoskeletal physiotherapy, work setting (exclusively in the NHS or also in private practice), their patient

[3] Agenda for change pay band is the tariff that NHS staff are allocated to on the basis of their knowledge, responsibility, skills and effort needed for the job.

caseload, their experience of providing telephone care and how they became involved in the trial. Based upon the above criteria, 16 physiotherapists (4 per PCT) were identified to be interviewed.

The chosen physiotherapists were subsequently invited by e-mail to take part in the interview study, and these physiotherapists were also invited for interview after the completion of the main trial recruitment and patient treatment. In each of the four PCTS, after the RCT was completed, the key physiotherapy service manager who oversaw the operational issues of the physiotherapy service was also invited for interview. All physiotherapists and managers who were invited for interview agreed to attend and were interviewed.

Table 3: Summary of physiotherapists' and managers' characteristics

Characteristics		Physiotherapists N=16		Managers N=4	
Years' of musculoskeletal experience	Mean (SD)	12 (9.3)		NA	
	Range in years	1 to 30		NA	
Managing musculoskeletal services	Mean (SD)	NA		4 (3.2)	
	Range in years	NA		1 to 8	
		Number	**Percentage %**	**Number**	**Percentage%**
Gender	Male	4	25	1	25
	Female	12	75	3	75
AfC pay band[4]	6	9	56	NA	NA
	7	7	44	NA	NA
Exclusively working in the NHS	Yes	13	81	NA	NA
	No	3	19	NA	NA
Previous experience of telehealth	Yes	6	37.5	NA	NA
	No	10	62.5	NA	NA
Involvement in the trial	Invited	8	50	NA	NA
	Volunteered	8	50	NA	NA

[4] AfC pay band is the tariff that NHS staff are allocated to on the basis of their knowledge, responsibility, skills and effort needed for the job.

Table 3 provides a summary of the physiotherapists and physiotherapy managers who took part in the interviews, showing their key characteristics according to sampling criteria. Of the 16 physiotherapists interviewed across the 4 PCTs, 75% were female. This is reflected within the NHS, as 84% of the physiotherapy profession are female (Beddow, 2010). The physiotherapists in the sample had a range of experience in treating patients with musculoskeletal patients, ranging from 1 year to 30 years, with an average musculoskeletal experience of 12 years. The majority (81%) worked exclusively in the NHS and 62.5% of the physiotherapists had no previous experience of using telephone assessment within physiotherapy. Half of the physiotherapists reported that they had been invited to participate in the PhysioDirect trial by physiotherapy managers, whereas the other half reported that they had volunteered to deliver the new PhysioDirect service in the trial. Of the 4 managers interviewed, 3 were female. They had a range of experience of managing musculoskeletal services from 1 to 8 years, with an average of 4 years.

3.6.3 Participants – GPs and commissioners

The aim of the GP and commissioner interviews was to explore some of the key organisational and contextual issues that might influence the acceptability and implementation of the new PhysioDirect service. In addition, prior to the start of the trial GP leads and practice managers used a wide range of communication approaches to inform GPs and provide information about the trial. In three of the PCTs, essential GP practice did not change and GPs continued to refer patients in the usual way to physiotherapy services. One PCT changed its physiotherapy referral system from paper based to electronic. This meant GPs referred patients to physiotherapy via e-mail instead of via a paper referral system. GPs located in

practices where patients had participated in the trial were invited to take part in the qualitative study, based upon two key criteria: the PCT and their individual referral pattern to physiotherapy (high versus low referrers to physiotherapy). Postal invites were sent to 80 GPs, of which 26 replied, 15 agreed to be interviewed and 8 GPs in total were eventually interviewed (two from each PCT area). A total of eight commissioners, two from each PCT, were identified and invited to take part in the interview study, of which four (one from each PCT) responded and agreed to participate.

Table 4: Summary of GP and commissioner characteristics according to the interview sampling criteria

Characteristics		GPs N=8	Commissioners N=4
Years' experience as a GP	Mean (SD)	20 (6.3)	NA
	Range in years	10 to 30	NA
Commissioning musculoskeletal services	Mean (SD)	NA	2 (1.9)
	Range in years	NA	1 to 5
		Number	**Number**
Gender	Male	5	3
	Female	3	1
Clinical background	Yes	8	1
	No	0	3

Table 4 provides a summary of the GPs and commissioners who took part in the interviews, showing their key characteristics according to the sampling criteria. Of the eight GPs interviewed across the four PCTs, five were male. They had a range of general practice experience ranging from 10 to 30 years, with an average experience of 20 years. Of the four commissioners interviewed, one was female, three had a non-clinical background and overall they had a range of experience of commissioning musculoskeletal services from 1 to 5 years, with an average of 2 years.

3.7 Data collection – semi-structured interviews

Qualitative research collects data in the form of talk, words, observations, visual images and documents (Hansen, 2006). The advantages of qualitative interviews are that they facilitate the investigation of research questions of immediate relevance and are a flexible and powerful tool which may open up many new areas for research which would otherwise be difficult to investigate (Britten, 1995). They allow the researcher flexibility, since the informant can be asked to clarify and reflect and expand on different experiences (Sim and Wright, 2000). There are a number of different qualitative interviewing styles: semi-structured, unstructured in-depth and short informal interviews (Hansen, 2006).

The unstructured in-depth interview is largely informal and consists of the interviewer and interviewee sharing experiences; it places a huge emphasis upon trust in the interview process in order for the interviewee to tell his/her story. Hansen (2006) describes how the unstructured in-depth interview rarely makes use of an interview guide. Informal interviews are brief interviews that arise spontaneously, often from friendly conversation, and are a good starting point for more formal interviews. The semi-structured interview appears to offer middle ground. They often use topic guides to help facilitate interview structure and to allow flexibility (Ritchie and Lewis 2003, Hansen, 2006). Flexibility enables the researcher to explore participants' experiences, allowing the interviewer to adjust his or her style to suit the interviewee. They also enable the researcher to introduce topics with non-leading questions and pre-planned prompts in order to encourage participants to elaborate (Freeman and Tyrer, 2006). Ultimately, effective interviewing should be an exchange of information between the interviewer and interviewee, creating a natural rapport that is built on empathy and

understanding without judgement (Patton, 2002). Although such a rapport may result in very naturalistic exchanges, Ritchie and Lewis (2003) pointed out that these in reality will bear very little resemblance to an everyday conversation. It is argued, therefore, that semi-structured interviews were the most appropriate form of data collection method to use to gather participants' different views and experiences. It is important to highlight that all the interviews (patient, physiotherapist, physiotherapy managers, GPs and commissioners) were carried out after the trial had finished but before the main trial analyses were complete. This meant that none of the participants knew the results of the main trial for waiting times, clinical outcomes or cost-effectiveness.

3.7.1 Patients' interviews

The aim of the patient interviews was to explore the acceptability to patients of the PhysioDirect service and to gain insight into their experiences of physiotherapy services. It is argued that each trial arm would have had a different experience of the service, and to understand the acceptability of the PhysioDirect service it was necessary to interview each group. Each patient was interviewed once, soon after their physiotherapy episode of care in the RCT (which may have included one or multiple treatments), at a convenient time and location to the patient, either at their home or at their local physiotherapy department. Topic guides for all four patient interview groups were collaboratively developed with members of the supervisory team (See Appendices F, G, H and I for examples). Initial interviews were guided by a review of the literature (see section 2.2). The topic guides were particularly focused upon their previous knowledge and experience of physiotherapy (Metcalfe and Moffett, 2005), their views and experience of the PhysioDirect service (Field, 1996a) and patients' understanding of telehealth technology (Ayantunde, 2007,

Fox, 2009). The topic guides were reviewed if interesting themes became apparent from initial reflections. Hennink *et al.* (2011) supported this view, and suggested that the characteristics of qualitative research are to identify key issues and concepts and to subsequently refine the questions in the next interviews. Therefore, after the first four interviews with patients in the PhysioDirect telehealth group, the topic guide was reflected upon and amended in order to improve clarity of questions and in the light of the information already gleaned from the early interviews. The amended topic guide, which included information about the role of the GP in the patient's musculoskeletal problem, their diagnosis and the impact this might have had, was then used for the following interviews. This process of topic guide amendment was followed for each of the four patient groups interviewed. In addition to the topic guide reflection and amendment, interviews were played back and transcripts re-read to check for accuracy and to glean initial ideas about issues of potential importance.

3.7.2 Physiotherapists' and physiotherapy managers' interviews

Ritchie and Lewis (2003) stated that the strengths of longitudinal interviews are that since they involve more than one episode, they enable the researcher to explore impacts, consequences and outcomes that may have changed in relation to the individual over time. A longitudinal approach was selected for use with the participating physiotherapists so that each was interviewed twice: once before treating patients in the PhysioDirect trial but following their training in the use of the PhysioDirect system, and again when the RCT had finished but before the results of the main trial were known. The rationale for the two interviews was to obtain an insight into each physiotherapist's views, expectations and concerns prior to using the new service with patients, whilst the second set of interviews

centred upon their experiences of using PhysioDirect clinically. The main focus in the second interviews was to explore whether there were any similarities and/or differences between the two sets of interviews, investigating their views as a whole and as individual physiotherapists. Furthermore, the aim was also to explore the changes on an operational level.

Both the first and second physiotherapy interviews took place at the participants' place of work, at a time convenient to them. The physiotherapist topic guide for the first interviews was developed based on previous literature and collaborative discussion with the supervisory team. Therefore, the interviews focused on how the physiotherapists perceived the new PhysioDirect service (Field, 1996a). They also focused upon the implementation of the service in each PCT and how it evolved over time. This provided insights into how individual physiotherapists' practice had changed, whether and how they adapted to the new service and whether, as healthcare professionals, they made any changes to the system which made it more acceptable or easier to use (May *et al.,* 2007, May *et al.,* 2009). This topic guide was reflected upon after the first four initial interviews had taken place and served to inform the subsequent interviews. The topic guide for the second set of interviews was personalised with the physiotherapists' key issues from the first interviews (see Appendices J and K for examples). This process enabled the researcher to observe the effect of time, practice and experience of the new PhysioDirect service on the physiotherapists' views on acceptability and implementation in the trial and once the trial was completed.

Interviews with the physiotherapy managers took place in each of the four PCTs, with the aim of gaining an understanding of their perspectives about the

acceptability and implementation of PhysioDirect. A topic guide was also developed for this group (see Appendix L). These interviews explored the perceived effect which PhysioDirect had upon the existing physiotherapy service, for example whether it reduced waiting times. They also explored how the service had been set up in each PCT and how it was operationalised (Lettieri *et al.,* 2012), what it was like to manage the service and other issues of importance to service managers that were perceived to facilitate or hinder its acceptability. The interviews took place at physiotherapists' and physiotherapy managers' place of work at a time mutually convenient to both the participants and the researcher.

3.7.3 GPs' and commissioners' interviews

The aim of the GPs' and the commissioners' interviews was to explore some of the key organisational and contextual issues that might influence the acceptability and implementation of the new PhysioDirect service. The GPs and commissioners were interviewed at their place of work, and their interviews focused upon their views of the PhysioDirect service, their perceptions of physiotherapy for musculoskeletal pain patients in general, whether they felt the RCT had gone well and their recollection of many patients who had used the PhysioDirect service and who had returned to them in general practice. In addition, views were sought about the desirability of a PhysioDirect service in the future (see Appendix M). The commissioners' interviews explored whether, and to what extent, the PhysioDirect service was likely to continue in each PCT beyond the completion of the trial, and investigated the factors important to commissioners in deciding this (May *et al.,* 2007), for example waiting list pressures, the type of information and evidence needed for the commissioning of services, budget constraints and commissioners' own views of methods of accessing physiotherapy services (see Appendix N).

As provided in detail in Chapter 2, section 9, there was governmental change in 2009 from a Labour government to a Coalition government of Conservatives and Liberal Democrats. This change meant that a number of new health policies were introduced. The structure of the NHS is therefore changing, with PCTs being disbanded in favour of commissioning consortia which consist of GPs, nurses and allied health professionals. At the time of the GPs' and commissioners' interviews, these changes had just been announced by the government. The commissioners and GPs were aware of these changes. It is important to acknowledge the time at which the interviews occurred, as this may have influenced the participants' views of whether or not new services would be commissioned. In addition, questions relating to the new commissioning process were asked.

3.8 Ethical considerations

The protection of human subjects or participants in research is of great importance. Ethics pertain to doing good and avoiding harm. Harm can be prevented through the applications of ethical principles, which include autonomy, beneficence and justice (Orb *et al.,* 2001). Full ethical approval was granted for the study and full PCT (R & D) approval was granted by each PCT prior to the start of the RCT and the linked qualitative interviews (see Appendix O). According to Patton (2002), the idea of informed consent is to allow the individuals to be aware of all that the research encompasses. The information that informs consent should be simple, straight forward and understandable, provided before the interview takes place, and at the time of the interview and throughout the course of the interview the researcher should ensure that the participant is willing to continue (Patton, 2002). Consent forms were completed prior to each interview and the

author made sure that the participant understood each part of the consent form (see Appendices P and Q).

Patton (2002) highlighted that confidentiality in research means that researchers are advised to protect the names of the respondents in order to safeguard their identity. Kaiser (2009) suggested that confidentiality is often addressed by researchers removing identifying information, such as names and addresses, and that the names of respondents can be replaced with pseudonyms or ID numbers. The author, whilst completing the consent form, reassured each participant that their data would be anonymised. The interviews were digitally recorded and transcribed in full and anonymised using pseudonyms unique to each participant with only the lead researcher knowing the identity of each participant. Each interview was then transcribed verbatim. Halcomb and Davidson (2006) described transcription as the process of reproducing spoken words, for example those from an audio-recorded interview, into written text. The introduction of an additional person to transcribe qualitative data introduces the possibility of human error (MacLean *et al.,* 2004). The transcripts were not transcribed by the author; therefore they were re-read and checked for errors by the author, the transcription was compared with the original recorded audio file and any errors were amended. The checked transcript was then saved to the Framework software programme (which is further discussed in section 3.6.1) and was given a pseudonym and an ID number.

Prior to each interview the researcher provided each participant with information regarding the study (Appendix R) and also the reasons why the data was important, what it would be used for and how it would be stored. The audio

recordings were kept at all times by the researcher so that upon their return to the university the information was safely stored on the university's secured network and the audio files on the Dictaphone were then erased. Creswell (2007) suggested that data collected should be saved, backed up and stored. There were a handful of instances during the professionals' interviews when the participants articulated that they did not want a comment to be used, and these segments were removed from the relevant transcripts. There was an instance during an interview with a physiotherapist when the participant did not want a section of the information to be disclosed. This was discussed in the interview and it was agreed by both the author and the participant that the information segment from the interview would be removed from the transcript.

3.8.1 Practical considerations

As the lead researcher in this qualitative study, the author is a physiotherapist and has worked in a telehealth environment providing health information by telephone, albeit not specifically related to physiotherapy or musculoskeletal problems. Therefore, when interviewing the author understood the terminology that the physiotherapists used and was also familiar with GPs' explanations of certain pathologies and treatments. The lead author previously worked in an NHS Direct call-centre, providing health information to members of the public over the telephone, and was able to empathise with the physiotherapists' experiences of delivering information and advice using this medium. Preconceptions are not the same as bias, unless the researcher fails to acknowledge them (Malterud, 2001). Haraway (1988) suggested that objectivity is recognising that knowledge is partial and situated according to the researcher's position. It is of importance to the study

to acknowledge, reflect and report such issues and show how the research data were collected (Richards and Emslie, 2000, Chew-Graham *et al.,* 2002).

In terms of disclosing professional identity and previous experiences to interviewees in this study, the lead author responded when asked that she was a physiotherapist. The justification for disclosing this was based upon both moral and methodological concerns. The author felt it was necessary to be open with the interviewees and the interview to be based upon collaboration and reciprocal honesty. This disclosure, as part of the conversation which evolved naturally, i.e. some participants asked and others did not, helped to build a rapport between the author and the interviewees.

The implications of this disclosure meant that at times the author was both an insider and an outsider. Corbin Dwyer and Buckle (2009) theorised that in reality the researcher often occupies the space between the insider and the outsider perspective, highlighting that the researcher who has insider knowledge is not exactly the same as the group that he/she is studying. Similarly, it was argued that a researcher as an outsider of the group being studied does not denote complete difference, and that the researcher has their own identity and their position is influenced by the literature that has been read and the contact and interactions with previous interviewees (Corbin Dwyer and Buckle, 2009). In terms of the physiotherapists' and managers' interviews, those who were aware that the lead researcher had a background in physiotherapy may perhaps have been more open in their responses. Of the patients interviewed, those who asked about the lead author's profession may have felt uneasy answering questions about physiotherapy, due to power status between the interviewer and interviewee

(Smith, 2006, Kvale, 2006, Karnieli-Miller *et al.,* 2009). On reflection from the transcripts of interviews is that there was only one instance when disclosing the lead author's professional background as a physiotherapist appeared to cause a problem. This was with a patient who then proceeded to ask about her knee problem and the professional opinion of the lead author regarding how she should manage it. However, after discussion, the patient accepted that it was not appropriate for the author to comment on her knee problem. Further reflections upon the interview process in relation to the methods used to maintain quality are presented in section 3.10.1, pages 94-97.

3.9 Analysis

The qualitative data were analysed using the Framework method (Ritchie and Lewis 2003). The Framework method has been widely used within health (Johnson *et al.,* 2013, Johnson *et al.,* 2012, Hanratty *et al.,* 2013, Morley *et al.,* 2013, Clarke *et al.,* 2012, van Netten *et al.,* 2012, Ryan *et al.,* 2012), the health service (Chung *et al.,* 2012, Solomon *et al.,* 2012, Greenway *et al.,* 2012, Broom *et al.,* 2012) and implementation research (Salkeld *et al.,* 2011, Moran *et al.,* 2012, Sheringham *et al.,* 2012, O'Donnell *et al.,* 2012). It has also been used within physiotherapy research (Thorstensson *et al.,* 2009, May, 2001) and in qualitative research in trials (Fairbrother *et al.,* 2012, Hoddinott *et al.,* 2012, Donnelly *et al.,* 2013, Hall *et al.,* 2012, Emmett *et al.,* 2006). Mays and Pope (2000) described the Framework approach as pragmatic, and stated that it has been used in other health-related work where timescales are short. As this qualitative research was nested within an RCT, data needed to be collected within certain opportune windows of time (largely dictated by the main trial time frames). The Framework

approach was felt to be particularly suitable for this PhD. This view is supported by (Crabtree and Miller, 1999), who suggested that research methodology is not only shaped by its aim, analysis goal and paradigm, it is also guided by research time frames and the degree of the researcher's control.

Ritchie and Lewis (2003) described the Framework method as a matrix-based method for analysing qualitative data. The central component of this method is to create a 'thematic framework' which is used to classify and organise the data. In practical terms, the Framework method consists of three broad stages, which are managing the data and the creation of both descriptive and explanatory accounts.

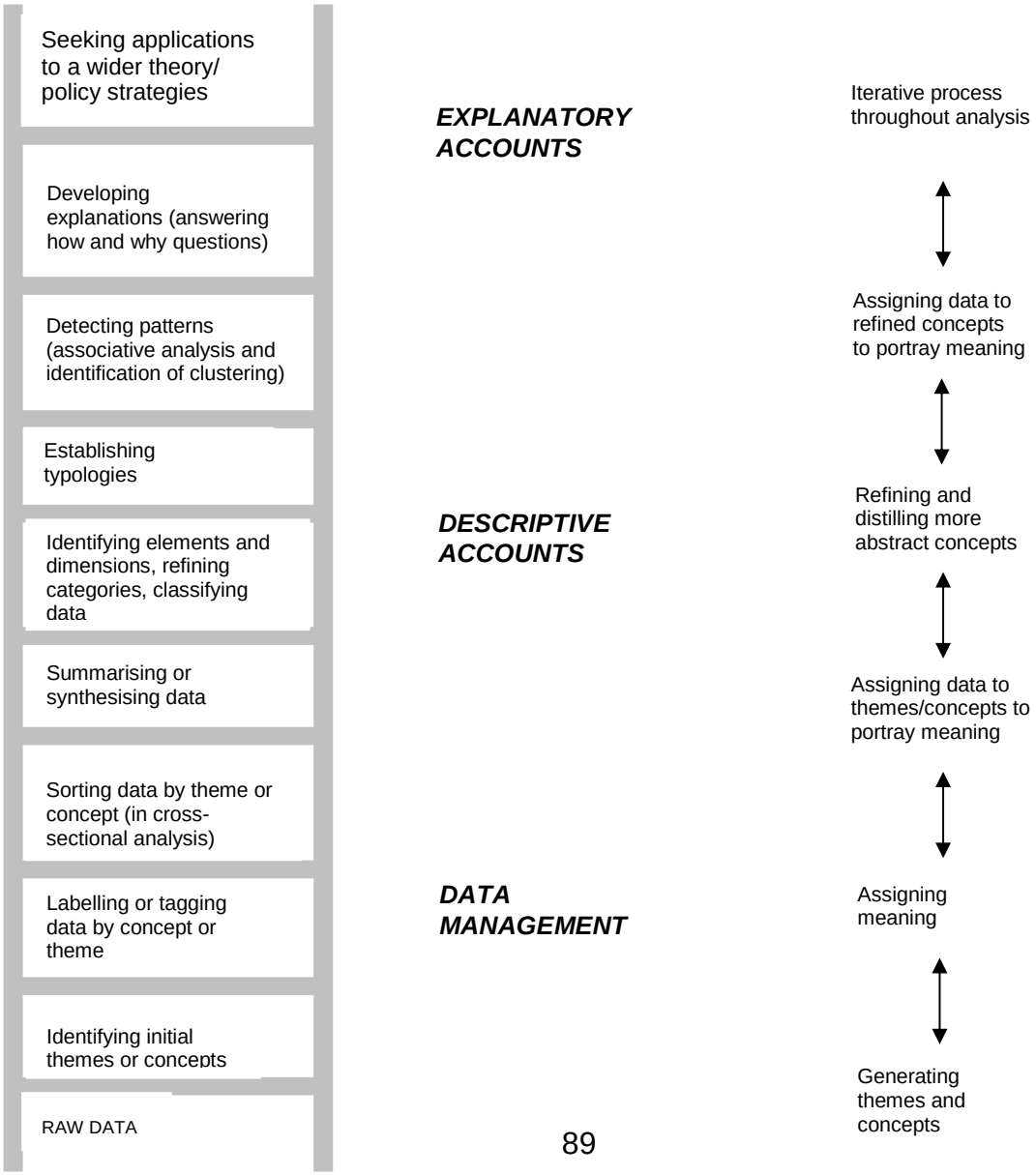
Table 5: A summary of tasks involved in the Framework method

Main task	Sub-task	Description
Data management	Familiarisation	Listened again to the audio files, re-reading transcripts and personal notes and noting key themes and concepts.
	Creation of an index	Reducing the data to a manageable form by generating a set of themes and concepts according to which the data are labelled; reviewing of index headings, refining terms, incorporating study aims and objectives into the index.
	Indexing the transcript data	Selecting the transcript data and then attaching them to the label on the index.
	Sorting the data by theme to concept	Ordering the data so material of similar content or having similar properties that are located together.
	Summarising the data	Reducing the original data to a more manageable level, distilling the essence of the original material (in the form of a data summary).
Descriptive accounts	Detection	Where the substantive content and dimensions of a phenomenon are identified.
	Categorisation	Categories are redefined and descriptive data assigned to them.
	Classification	Categories are assigned to classes usually at a higher level of abstraction.
Explanatory accounts	Linking	Search for links between sets of phenomena.
	Attaching	Looking for and attaching any patterns occurring between different groups.
	Verifying	Exploring why there are particular links between groups, check the matching between the phenomena, interrogating the patterns of associations.

Adapted from (Ritchie and Lewis, 2003)

These activities occur in what Ritchie and Lewis (2003) described as the analytical hierarchy (see figure 4). This hierarchy is the process by which qualitative findings and interpretations are built from the original data. Ritchie and Lewis (2003) argued that this feature enables the research to be iterative, responding to what is found and maintaining a clear link to the original transcripts. However, within these three stages there are several main tasks to perform. They include familiarisation with the data, creation of an index, indexing the transcripts, summarising the data and the creation of descriptive and explanatory accounts (see Table 5, page 88).

Figure 4: The Analytical Hierarchy – A depiction of the stages and processes involved in qualitative analysis



A number of approaches could have been taken to manage the qualitative data. Three approaches were considered; they were geographical, ‘key concepts’ and perspective approaches. The geographical approach would have organised the data according to the PCT. The advantage of this was that any differences between interviewees in the different geographical areas would have been uncovered, for example differences between administrative processes which may have impacted upon the implementation of the PhysioDirect service. Although this would have been explored to some degree in the other two approaches, by managing the data using this method the likelihood of discovering any differences may have been increased.

In addition, each PCT was informed by the same trial protocol, the physiotherapists were trained in the same manner by the same trainers, and it was considered unlikely that the core issues of acceptability and implementation would have been very different in each PCT. Therefore, the geographical approach was not used. The ‘key concept approach’ is another approach that was considered to manage the data. This would have meant that analysis of the data would have been organised under two key index headings, acceptability and implementation. Although this approach may have provided useful insights, the method was impractical due to the number of interviews involved and their differing timings. For example, the first physiotherapists’ interviews occurred approximately one year before the GPs’ and commissioners’ interviews. Therefore, it would have been impractical to wait for all interview data to be collected, transcribed and anonymised before creating a combined index heading for all three perspectives. In addition, it was felt that a joint index where all of the participants’ perspectives were included may have led to an index Framework with insufficient detail.

It was considered that a perspective approach to manage the data would be the most useful and practical one for the purpose of this thesis. The advantages of using a perspective approach were that each key stakeholder's issues of acceptability and implementation would be analysed within that stakeholder group, exploring both their view and experience of and beliefs about the PhysioDirect service. Concerns could be explored in detail within each stakeholder group and then compared across groups to provide useful insights on the similarities or differences between what all three stakeholders found acceptable and unacceptable. The decision to use this approach was also a practical one given the number of interviews and the riches of the data generated from the qualitative interviews. The patients, physiotherapists and physiotherapy managers, GPs and commissioners were therefore analysed within their own stakeholder perspective group prior to comparing across the groups. The key themes from all three groups were then compared and contrasted to explore the full understanding of the acceptability and implementation of the PhysioDirect service. This approach follows the guidance of Ritchie and Lewis (2003), who suggested that in the analysis of qualitative research that involves multiple perspectives, the researcher can choose either to represent the findings within one overall analysis or to take a perspective approach. If a perspective approach is adopted, the researcher must then compare and contrast their findings across the groups (Ritchie and Lewis, 2003).

3.9.1 Data management

The patients were the first group to be analysed. In total, 57 patients were interviewed across each of the four PCTs. The author became familiar with the data by listening again to the audio files, re-reading transcripts and noting key

themes and concepts. Following the steps in Framework (summarised in Table 5, page 88), 16 patient transcripts (see Appendix S) were used to create a thematic framework to identify the key issues and themes. This was then organised and reduced into the form of an index. This patient index was reviewed by the supervisory team and the index headings were refined to accurately describe the patient findings, whilst addressing the aims of the study (see Appendix T). The author then indexed the data from the remaining transcripts and attached a data summary to the data labels on the index. These data summaries (created from summarising the data) were a synopsis of the data, in the author's own words, and were saved to the Framework software programme (see Table 6 below).

Table 6: An example of index heading and data summary

Index heading	Subheading	Data summary	Transcription data
Telephone service	Overall views of PhysioDirect	He thought that PhysioDirect was good service. It was quick, prompt and thorough. They diagnosed his problem, sent the exercises so he could get back to work quickly.	*"Only what I've said before. It's a very good service, very quick, very prompt, and very thorough. Like I said, they find out what your problems are, how much you can do, and they got the exercises out to me very quick in order for me to be able to start doing them and getting myself back to work quicker so it was a very good service."*

One physiotherapist manager transcript and eight physiotherapist transcripts (two transcripts per PCT) were used to create the physiotherapists' and physiotherapy managers' Framework index. Eight GPs and four commissioners were interviewed across each of the PCTs. Four GP transcripts (one per PCT) and one commissioner transcript were used to create their Framework index. Once all of the three indexes had been created, they were added to the respective data set in the Framework software programme.

The Framework software is a programme that facilitates data management. There has been an increase in the use of computer packages to assist in the analysis of qualitative data (Corti and Ahmad, 2000). Software packages can help to effectively manage qualitative data and thus improve the rigour of analysis (Kelle *et al.,* 1995). Pope *et al.* (2000) described the benefits of software packages that use hyperlinks to capture the conceptual links which are observed between sections of the data, which helps to protect its narrative structure, avoiding the problem of de-contextualisation or data fragmentation. Framework software is a tool which enabled the hyperlinking of the data summary created by the researcher to the original transcript, as mentioned above, accurately retaining the meaning of the interviewees' raw data. The Framework software also allowed the author to create three separate 'studies' within the software programme, storing the information about the three key perspectives.

3.9.2 Descriptive and explanatory accounts

Malterud (2001) argued that knowledge rarely emerges alone but develops from the relationship between empirical data and theoretical models. She described a theoretical Framework as the researcher's reading glasses, as they ask questions about the data. Ritchie and Lewis (2003) described descriptive analysis as unpacking the content of the data. To do this, the author used the Framework software to create a large chart in which each index heading was visible. From these charts the author could look across each index heading to the attached data summaries for each case. This enabled the author to ascertain whether there were recurring findings. Ritchie and Lewis (2003) described this as detection where the substantive content and dimensions of a phenomenon across each index heading are identified. From each of the index headings, with their data summary, the

author created descriptive accounts to define the phenomenon for each of the cases involved (Ritchie and Lewis, 2003). An index heading was chosen across each of the case descriptions that captured the essence of what was being summarised (see Appendix U). Richie and Lewis (2003) described this as abstraction where descriptions stay close to the original data. From this abstracted description, the author attached an in-depth abstract label to the data in order to categorise those descriptions, capturing the essence of what was occurring, for example something practical or something with a more emotional component. The final stage of the analysis was interpreting the data (Ritchie and Lewis, 2003). The author explored any links and connections between two or more sets of phenomena and attached patterns that occurred between the different groups (Pope *et al.,* 2000, Ritchie and Lewis, 2003). Finlay (2006) suggested that it is possible to transfer the findings of qualitative findings to other individuals, contexts and situations. Therefore, by maintaining quality there are more opportunities to transfer the findings to other settings.

3.10 Quality in qualitative research

One of the common criticisms of qualitative research is that it can lack methodological rigour (Tobin and Begley, 2004). The assessment of quality in qualitative research is a contentious issue. There are many debates about which method is most appropriate, if it is appropriate at all, to appraise the quality of qualitative research (Sandelowski, 1993, Barbour, 2001, Dixon-Woods *et al.,* 2004). This is because the method to assess quality depends on the ontological and epistemological assumptions used to collect, analyse and interpret the data (Ballinger, 2006). It is important not to judge the value of qualitative research by quantitative standards and assumptions, but to acknowledge the importance of an

alternative means to assess the quality of qualitative research (Mays and Pope, 2000, Ritchie and Lewis 2003). Mays and Pope (2000) argued that it is possible to assess the quality criteria common to both qualitative and quantitative research, particularly those of validity and relevance. They suggested methods of assessing the validity of qualitative research through a process that seeks respondent validation, through clear exposition of methods of data collection and analysis, in addition to reflexivity (the ability to reflect on the researcher's own position and influence on the research) and attention to negative cases (data from cases that do not support, or appear to differ from, patterns or explanations that emerge from data analysis). A number of different criteria have been suggested to judge the quality of qualitative research (Walsh and Downe, 2006, Lincoln and Guba, 1985, Hammersley, 1992, Henwood and Pidgeon, 1993). It is not within the scope of this thesis to explore fully and critique the different approaches, but to explain what measures the author has used to ensure quality in this research.

3.10.1 Methods used to maintain quality

There were five main methods through which quality was maintained within this study. The first method used was a detailed audit trail. As previously highlighted, the Framework method was used to manage and facilitate the analysis of the collected data. This method allowed the data to be audited, linking the raw data to the index category and sub-category, thus ensuring a clear data audit trail (Ritchie and Lewis, 2003). Mays and Pope (2000) also suggested that an audit trail can ensure the quality of qualitative research, and reported that it is achieved through the transparency of its data collection and of its coding methods. The second way in which quality was ensured involved a proportion of the raw data from all three key stakeholders' perspectives (patients, physiotherapists and physiotherapy

managers, and GPs and commissioners) being independently coded by two other research members (of the supervisory team). The professional backgrounds of these individuals were physiotherapy and social science. The use of different analysts to compare data interpretation allows researchers to review coding frames and emerging themes (Ritchie and Lewis, 2003, Barbour, 2001). Independent coding is also a method used to guard against bias and can help to improve the trustworthiness of the data (Richards, 2009).

Another way in which quality was ensured was that each of the indexes (patient, physiotherapist and physiotherapy manager, GP and commissioner) was discussed in detail by the research team (the author and three supervisors) and each team member indexed a transcript according to the Richie and Lewis (2003) Framework method. In light of the discussions arising from this process, changes were made to the index terminology. Barbour (2001) described how multiple coding of transcript data can be a valuable strategy, and argued that the value is not in the agreement of the codes but in the decisions and content of the disagreements as they allow those codes to be explored and re-defined. One method commonly used in qualitative analysis to ensure quality is that of deviant cases analysis. This is where cases that do not fit the norm or report differently or contradict patterns or explanations that are emerging from the data are analysed (Silverman, 2005). Deviant cases in this study were explored and analysed as they are an important resource in understanding the phenomenon (Ritchie and Lewis, 2003).

Finally, the process of reflexivity occurred throughout the data collection and analysis process. Reflexivity is a concept found in research methodology literature

as method that ensures quality (Mays and Pope, 2000). Finlay (2002) outlined subtle differences between reflective and reflexive practice. Reflectivity means that the researcher takes a critical stance towards their work when it is completed. Reflexivity, on the other hand, is the researcher's own reaction to the study, in terms of how they position themselves in the study. Malterud (2001) described reflexivity as the systematic attention to what effects the research, at its every step, has on how knowledge is formed. The perspective of the observer is always limited to and determines what is seen, and therefore the researcher has an influence upon the research process, and such effects cannot be prevented (Malterud, 2001). This is the view that underpins reflexivity, as there is a need to reflect upon how and where those influences have occurred in the study (Haraway, 1988, Malterud 2001). Guba and Lincoln (1985) also described how the investigator becomes part of the context of the research, signifying that the researcher cannot be considered as an affecting factor. In the following section I describe how reflexivity was applied in this study, and therefore, for the purpose of the next two sections of this chapter, the first person is used. This is aligned with Silverman's (2005) suggestion that reflections on the research process should be written in the first person.

3.10.2 Reflexivity

After each interview, in order to reflect on the data collection methods and content of the interviews, I recorded my initial thoughts on a Dictaphone. Then, as soon as possible after each interview, I wrote up my reflection, along with the other thoughts that I had about the interview itself, the interaction between myself and the participant and what, if any, themes were emerging from the data. Halcombe (2006) suggested that in their method of data management, to ensure that

reflections remain fresh, researchers should record initial impressions of interactions, major ideas and concepts as soon as possible. Richards and Emslie (2000) also supported this view by suggesting that the role of reflexivity is an awareness of how the researcher interprets contextual issues, such as the interview environment and the interaction between the interviewer and the participants. This process of regular reflection after each interview was a process that I found beneficial. I felt it appropriate to reflect on which aspects of interviewing had gone well and which had gone less well. This helped to further reflect on the interview itself and to document my thoughts and feelings about any given situation encountered during the research process.

In addition to my reflective notes, I kept a written research diary which assisted in reflecting on important events or interesting cases. The research diary also helped me reflect upon issues that arose with the participants that I interviewed. Overall, the diary documented the development of my thinking, and therefore I was able to look back and review my approach to the research (Silverman, 2005). This process was very beneficial, as it allowed me to critically examine my thoughts and feelings about how I felt the questions in the interview were asked and how the participants responded. I was then able to re-listen to interviews, re-read my initial reflections and consider the process by which I formulated questions in the interviews. From both the transcripts and the audio tapes I was able to assess which questions worked well in the interviews and which did not. The supervisory team also listened to example audio recordings, read the transcripts and provided feedback on both the process and the content. These reflections enabled me to improve my interviewing technique and reflect upon how my personality, previous experience and professional background may have influenced my interview style.

3.10.3 Reflection upon the data collection methods

In the commissioner interviews I was outside the research. There was a clear example of how being unfamiliar with the process of commissioning worked to my advantage as I asked questions in order to understand the commissioning process itself. I asked a commissioner to explain some specific terms used as I did not understand them. The extracts from the transcripts below (pseudonyms have been used to uphold anonymity; see section 3.8) provide more detail.

> *"So is that the QALY data?"* Interviewer
>
> *"Not necessarily" ...* Ms June Clarry, commissioner
>
> *"No; but you have QALY data from the GPs that"* ... Interviewer
>
> *"We don't have QALY data from the GPs"...* Ms June Clarry commissioner
>
> *"No, sorry" ...* Interviewer
>
> *"We've got QOF"...* Ms June Clarry, commissioner
>
> *"QOF data, sorry" ...* Interviewer
>
> *"Yeah, yeah "...* Ms June Clarry, commissioner
>
> *"QALYS are the"...* Interviewer
>
> *"Quality Adjusted Life Years" …* Ms June Clarry commissioner

The interviewee continued to describe details regarding both Quality Adjusted Life Year (QALY) and Quality and Outcomes Framework (QOF). On reflection with the

supervisory team, it was considered that her explanation was helpful to understand what information commissioners use to make decisions on commissioning healthcare services. As an outsider I was unaware of the terms, which meant that she had to explicitly explain what they were and how they were used. However, if I had had a wide knowledge of the commissioning process this may not have occurred.

Reflections were also considered useful to provide an insight whilst the data was being collected. Following the completion of several interviews, I asked interviewees at the end of the interview how they thought the topic guide had worked. This helped to ascertain whether the interview questioning was effective or whether some areas, deemed by the interviewee as important to the research, had been omitted. Insightfully, in one interview, the GP found one of the questions about patients presenting with musculoskeletal problems vague, and commented that the question was “stupid”. This reaction was unexpected and prompted me, at the end of the interview, to seek advice from the GP as to how the question could be reworded. The reflection with the GP on the topic guide is documented below:

> *“Can I ask a question about my topic guide? Can you see this question here about how do you manage a patient with musculoskeletal problems; how do you think I should ask that better?* Interviewer
>
> *I think you either need something specific; you’re probably better with a scenario really”...* Dr Polly Green

"Do you think so?" Interviewer

"Yeah, it's very" ... Dr Polly Green

"Do you think that's too general ...?" Interviewer

"It's very, it's too general. You could do with, I mean, what do you want to know, what would you do with somebody who comes in with a sore knee or who comes in with, saying they've had back pain or" Dr Polly Green

"And then focus it that way ...?" Interviewer

"I think you'd probably have to do something like that. Dr Polly Green

Okay, because that's too broad ... "Interviewer

"It's too broad because, you know, we'd see a lot of it". Dr Polly Green

"Okay, I'll change that one. Anything else about the questions?" Interviewer

Reflection on challenging interviews helped me to understand whether my approach was a reasonable one. A further example of this was when one of the physiotherapists interviewed informed me that she found my interview questions insufficiently focused. At the end of the interview the participant described her difficulty and unease with some of my questions:

"How it feels, yeah. And I wouldn't consent to do one again, for anything."

Delia, second interview

"That's fair enough." Interviewer

"I just thought that's important, yeah, because if I was asked to do an interview with somebody and that's how they felt, I'd actually like them to tell me. But yeah, it's nothing" … Delia, second interview

"No, that, that was" … Interviewer

"It's nothing, it's nothing personal, don't take that as a personal attack." Delia, second interview

"No, that was my next question, was how you found the interview itself" … Interviewer

"I don't, don't like the process at all. And being recorded, don't like it at all. If it wasn't part of my job, I wouldn't have even consented in the first place, but it's actually part of my job to take part in research as required, and it's not unreasonable to ask me to do it, etc., etc. And therefore it's important to do it as well as I can." Delia, second interview

It was clear that this physiotherapist was uncomfortable from the start about the interview. This situation was uncomfortable and made me question whether other participants in the study might also feel similar to this physiotherapist. I wrote up my field notes and reflected on how I felt about this, and tried to understand the interviewee's point of view. In subsequent interviews I asked participants how they

felt about taking part. In the following interviews no other participant mentioned feeling distressed or anxious about the interview process.

3.10.4 Reflection on trial-related issues

It was not an aim of the qualitative study to specifically explore how the RCT was working, but rather to explore the acceptability and implementation of PhysioDirect from the perspectives of the three stakeholders (patients, physiotherapists, physiotherapy managers, GPs and commissioners). It was decided that information derived from the qualitative interviews would not be openly shared with, nor disclosed to, the research and clinical trial team itself while the trial was in progress. The reason for this was that there were physiotherapists delivering both PhysioDirect and usual care services in the regular monthly trial who attended the trial management meetings. It was felt that some of the emerging qualitative research findings might have an influence on how the physiotherapy services implemented the PhysioDirect service in the trial.

In some of the trial management meetings during the data collection period, concerns were raised by the trial team that the PhysioDirect service in one PCT might not be functioning effectively. There were also concerns regarding the availability of different days and times that the PhysioDirect service was available for patients to call. It also became apparent after the interviews with the physiotherapists that there were some differences in how each physiotherapy team in each PCT implemented the PhysioDirect service and reasons why call times in some PCTs were higher than in others. Again, I felt unable to share this information with the trial management team in the monthly meetings. One PCT had a very elaborate call-back system which was noted on one of the boards

where the physiotherapists were reminded of the patients that they needed to call back. Another difference was in the way in which the physiotherapy departments communicated with each other. Two of the PCTs in their interviews suggested that all the physiotherapists met and discussed issues arising from both the PCT and the PhysioDirect trials. However, this did not appear to occur in the other PCTs. In addition, there were examples of how some physiotherapists felt less confident regarding certain sites of musculoskeletal pain. It was uncovered that one PCT had a shorter amount of face-to-face time with PhysioDirect patients compared to the other PCTs. These findings might simply reflect the cultural differences between PCTs; however, these issues were not raised in the monthly meetings. The problem for an RCT is that once it has started, it is undesirable to change the way interventions are delivered part way through the trial, as it would undermine the comparison between the trial and randomised arms (Rothwell, 2006, Stolberg *et al.,* 2004). It is noted that the differences between the PCTs were addressed by the PhysioDirect trial team at a later date; however, the qualitative research could have identified them sooner.

The qualitative study was nested within the RCT of PhysioDirect, and the interview participants had many views about being a part of the RCT, and the process of conducting a RCT. The focus of the qualitative study was the acceptability and implementation of the PhysioDirect service rather than the acceptability and implementation of the trial itself. Therefore, trial-specific data (for example, consent to the trial and trial operating procedures) were not focused upon for the purpose of this thesis and have been largely excluded from the analysis. However, where relevant to the acceptability and implementation of the PhysioDirect service such trial related findings are considered.

3.11 Conclusion

This chapter has described the approach used in this qualitative study to investigate the acceptability and implementation of the PhysioDirect service for adults with musculoskeletal problems. This study was nested within an RCT, and this chapter provided details of the importance of providing contextual qualitative evidence in further understanding interventions being tested in RCTs. This thesis used a perspectives approach to effectively manage the interview data. The methods of data collection were described and the Framework method of data analysis was explained and justified. The author's reflections on the research process were embedded within the methods and are also reported in the reflection section of this chapter. This section allowed the researcher to describe those reflections in the first person, drawing on specific examples of data from participants. This chapter has demonstrated the trustworthiness and robustness of the methods, leading to confidence in the findings. The next chapter presents the results from the patients' perspective.

Chapter Four: Patient acceptability of PhysioDirect

4.1 Chapter introduction

This thesis explores the acceptability and implementation of the PhysioDirect service from the perspectives of the patients, physiotherapists, physiotherapy managers, General Practitioners (GPs) and commissioners. This chapter investigates acceptability from the patients' perspective. It is important that patients' views and experiences are considered. The experiences of patients are an important consideration in the development and evaluation of healthcare services (Department of Health, 2012b, Department of Health, 2012b, Department of Health, 2011a, NICE, 2012).

This chapter is structured and presented as a series of six overarching themes and related sub-themes. Initially, a patient-evaluative model is used to explain patients' acceptability of the PhysioDirect service (see Figure 5, page 109). The chapter explores patients' expectations of the PhysioDirect service investigating how the PhysioDirect service was perceived in terms of access to physiotherapy services. Subsequently, it explains in detail what features of the PhysioDirect service were perceived as acceptable and less acceptable to patients. Then the chapter explores the reasons why patients who were randomised to the PhysioDirect service chose not to use the service. Finally, patients' views about the future development of the PhysioDirect service are presented. The chapter is supported throughout by examples of patients' narrative data, both within the chapter itself but also in Tables 7 (page 108), 8 (page 116), 9 (page 120) and 10 (page124). Table 7 provides patient pseudonyms along with key patient characteristics. Tables 8, 9, and 10 graphically illustrate the large number of patients interviewed and highlight the range of views and the strength of the

themes. The tables are structured following the same themes and sub-themes highlighted within the chapter. The chapter is also supported by the use of two contrasting patient case examples Somerton (section 4.5.5, pages 129-135) and Steve (section 4.7.3, pages 151- 153). These two case examples are illustrative of the themes within the chapter and provide additional contextual information about the complexity of patients' lives, which can be difficult to fully appreciate. The first individual case example found the service to be acceptable and related a relatively positive experience with the PhysioDirect service. The other depicts the experience of a patient who found aspects of the PhysioDirect service less acceptable. These cases should be considered in conjunction with the model which is explained in the following section.

4.2 An evaluative framework for the acceptability of PhysioDirect

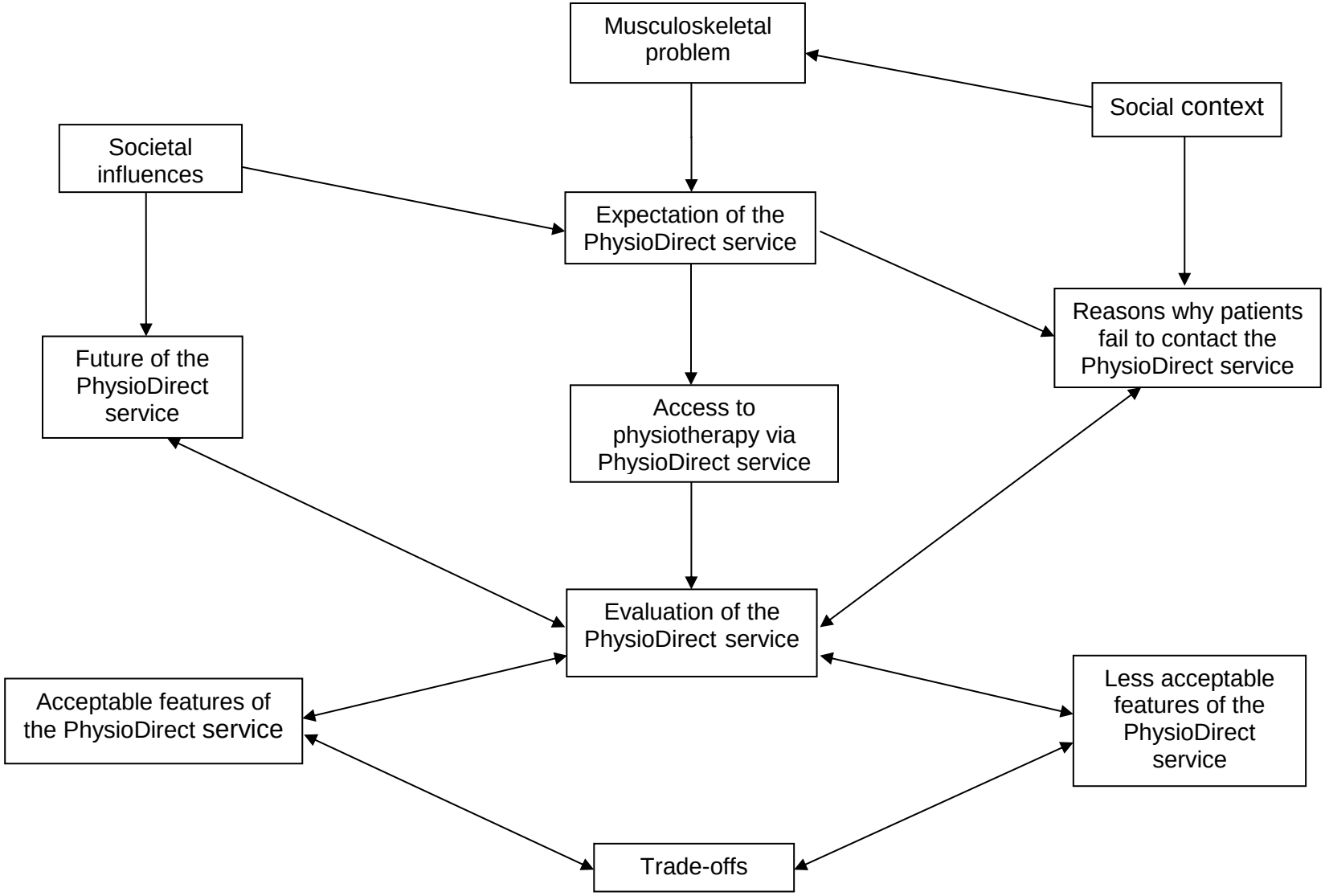
The model acts as an evaluative framework that explains patient acceptability of the PhysioDirect service (see Figure 5, page 109). In order to make sense of the model, a summary of the main patient findings is presented. Each patient presenting to the PhysioDirect service had a musculoskeletal problem (see Chapter 3, section 5.3). The qualitative data showed that their problem was often understood within their own social context (Ong *et al.,* 2011). It became clear that patient expectations of the PhysioDirect service were important in how they subsequently evaluated the service, which was often informed by both the patients' knowledge and their previous experience of physiotherapy. It was shown that patients found the PhysioDirect service unacceptable when their expectations for face-to-face physiotherapy were not met. However, the findings also suggest that some patients, who expressed rather negative perceptions about PhysioDirect

after experiencing the telephone assessment subsequently, evaluated it in a more positive light when reflecting upon the telephone package of care they received.

Table 7: Patient pseudonyms and key characteristics

ID	Age	Gender	Trial Group	Problem
Sophie	46	f	Usual care	Shoulder
Simon	73	m	Usual care	Shoulder
Padma	46	f	Telehealth + face-to-face	Multiple
Lucy	53	f	Telehealth + face-to-face	Leg pain
Steven	77	m	Telehealth + face-to-face	Shoulder
Kathryn	80	f	Telehealth + face-to-face	Knee
Brian	48	m	Randomised and did not ring	Lumbar Spine
Harry	23	m	Randomised and did not ring	Hand
Lorna	30	f	Randomised and did not ring	Lumbar spine
Walter	79	m	Telehealth only	Ankle
William	81	m	Telehealth only	Knee
Mark	65	m	Telehealth only	Multiple
James	63	m	Telehealth only	ankle
Jenny	36	f	Telehealth only	Neck
Wendy	58	f	Telehealth only	Ankle
Mary	76	f	Telehealth only	Wrist
Bronya	51	f	Telehealth only	Lumbar spine
Michael	87	m	Telehealth only	Multiple
Helen	59	f	Telehealth only	Hand
Karla	84	f	Telehealth only	Knee
Harriett	70	f	Telehealth only	Hip
Lucas	34	m	Telehealth only	Lumbar spine
Natalie	31	f	Telehealth only	Neck
Bridgett	35	f	Telehealth only	Lumbar spine
Somerton	53	m	Telehealth only	Shoulder
Hannah	65	f	Randomised and did not ring	Hip
Alyssa	45	f	Randomised and did not ring	Lumbar spine
Aaron	42	m	Randomised and did not ring	Lumbar Spine
Kendal	19	m	Telehealth + face-to-face	Knee
Hilda	69	f	Telehealth + face-to-face	Hip
Arnold	68	m	Usual care	Lumbar spine
Johnny	71	m	Usual care	Lumbar spine
Noreen	61	f	Randomised and not rang	Neck
Pauline	43	f	Randomised and not rang	Foot
Lynn	69	f	Telehealth only	Lumbar spine
Steve	40	m	Telehealth only	Groin
Samuel	77	m	Telehealth only	Shoulder
Scarlett	77	f	Telehealth only	Hip
Sadie	79	f	Telehealth + face-to-face	Shoulder
Carrie	53	f	Telehealth + face-to-face	Neck
Leah	50	f	Telehealth + face-to-face	Lumbar spine
Angela	57	f	Usual care	Foot
Sarah	45	f	Usual care	Shoulder
Louise	63	f	Usual care	Knee
Justus	63	m	Randomised and did not ring	Shoulder
Peter	52	m	Randomised and did not ring	Lumbar spine
Robert	30	m	Telehealth only	Ankle
Paul/Peter	74	m	Telehealth only	Knee
Faith	52	f	Telehealth only	Shoulder
Giro	80	m	Telehealth only	Neck
Alyosia	80	f	Telehealth only	Shoulder
Donaghan	69	m	Telehealth + face-to-face	Hip
Hackman	63	m	Telehealth + face-to-face	Hip
Holly	54	f	Telehealth + face-to-face	Groin
Sybill	61	f	Telehealth + face-to-face	Shoulder
Kurt	61	m	Usual care	Knee
Archie	42	m	Usual care	Foot

Figure 5: An evaluative patient framework of the acceptability of PhysioDirect



The evaluative patient framework for the acceptability of the PhysioDirect service shows that patients accessed physiotherapy services through the PhysioDirect service. Patients experienced access to physiotherapy in a number of different ways, with patients often perceiving the PhysioDirect service as a 'stepping point' to face-to-face physiotherapy. The model shows that patients evaluated the service in terms of the acceptable and the less acceptable features. The acceptable features of PhysioDirect centred upon issues concerning access, the physiotherapist and the patients' self-management of musculoskeletal pain, whilst the less acceptable features of PhysioDirect focused upon the 'visual access' in terms of the lack of a face-to-face component of the telephone assessment. The qualitative evidence also suggests that when evaluating the service patients traded off the less acceptable features of the service for the more acceptable features. The reasons why patients chose not to use the PhysioDirect service varied from the simple to the complex, and the evidence suggests that there are similarities between these reasons and the reasons that patients in the trial did not attend (DNA) usual physiotherapy care. In their evaluation for the service, patients also discussed the future developments of PhysioDirect in the context of current developments in technology. The next section begins by exploring patients' expectations, perceptions and experiences of the PhysioDirect service.

4.3 Expectations of the PhysioDirect service

This theme highlights the effect that patient expectations had on whether they engaged with, and how they evaluated the PhysioDirect service. Figure 5 (page 109) shows how expectations of the service influenced how they evaluated the PhysioDirect service. It also demonstrates that patients' expectations also influenced whether they decided not to contact the telephone service after they

had been randomised and had consented to take part in the (randomised control trial) RCT, details of which are presented in section 4.4 in this chapter. The difference between what occurs in usual care physiotherapy assessments and what patients experienced in the PhysioDirect service has previously been explained in Chapter 1, section 7. Of the 57 patients interviewed, 42 reported that they had received physiotherapy previously. There was evidence in the qualitative data that patients' expectations of the PhysioDirect service were partially based upon this previous experience.

The evidence demonstrates that some patients had a fixed idea of what physiotherapy would comprise and felt that the PhysioDirect service 'was not physiotherapy' and therefore, would not meet their needs. For these patients, physiotherapy was perceived to be a treatment that must be physically 'hands-on' and 'done to them', and for that reason telephone-based physiotherapy seemed rather senseless.

> *"Well, you wouldn't call it physiotherapy would you, not over the phone. You can't do physiotherapy over the phone, can you?"* Steve, age 40, telehealth only

This example provides evidence that some patients felt sceptical towards the PhysioDirect service, finding it difficult to believe that a physiotherapist could assess or treat musculoskeletal problems over the telephone given that their previous experience and understanding of physiotherapy was of something that involved physical and visual interaction. Some accounts suggested that they struggled to see the telephone as a medium for anything other than arranging

appointments and that they had an expectation that they would be seen face-to-face by a physiotherapist. The example of Lucas is presented as a case that demonstrates those unmet expectations. Lucas's expectation of the PhysioDirect service, despite the trial information leaflet and consent process, was to be seen face-to-face after the PhysioDirect telephone call, and he seemed quite surprised that he did not consequently receive a face-to-face appointment.

> *"I thought I might get some advice on the phone which means I can start early before my appointment and I was actually quite surprised I didn't get an appointment at all."* Lucas, age 34, telehealth only

Lucas was disappointed with the PhysioDirect service overall. He felt he was misdiagnosed by both the GP initially and then by the physiotherapist over the telephone. When asked why he did not re-contact the PhysioDirect service, he explained that he had been advised by the physiotherapist that he did not need a face-to-face appointment and that the exercises he had been advised to do should help resolve his problem. It seems that Lucas's expectation to be seen face-to-face affected his perception of the acceptability of the PhysioDirect service. He reported that the physiotherapist did not ascertain what the patient believed the problem was and that they misdiagnosed the problem over the telephone. In addition, he perceived that the exercises that the physiotherapist sent to him in the post were insufficient, and subsequently sought private treatment. Although trial-related issues have largely been excluded from this analysis (see Chapter 3, section 10.5) it is acknowledged that the possibility of improved access to physiotherapy largely influenced Lucas's decision to participate in the trial. He had expected that the physiotherapist who assessed him on the telephone would then

invite him for a face-to-face consultation. Participation in the RCT was seen as a way to reduce the waiting time for physiotherapy treatment. He had misunderstood the new service. As a patient designated to the PhysioDirect telehealth-only arm, Lucas did not have a good experience of the PhysioDirect service. After the PhysioDirect telephone consultation and receipt of the supplementary postal information, Lucas decided to consult a private physiotherapist. It is not clear whether the physiotherapist who assessed Lucas over the telephone was aware of his expectation to be seen face-to-face or whether or not that information would have changed the physiotherapist's decision to treat Lucas with telephone advice only. Clearly, the PhysioDirect service was not perceived by some patients to be 'proper' physiotherapy due to their expectations, most often developed through previous experience of usual physiotherapy care (see section 4.3). The implications are that if patients' expectations of the PhysioDirect service are not met, or they subsequently do not find the service to be beneficial, patients will probably evaluate the service less favourably, as highlighted in Figure 5, page 109.

However, there was other evidence in the interviews that some patients who were initially sceptical of the PhysioDirect service, and who thought that physiotherapy could not be delivered sufficiently well over the telephone, changed their minds after using the PhysioDirect service. An example of this is presented in the case of Giro.

> *"I suppose initially I thought it was second best, um, you know, as compared to a face-to-face interview."*

"Can I ask why you thought that?" Interviewer

"Erm, possibly because you can demonstrate more clearly to whoever's interviewing you where the pain is and exactly how it, the area it's in and how it occurs. But otherwise, no, I don't think it was."

And, why would you think that would be important? Interviewer

"I don't know really. Erm, just that the physiotherapist would have a clear idea of exactly how you were affected I suppose. I think, on second thoughts, you know, after I'd done it that wasn't really so necessary, that whoever you were talking to would be expert enough to understand how the pain affected you and whereabouts and as you described it. This is a condition they must meet with over and over again I would have thought. That was just an initial response. I think on reflection it's quite good actually." Giro, age 80, telehealth only.

This highlights a change in some patients' perceptions from negative to positive after they actually experienced the PhysioDirect service. It appears that their opinion of the service had changed from the perception that 'proper' physiotherapy was impossible via the telephone, towards a belief that effective physiotherapy assessment could be telephone based. There was no evidence from the interviews that the patients randomised to usual care were relieved about their treatment allocation; on the contrary, there was an example of a patient who hoped to be randomised to the PhysioDirect arm of the trial, as he perceived he would have faster access to physiotherapy advice. The finding that patients'

expectations are based upon their previous experience of physiotherapy is similar to the findings of (Hills and Kitchen, 2007a, Barron *et al.,* 2007, Metcalfe and Moffett, 2005). This suggests that patients' previous experience of physiotherapy influences their subsequent preferences for face-to-face care. It also implies that those patients with unrealistic expectations of PhysioDirect may find the service unacceptable. The implications of these findings are further discussed in Chapter 7, section 3.5. The next section in the model relates to evidence of how patients accessed physiotherapy services through the PhysioDirect system, and is discussed in the next section of the chapter.

4.4 PhysioDirect as a 'point of access'

This section of the chapter describes how patients perceived PhysioDirect as an access point to physiotherapy services. The experiences of patients contacting the PhysioDirect service are provided, highlighting that the PhysioDirect service was viewed as a stage within the existing physiotherapy service. As previously described in Chapter 3, section 5.1, patients who consented to take part in the PhysioDirect trial were randomised to either the PhysioDirect trial arm or the usual care arm. Patients in the PhysioDirect arm were sent a letter inviting them to call a number at a time that was convenient to them, when they would be assessed over the telephone by a physiotherapist. The physiotherapist, together with the patient, would then decide whether the patient could be treated on the telephone with advice and suggested exercise or whether they needed to be invited into the physiotherapy department for a face-to-face consultation. Patients randomised to usual care were invited to attend a face-to-face appointment dependent upon the waiting time of the corresponding Primary Care Trust (PCT). The qualitative interviews with patients reflected the range of possible pathways into the

PhysioDirect service. These pathways can be categorised into four distinct groups: direct access, call-back service, difficulty in access and failed to access. (See Table 8 below and Table 2 (page 73) for further details about the number of patients interviewed in each of these groups).

Table 8: Patients' views on PhysioDirect as an access point to physiotherapy services

Theme	Description	Illustrative quotations
PhysioDirect as an 'access point'		
Direct access	Patients got through to the service when they wanted without any difficulty.	*"I got through alright, there was no problem getting through."* Walter, age 79, telehealth only *"I must have picked a convenient time because she just answered the phone."* Lynn, age 69, telehealth only
Call-back service	Patients rang the service and were offered a call-back at a time that was acceptable to them.	*"I phoned this number, she took my details, telephone number and said I will get the person to phone you back and that happened within the hour."* Somerton, age 51, telehealth only *"Yeah, I got through without problems. She was busy at the time and, just asked could I, would it be alright if they phoned back later in the afternoon."* Peter, age 74, telehealth only *"It was really busy when I first rung so they rung me back about half an hour after I'd originally rung."* Robert, age 30, telehealth only *"It was very easy to get through. I think I rang and the physio wasn't available but arranged to ring back at an agreed time"* Bridgette, age 35, telehealth only
Difficulty in access	Problems arose when the PhysioDirect service was busy and patients were unable to get through.	*"It took quite a bit to get through. That was a bit annoying. It took several calls to get through."* Lucy, age 53, telehealth + face-to-face contact. *"That was a little bit of a problem, to get through"* Wendy, age 58, telehealth only
Failed access	Patients were unable to access physiotherapy care	*"I can't get the phone call to get in with them because of the issues. Now, if they did a five until six yes, I could get in. If they did perhaps a Saturday morning, yeah, that suits me fine, that's even perfect."* Pauline, age 43, randomised and didn't ring

Although there were four possible pathways, most of the patients accessed the service directly or used the call-back service, experiencing no problems. They

contacted the service at a time convenient to them and got through to a physiotherapist straight away or they were called back at a convenient time. The most common experience of the patients interviewed that were randomised to the PhysioDirect service were that they experienced the telephone contact only (n=25) or they experienced PhysioDirect and face-to-face care (n=13). From those 38 patients; 13 got through to a physiotherapist who assessed them immediately, 12 patients experienced the PhysioDirect service as a call-back service, 5 patients described instances where they tried to contact the PhysioDirect service and were unable to get through, but after persisting in calling the service were eventually successful. The remaining patients could if it was the physiotherapist who contacted them or if they contacted themselves contacted the service. It was reported that difficulty in accessing the service meant that some patients became frustrated with the PhysioDirect service.

Patients also perceived PhysioDirect as an early stage in access to physiotherapy services. During the interviews, patients' referred to the PhysioDirect service as the 'first stage' in accessing physiotherapy and talking on the telephone to a physiotherapist was seen as the 'first step' in this process. This was a consistent theme across the four arms (telehealth only, telehealth + face-to-face contact, randomised but did not ring and usual care patients). Patients perceived that the PhysioDirect service already existed within the healthcare system and that the level of input from physiotherapists would increase, depending upon the complexity of the problem. The second stage of care was described by patients who were invited for a face-to-face appointment. A range of patient experiences were described, with some patients accepting that the PhysioDirect service provided the 'first stage' of physiotherapy care, whilst others felt that the

PhysioDirect service provided an unnecessary stage which actually impaired their access to ‘proper’ physiotherapy services. To illustrate these contrasting views the two cases of Somerton and Walter are provided.

Somerton, a participant who received telehealth only, was referred by his GP to musculoskeletal physiotherapy services because of a shoulder injury he sustained at work, and he described PhysioDirect as the ‘first stage’. In this case, the physiotherapist decided that Somerton’s problem could be managed with the telephone package of care; however, Somerton assumed that there was another ‘stage’ which he could access if he needed to. He perceived that PhysioDirect was a stage within an existing healthcare system and felt confident that if the treatment provided at that time by PhysioDirect was not successful he would then be able to access another, more appropriate, level of care at a later stage. However, he felt he did not need to as the PhysioDirect telephone service was successful and therefore acceptable.

> *“I was fine because as I say, it’s like anything. You’ve got to try something to see if you can resolve the problem and it’s easier to resolve it in the simplest ways rather than go into the extreme ways, because maybe you don’t need to go to the extreme, you can do the first stage first and that maybe resolves it. Or maybe you might have to go to the second stage and that resolves it.”* Somerton, age 53, telehealth only

In contrast, Walter received telehealth only, yet he felt that this had not resolved his problem and was eager to go to the ‘next stage’ of treatment.

> *"It's just annoying. Well, I've done that and as far as I'm concerned now I'll ring up tomorrow and say 'What's the next stage, I'm not happy with what's happening, are you proposing anything else or do I have to go back to the doctor and see what he can do?' Because, as far as it is at the moment, it's a waste of time. It's done nothing for me at all."* Walter, age 79, telehealth only

Walter was dissatisfied with PhysioDirect's telehealth service; he did not find it helpful and he was unsure of how to proceed to access further treatment. One interpretation is that Walter considered the PhysioDirect telephone call as barrier to 'proper' physiotherapy services. This meant that Walter's experience left him feeling dissatisfied with the PhysioDirect service due to its lack of success. Clearly, such patient perceptions could be a problem for PhysioDirect treatment services if they are the only way to access physiotherapy services. There are two contrasting views here, which can be illustrated by two case examples: one in which the idea of stepped or 'staged' care worked well and was understood by the patient and another in which the PhysioDirect telephone call was perceived as an unnecessary barrier to accessing the 'right' physiotherapy care (see Chapter 7, section 3.1 for further discussion regarding stepped care models in healthcare). The above examples have highlighted that access to healthcare services is extremely important in terms of how patients evaluate healthcare services (Campbell *et al.,* 2000, Knight *et al.,* 2010). However, many patients reported that the PhysioDirect service increased access to physiotherapy advice, which was perceived as a positive and acceptable feature. These details, along with other acceptable features of the PhysioDirect service, are presented in the following sections.

4.5 Acceptable features of the PhysioDirect service

Figure 5, section 4.2, page 109 shows that the patients evaluated the service in terms of the acceptable qualities of the PhysioDirect service, for example what patients felt they gained and benefited from by using the PhysioDirect service. The features of PhysioDirect that patients found acceptable were that the service was quick and convenient; it provided patients with information and advice from helpful physiotherapists that would help them to self-manage their condition; and the service did not impair existing referral care pathways.

4.5.1 A quick and convenient service

One of the most acceptable features of the PhysioDirect service reflected in patients' narratives was that it was experienced as quick, efficient and convenient. Patients preferred the immediacy of the telephone advice to the long waiting times of face-to-face physiotherapy care. Other examples are provided in Table 9.

Table 9: Illustrative quotations describing the PhysioDirect service as convenient

Theme	Description	Illustrative quotations
Acceptable features of the PhysioDirect service		
Quick and convenient service	PhysioDirect service was perceived as quick, efficient and reduced the time to speak to a professional about their problem.	*"Well, the thing I liked about it really, it didn't take long for them to get in touch with me."* Mary, age 76, telehealth only
		"The immediacy of it was good." Helen, age 59, telehealth only
		"It was quick. That was the, um, it seemed to plug the gap of having to wait for an appointment." Peter, age 74, telehealth only
		"It's a very good service, very quick, very prompt, very thorough." Robert, age 30, telehealth only
		"It was quite quick, so I was quite impressed." Faith, age 52, telehealth only
		"It was very, very good, a very quick service." Alyssa, age 45, telehealth only

A reduction in waiting times to access physiotherapy is one of the key arguments for the use of PhysioDirect telephone advice and treatment services (Foster *et al.,* 2011). Waiting times are also important with respect to patients' satisfaction with physiotherapy treatment (Hills and Kitchen, 2007c) in both musculoskeletal (Department of Health, 2006a) and healthcare services (Campbell *et al.,* 2000). In the qualitative interviews there was evidence that usual care patients were less satisfied with their wait for physiotherapy contact. One patient felt that if he had been randomised to the PhysioDirect service in the trial, instead of usual care, he may have had faster access to advice from a physiotherapist.

> *"It was great. The downside was, probably you're gonna refer to it later, was I wasted six weeks when I could have been given, been told exactly what I needed to do within two days or even the same day or whatever once the swelling had gone down a bit because everything he did and everything else was exactly as he said it would be. So the only downside really was the delay in doing it. You know wasted almost six or seven weeks of my time, my life, hobbling around when it could have been started earlier quite easily."* Arnold, age 67, usual care

Patients thought that an ideal wait for a face-to-face physiotherapy appointment was no longer than two weeks of being referred from the GP. Kurt, a patient randomised to usual care, described how he felt about this:

> "*It's not a viable proposition to say I'm gonna go to the physio tomorrow. Um because life isn't like that but certainly I would have thought within one or two weeks um of being referred and you should have had some form of*

> *consultation done within that period of time, you know to even to turn around say well all you need is exercise you know or whatever."* Kurt, age 61, usual care

Patients also liked being able to access the PhysioDirect service in their own homes and places of work, and described not having to go to the physiotherapy outpatient department, take time off work or pay for hospital parking as convenient.

> *"If you're getting to see the physiotherapist, I mean, you have to make the journey, you have to go, you have to sit there. You very rarely get in at the time of your appointment, you usually wait half an hour, more, um, then you go in and you're in strange surroundings. Whereas, on the telephone, you're in your own home, it's immediate, you have no waiting time, you can be doing it in your pyjamas if you want."* Lynn, age 69, telehealth only

There was also evidence that the phone call was seen as a convenient opportunity to receive advice from a physiotherapist regarding her back problem, as described by Bronya:

> "*I just saw a golden opportunity with this. And, there must be other people like me who, their lifestyle is so busy that actually, it's quite great to just fit it in somewhere."* Lynn, age 69, telehealth only

Patients found the PhysioDirect service quick and convenient and evaluated this as an acceptable feature of the service. They felt that long National Health Service

(NHS) physiotherapist waiting times are unacceptable and suggested that a wait of two weeks from the date of the GP referral to the physiotherapy service would be more appropriate. This was also evident in patients in the usual care patient group, who also felt that they waited too long for their physiotherapy appointment. Similar results were found within the views of the physiotherapists and physiotherapy managers, and are discussed in Chapter 5, section 2.1.1. Further discussions about the implications of these findings are presented in Chapter 7, section 3.1. The patients valued the advice of the PhysioDirect physiotherapist in their assessment of their musculoskeletal problem over the telephone.

4.5.2 The helpful PhysioDirect physiotherapist

This next section explores how patients perceived the PhysioDirect physiotherapists. The attributes of the physiotherapists providing the PhysioDirect service were perceived by patients to be very important. Patients interviewed were very complimentary about the physiotherapists in both the usual care and PhysioDirect trial arms. Patients in the PhysioDirect group mentioned the physiotherapists more frequently than those in usual care. None of the patients interviewed had anything negative to say regarding the physiotherapists' professionalism. The views about the physiotherapists seemed to be a key factor in how patients evaluated the service itself – see Table 10.

Patients randomised to the PhysioDirect service also described the physiotherapist as the 'knowledge provider', able to advise, provide information on the condition and give time frames for the patient to phone back if their problem did not improve as expected.

Table 10: Illustrative quotations describing the PhysioDirect physiotherapist

Theme	Description	Illustrative quotations
Acceptable features of the PhysioDirect service		
The helpful physiotherapist	The PhysioDirect physiotherapists were perceived as being a positive, helpful, polite, pleasant, knowledgeable..	*"I found her very clear, thorough and very pleasant. She was very pleasant. She really was good."* Wendy, age 58, telehealth only
		"Although his telephone manner and his questions were very good." Mark, age 65, telehealth only
		"Very helpful, very nice. Yes. Very helpful." Lynn, age 69, telehealth only
		"*Oh, it was perfectly fine. I mean, polite, efficient but friendly."* Lucas, age 34, telehealth only
		"She was very good. She asked me a lot of questions to enable her to be able to get a good diagnosis over the phone." Peter, age 74, telehealth only
		"She was very, very good. Yes. We spent a lot of time, yes, no, it was very, very useful. And, you know, informed." Helen, age 59, telehealth only

This perception that the physiotherapist 'gives the patient knowledge' links to the physiotherapist providing patients with self-management advice. An example of this is Somerton, who found it helpful to know that he could phone back at any time and receive more advice.

> *"It was the fact knowing that that person, sort of, seemed to understand what you were going through and just trying to be helpful and give you advice and then it's left for you to try it and then take it from there and then if there's a problem that person would still be there to phone and get more advice on it if you needed it."* Somerton, age 51, telehealth only

It was reassuring to this patient that the physiotherapist had knowledge of the prognosis of his problem. He also felt empowered and was able to trust the physiotherapist's judgement that something else could be done if his problem was not resolved. Patients perceived the physiotherapists to be polite, helpful and friendly. These are all positive and complimentary terms, highlighting that the physiotherapists who provided the PhysioDirect service were perceived as acceptable to patients. Moreover, although patients were not negative about the physiotherapists in usual care, it appears that the lack of visual cues inherent in normal, face-to-face consultations served to enhance the importance of key physiotherapist attributes during telephone consultations. These findings, therefore, highlight that the conduct of PhysioDirect physiotherapists would be acceptable if the service was to be implemented across other PCTs. As previously highlighted, the patients viewed the physiotherapists as 'knowledge providers'. The next section focuses in more detail upon how the PhysioDirect service was perceived by patients as providing self-management advice.

4.5.3 PhysioDirect effective at providing self-management

Self-management is defined as being responsible for day-to-day management of living with a chronic disease or engaging in some activity that promotes health (Lorig and Holman, 2003). This includes the learning of skills such as problem solving and decision making in response to fluctuating signs and symptoms, and taking action, i.e. learning how to change behaviour (Lorig and Holman, 2003). The PhysioDirect service was perceived by patients as effective in providing self-management advice. By its very nature, the concept of the PhysioDirect service encourages self-management as it focuses on giving advice and prescribing a home exercise programme. The physiotherapy treatment in PhysioDirect was

described by patients as providing them with the knowledge to carry out their own physiotherapy.

> *"It's a good thing. Erm, because obviously, not everybody knows the best way in order to aid their injury. When I hurt my ankle and they sent out the information to me, um, after the initial over the phone consultation, um, with the Physio Direct, they sent me out a book of all the different exercises in order to aid my ankle, in order to strengthen that and a lot of them, I wouldn't have thought were ones that would help me but it was very good, a very good service for, you know, they were all ticked or marked which ones I needed to do specifically in order to aid myself to get back to work as soon as I could."* Robert, 30, telehealth only

From this qualitative study, it appears that patients accepted PhysioDirect as a medium for facilitating self-management of their musculoskeletal problem. Despite clear parallels between the PhysioDirect service and the more general national initiatives to improve self-management of long-term conditions (Department of Health, 2009c, Department of Health, 2009a, Department of Health, 2005b) there are important differences, most notably that the PhysioDirect service also includes patients with early, self-limiting and acute conditions. What is clear from the qualitative evidence is that providing advice and information over the telephone, with patients performing exercise prescribed by the physiotherapist, was perceived, by some, as self-management. These findings are similar to studies which found that patients accept self-management advice and support for musculoskeletal problems such as osteoarthritis (OA) and back pain over the telephone (Taylor *et al.,* 2002, Allen *et al.,* 2010, René *et al.,* 2005). Patients'

ability to self-manage is high up on the UK government's agenda (Department of Health, 2005c). In addition, the Department of Health (DoH) intends patients to experience the health service as 'seamless', aiming to achieve clear and fluid transitions between services (Department of Health, 2005c). The patients' perceptions and experiences of how the PhysioDirect service fitted within existing healthcare services is explored in the next section.

4.5.4 PhysioDirect does not impair links between services

The PhysioDirect service did not appear to have any negative impact on existing links and pathways between health services. Integration of health services for musculoskeletal patients can improve access to appropriate care, reduce the number of orthopaedic referrals and reduce waiting times (Maddison *et al.,* 2004). Although this is not specifically related to PhysioDirect telehealth services, it highlights the concern about whether new services could result in increased fragmentation of existing services or inhibit patients' pathways to other care, when that is necessary. In the case of musculoskeletal services, most commonly this relates to the patient journey from physiotherapy services to other clinicians such as the GP for further investigations, or to orthopaedic surgeons, rheumatologists or other allied health professionals. There was some evidence within patient narratives that suggested that the PhysioDirect service was well integrated with these other services, such as the GP, occupational therapy and domiciliary services. A case demonstrating this is Bronya. She was a female patient randomised to the PhysioDirect service and was assessed by a physiotherapist for a back problem.

> *"So, they suggested I went to my GP for a blood test and wrote to the GP to say to expect me for a blood test and, um, I then had the problem trying to book myself in to the GP and actually, the GP rang me and said listen, we've had a letter from the physiotherapy department, you must come in for a blood test, which was what I did. And actually, that proved negative so it's not the onset of rheumatoid arthritis, but, I would have never thought about it. I mean, my whole family was arthritic. So, I was impressed with the fact that they said you must go and do it but actually wrote to my GP and tried to chase me up to come and have the blood test done. But, you know, that's been confirmed."* Bronya, age 51, telehealth only

Steven's case also illustrates how links between services were not impaired by the introduction of PhysioDirect. Steven's physiotherapy records documented that he had received telephone assessment and was then referred for face-to-face contact. At his interview it became clear that he had not been seen in the physiotherapy outpatients department, but had actually been referred to the domiciliary physiotherapy service. The physiotherapist who assessed him in PhysioDirect referred him to domiciliary services to receive physiotherapy treatment at home.

> *"Well, it's been very good as far as I'm concerned. I didn't expect to have people calling on me and asking me questions. I thought they'd just leave you to get on with it. I was quite amazed, really and truly."* Steven, age 77, telehealth + face-to-face contact

Both cases provide evidence that the PhysioDirect service did not impair the patient journey or integration of musculoskeletal services; indeed, these examples show how care pathways can be ‘seamless’ and demonstrate a continuity of care that patients are very pleased with. The PhysioDirect service seemed to have worked well when integrated within the larger referral systems of the NHS. It appeared not to affect how onward patients’ referrals were arranged. This is important, as if it had slowed down onward referral or introduced a barrier to existing systems, it could have more widely affected the acceptability and implementation of the PhysioDirect service. The next section introduces the case of Somerton, which provides a case example of how the PhysioDirect service was evaluated and accepted.

4.5.5 Case example: Somerton

The case of Somerton is presented in order to illustrate some of the key themes of patient acceptability of the PhysioDirect service. It is based solely on the retrospective narrative of Somerton, who is male, aged 53, lives with his wife and two children in a rural area in the UK and is representative of the range of themes present in patients who found the PhysioDirect service acceptable. At the time of the interview, he was working full time (nightshift) at the local supermarket. He was referred to physiotherapy for a shoulder injury which he sustained at work whilst moving trolleys from the shipping area into the warehouse. He explained that he had pain in his shoulder which was disturbing his sleep. In order to resolve the problem, Somerton consulted a complementary health practitioner outside of the NHS. In that assessment she suggested that she could not ‘feel anything’ and thought that the problem was ‘deep’, and she was unable to treat it. Somerton subsequently visited his GP, who informed him that he had strained the muscles in

his shoulder, prescribed him some anti-inflammatory medication and referred him to physiotherapy. After the GP consultation Somerton received the trial information in the post, consented to take part and was then was randomised to the PhysioDirect arm. Somerton rang the PhysioDirect service and spoke to an administrator who took his number and arranged for the physiotherapist to return his call.

> *"I phoned her and there was a, there must be like a desk I suppose, a helpdesk and she said right, I'll get the relevant person to phone you back so I'm going to take your number. So, I actually wasn't on the phone very long. That's right. I remember now. I phoned this number, she took my details, telephone number and said I will get the person to phone you back and that happened within the hour. Yes, that's why, yeah, that's why she phoned me."*

The physiotherapist assessed Somerton's shoulder problem over the telephone. She asked him to move his neck and arms in certain directions, and he described this as 'doing your own physiotherapy over the telephone'. Following these questions, the physiotherapist confirmed the diagnosis of the GP that he had strained the muscles in his shoulder. She subsequently provided him with advice over the telephone in relation to how to manage his shoulder pain whilst at work, and sent him an exercise leaflet which consisted of a home exercise programme. Importantly to Somerton, the physiotherapist reassured him and recommended that he was to re-contact the service if his problem did not resolve.

> *"Oh, that's right, after the telephone conversation they send this leaflet out to you, for you to do some exercises and she said we'll leave it six or eight weeks and then, if everything was okay, then she didn't hear from me then she'd assume everything would be okay and that then I was going to have to wait for the next letter to come, which is the next stage of the process. But, if I had any problems in the meantime, I could phone her or I felt that coming up to the end of the six weeks that it wasn't working I could then phone her and she'd advise me on the next stage. So, there was always that communication and also, in the back of your mind, if things weren't going right then there was always somebody at the end of the phone that you could actually phone and speak to her.*

Somerton based his evaluation of the quality of the consultation on the communication that he had with the physiotherapist, because he did not receive any face-to-face contact. The manner in which the physiotherapist provided clear information over the telephone, and the fact that he could contact the service at any time within the six weeks, reassured Somerton that he could be seen if his problem was not resolved. This appeared to make the lack of face-to-face contact and difficulty describing his problem over the telephone acceptable. It also suggests that there was a level of trust in the knowledge of the physiotherapist between the physiotherapist and patient, and, although Somerton felt that the relationship was impaired due to the lack of face-to-face contact, it was still seen as working well.

Another theme to emerge from Somerton's narrative is that he perceived the PhysioDirect service as a 'stage of care' and viewed speaking to a physiotherapist

as a ‘step’ in an already existing system. He reported that the increase in stages would be relative to the amount of input that would be needed to solve his shoulder problem, for example the higher the stage number, the greater the level of input needed.

> *“And then, say if that didn’t work, then getting in contact with yourselves and getting advice and to go through the scenario of explaining how it happened and what had happened and that and then, that would be stage two. And then obviously, if it didn’t quite work, obviously, I would say there would always be a stage three after that when they could give out a little bit more advice to try something more and then I would say stage four would probably be actually coming to see somebody after a period of time. And then actually having physio, which would be stage four. And then obviously, if that didn’t work then obviously there would be a stage five.*

Due to the long-established GP gatekeeper role in managing access to treatments in the NHS (Loudon, 2008, Forrest, 2003), the concept of staged or stepped care might have social and cultural explanations. The most minimal or brief intervention is recommended first; if that intervention is not successful, another level of treatment, which would be more invasive, need greater expertise and be more expensive, is tried. This might explain why Somerton perceived the PhysioDirect service as a stepped approach to physiotherapy. Somerton’s narrative describes the difference between the GP and the physiotherapist, with the GP not having the expertise to treat musculoskeletal problems, and he uses the word ‘step’ to describe this.

> *"I suppose it's a step between your doctor can't always cure everything, so, the doctors there for, sort of, certain things and then you've got the people in-between, like the doctor's aid, I suppose, in a sense, you know, like another derivative from a doctor I suppose. So, they're there, people are there to specialise in certain things."*

Somerton believed that physiotherapists and GPs have different roles in the management and treatment of musculoskeletal problems. In the interview, Somerton reported that he thought physiotherapists were the 'knowledge providers', giving patients knowledge in order to help them to restore normal function.

> *"Well obviously, they understand with their training what different things needs to be done and how they can help so they try and put that knowledge to you and hopefully, you follow what they say so that you get back to where you want to be quickly and safely as possible."*

Somerton viewed the role of the PhysioDirect service positively. It provided him with sufficient and effective self-management advice; he was able manage his condition by combining both his own and his practitioner's knowledge. This concept is supported by Ong *et al.* (2011) who argue that patients make decisions about their own self-management based upon the balance between lay and professional systems. As previously documented, Somerton was mostly positive about the PhysioDirect contact he received and was happy to receive the physiotherapy assessment over the telephone. From his experience of the PhysioDirect service, he reported that he would use the service again for a

different problem; however, he would need to be directed to use it after speaking to his GP.

> *"Yes, I don't see why not, yes. I mean, I hope I don't have to but knowing it's there, I wouldn't hesitate to, if the doctor said can we go down this route again, I would have no hesitation to say yes, no problem at all."*

He continues to explain that he would be unsure about whether a problem was specifically physiotherapy related.

> *"If something has happened, I suppose it depends really if I felt it was physio orientated but then, how do you know what's physio orientated? So, I don't know, that'd be a difficult one. If I maybe thought it was physio orientated yes, I probably would do but then, not that I go to the doctors very often but I tend to go if something's wrong, I just go to the doctors and take it from there."*

On asking Somerton about how he imagined a future PhysioDirect service, he suggested that the service could be improved by assessment being provided by a physiotherapist over the internet with a laptop fitted with a web cam. This would allow the physiotherapist and the patient to have a visual component to their interaction. It is interesting to note that, although Somerton was happy and positive about the service he had received through PhysioDirect, he still suggested that a future service should involve visual contact.

> *"Yes, fine. I suppose looking ahead, I suppose your service could be, done on a one-to-one on broadband but that's only if everybody had the webcam, you know. The way things are going, I mean, these things come out with webcams on them, laptops are coming out with webcams on them but, I mean, that could be the future. Then, actually, you're talking one-to-one aren't you, face-to-face then but again, that would be a long, well, I don't know, it could be 10 years down the line, it could be 20 years down the line."*

The case of Somerton illustrates the key themes that are present within a patient's evaluation of the PhysioDirect service. Overall, Somerton found the PhysioDirect service acceptable, it met his expectations and his shoulder problem resolved. Somerton was reassured by the physiotherapists about who could offer him other treatment options if his shoulder problem did not improve. This is important, as it appears that the interaction with the therapists reassured him and made him feel confident that he could contact the service at any time. The next section of the chapter explores in detail how patients traded off the less acceptable features of PhysioDirect with its more acceptable features in their evaluation of the PhysioDirect service.

4.6. Trade-offs

The sub-theme of 'trade-offs' highlights one of the key findings of how patients evaluated the PhysioDirect service. Trade-offs are how patients evaluate and weigh up different aspects of their healthcare experience. This concept is shown in Figure 5, section 4.2, page 109. A trade-off is similar to a compromise, in which each party gives up part of a demand in return for a more acceptable element and

deviations from an original goal are involved. As described previously in this chapter (see section 4.5.1), patients commented on how rapid they thought the PhysioDirect service was and that it appeared to reduce the amount of time spent waiting for physiotherapy contact. It also appeared that the most frequent patient trade-off centred upon the perception that the PhysioDirect service was quicker than waiting for a face-to-face appointment, and this was traded favourably against other less acceptable attributes. To illustrate this finding, Robert, a patient randomised to the PhysioDirect service who received telephone care only, is presented.

> *"Not having somebody there seeing how far you can bend it or move it in a certain direction just takes a little bit of the personal side out of it. But, you know, on the flip side, it takes a lot of the time waiting to be able to see a physiotherapist."* Robert, age 30, telehealth only

Robert traded the lack of face-to-face contact with the physiotherapist who was unable to see the movement of his ankle in return for the speed of the service, as he perceived that the sooner he started a physiotherapy programme, the quicker he would be able to return to work. Another example is the case of Lynn, who traded off the convenience of receiving the service in her own home with the lack of personal contact.

> *"I mean, you have to make the journey, you have to go, you have to sit there, you very rarely get in at the time of your appointment, you usually wait half an hour, more, um, then you go in and you're in strange*

> *surroundings whereas on the telephone, you're in your own home, it's immediate, you have no waiting time."* Lynn, age 69, telehealth only

Although some of the older patients interviewed could not recall the telephone call, it was clear that they found it more convenient to be assessed using PhysioDirect compared to travelling to the physiotherapy outpatient department to be assessed face-to-face.

> *"Because it's in the comfort of your own home and you're talking to somebody, you know, who knows about these things and, er, you haven't got the problem of driving somewhere or making a journey somewhere or that sort of thing. It's easier, isn't it? You're just sitting in your own home talking to somebody."* Giro, age 80, telehealth only

Giro found it easier to speak to someone on the telephone rather than travelling to a face-to-face appointment, so he was trading off these factors against each other. He placed the greatest priority on being able to speak to the physiotherapist while remaining in his own home, rather than driving to a consultation to be assessed by a physiotherapist, describing how he experienced neck pain when driving long distances.

> *"Driving is becoming a bit of a trial in that I can't drive that far without getting into pain."* Giro, age 80, telehealth only

This, along with other data in his interview, suggested that he weighed up what was the most suitable course of action. Although Giro initially thought face-to-face

care was preferable, after reflecting upon the process he experienced, he thought that PhysioDirect was an effective way to deliver physiotherapy treatment.

Overall, it was clear that patients made risk–benefit trade-offs when evaluating the PhysioDirect service. The most common trade-off was that between speed of access to the service and reduction in personal contact. These data also highlighted that patients have different preferences and priorities regarding the provision of physiotherapy. What is not clear, however, is how those attributes interacted with external variables, for example whether there were different patient trade-offs that depended on whether or not patients had an acute or chronic problem, or whether gender or social status affected which attributes were traded off. Whilst trade-offs are an important concept to highlight, and an issue to consider, if waiting times were reduced to a maximum of two weeks for face-to-face physiotherapy, the trade-offs made by patients for speed of access may mean that the PhysioDirect service would perhaps be considered no longer acceptable. These findings are similar to those found with patients deciding to consult their GP in primary care (Salisbury *et al.,* 2007, Gerard *et al.,* 2008, Rubin *et al.,* 2006). This is the first study to recognise that this also happens in the provision of physiotherapy services. In addition there was no evidence from the qualitative interviews that patients made such a trade-off in usual care.

The qualitative results show that some aspects of the service were evaluated by patients as not acceptable, or dissatisfactory, and these attributes were traded off for more acceptable features, which meant that overall the PhysioDirect service was acceptable. This might explain why patients compromised and made trade offs between the acceptable and less acceptable features of the PhysioDirect

service. It is also known that satisfaction and expectations are linked (McGregor and Hughes, 2002, Metcalfe and Moffett, 2005) as shown in a number of models (Thompson, A.G.H. 1995). The ‘zone of tolerance’ model (as described in Chapter 2, section 2.2) provided evidence that patients’ expectations influenced how patients evaluated a service (Parasuraman *et al.,* 1991). It was considered that a scale of satisfaction could exist in relation to the service, with highly satisfactory at one end and dissatisfactory at the other. The area ranging from adequate to desired levels of satisfaction point is where a service is acceptable. This might also explain why, when a patient had high expectations of the service, a trade-off was insufficient. Commonly, this was when patients’ prior expectation of the service was to be seen face-to-face. Although patients could ask to see a physiotherapist, it appears that at times patients were not confident enough to ask or felt that it was impolite to ask for an appointment (see case example Steve, section 4.2, pages 151-153), or the physiotherapists failed to identify such prior expectations (see case example Lucas, section 4.3, pages 112-113).

As previously highlighted, the most common features that patients traded off were between the personal attributes of the physiotherapist and improved access to the service. It has been shown that the interpersonal relationship aspects of clinical care are important in how patients judge quality (Campbell *et al.,* 2000), and are also found to be one of the most powerful predictors of satisfaction (Knight *et al.,* 2010, McCracken *et al.,* 2002). However, this, as previously explained, may not mean that the service was unacceptable to patients. The next section explores, with an in-depth discussion, the features of the PhysioDirect service that patients evaluated as less acceptable.

4.7 Less acceptable features of PhysioDirect

The qualitative data have provided evidence that shows that in order to evaluate the PhysioDirect service as acceptable many patients traded off the acceptable features with the less acceptable features (see Figure 5, section 4.2, page 109). The less acceptable features centred upon the lack of a visual component of the telephone assessment. This meant that some patients felt that the PhysioDirect service impaired communication between the patient and the physiotherapist and affect how a patient and clinician developed their relationship. In addition, those patients who felt their musculoskeletal problem had not improved perceived that the PhysioDirect service was not acceptable.

4.7.1 PhysioDirect as an 'impersonal' service

The most common negative feature of PhysioDirect perceived by patients was that the telephone care was seen as impersonal. The words 'not personal' were used by patients in their narrative when they described the features they disliked about PhysioDirect. The perceived impersonal nature of the PhysioDirect telephone assessment might have contributed to why patients, although randomised to take part in the trial (also discussed further in this chapter, section 4.7.4), did not contact the PhysioDirect service. On asking patients, in their interviews, if they would have attended a face-to-face appointment if randomised to the usual care arm, two of the ten interviewed would have done so. This is evident in the cases of Hannah and Pauline.

> *"Yes, I probably would have gone to explain the situation, I wouldn't have not gone to an appointment but not picking up the phone is a lot easier than not going to an appointment. It's the face-to-face thing, if you don't go to an*

appointment it's like insulting somebody really but forgetting to make a phone call is different, you know, so, I might have done." .

"Why is that different?" Interviewer

"Because it's, um, it's a face-to-face, personal thing. You know that there's somebody sitting there waiting for you turn up and you don't or you're cancelling your appointment that somebody's gone to the trouble to make for you, whereas a phone call's just a phone call and it can be anytime and anywhere, so, it's less personal." Hannah, age 65, telehealth only

Hannah perceived the telephone call as impersonal, and this explained why she did not contact the PhysioDirect service. She described failure to attend a face-to-face appointment as insulting to the health professional concerned, but did not feel the same about a missed telephone call. The uncertainty of the telephone call was another reason as to why she did not contact the PhysioDirect service.

"I don't know what this phone conversation's going to say. I don't know if it's going to go into my history, I don't know whether it's going to start saying okay then, do you think you can try this now, have you got any pain or anything now. I can't do that in work. I'm in my boss's office when I'm making my phone calls or in the secretary's office. I'm not office-based anywhere. So, I try and do things like that when I'm at home. And I make phone calls to yourself or whatever, make contact through home. I can't take things like that into work. I don't want to. No, no, I wouldn't want to do it anyway. It's personal." Pauline, age 43, randomised and did not ring

Clearly, she considered it was inappropriate to contact the PhysioDirect service whilst at her place of work and was unable to get time off work to telephone the service, whereas this might have been easier for a face-to-face appointment. She felt that the physiotherapy consultation should be a private conversation, and she was unable to achieve this whilst at work. This is highlighted within Pauline's narrative, as she explained that she was unsure about what the telephone conversation might involve and the questions the physiotherapist might ask during the assessment, and she felt uncomfortable discussing personal matters within audible range of her work colleagues and manager. So while the telephone service offered convenience for some, if the patient was contacted at the wrong time and in the wrong place, the service was not convenient. In the case of Pauline, she would have preferred a specific, private place to go to in order to deal with her health problem. This is an important consideration for the service. The problem of the PhysioDirect service being perceived as impersonal was also evident in the case of William.

> *"I don't trust people I don't see". "Well, you know, somebody out of the ether is talking to you, not like you laughing like that or something like that, it is simply not personal enough. It's simply not personal enough. And, I know they've got a lot of work to do but that doesn't make me feel any better, it don't make me feel any better. I still think, you know, I'd like to talk to somebody."* William, age 81, telehealth only

William used the words 'not personal' in his description of the PhysioDirect service and reported that he would still like 'to talk' to someone. This is interesting,

because he would have talked to a physiotherapist over the telephone in the PhysioDirect assessment. It appears that William refers to the word ‘talk’ to mean ‘physical, visual and verbal’ contact. When we listen to someone talking we also watch their lips, their body language and their expressions all at the same time in order to decipher what they are saying. ‘Listening’ consists of watching visual cues as much as of hearing verbal and audible sounds and tones. It could also be suggested that William did not perceive the telephone call as physiotherapy and still wanted face-to-face contact. He also described how he did not trust someone that he was unable to see. This suggests that the inability to see someone has an effect on how trust is developed within a clinical relationship.

In addition, some patients felt unsure about what questions the telephone assessment would consist of, and others could not find a suitable place to take the telephone call. It is interesting to note that none of the usual care patients described the service they received as impersonal in their narrative. This lack of trust in PhysioDirect might be because they were unable to see the physiotherapist and therefore could not put a face to a voice. The lack of visual clues, and the tendency for one-off assessment and treatment consultation in the PhysioDirect service, appeared to contribute to patients’ perceptions that PhysioDirect was impersonal. There was no evidence in the usual care interviews that patients viewed the service as impersonal. An in-depth discussion of how both the physiotherapists and the patients felt about this is presented in Chapter 7, section 3.4.

Patients also reported that the lack of continuity of care meant that they felt it was difficult to build a trusting relationship with the physiotherapist compared to the

face-to-face physiotherapy. The role of the physiotherapist and the rapport they develop with patients are important to clinical relationships (Cooper *et al.,* 2008, Beattie and Nelson, 2008). This is similar in the GP literature, where both patients and GPs value the role of the therapeutic relationship and where the four elements of the relationship are knowledge, trust, loyalty and regard (Freeman and Hughes, 2010, Ridd *et al.,* 2006). Some patients who were interviewed felt that the PhysioDirect service directly affected continuity of care.

> *"I just mean somebody who, you know, I just feel that this PhysioDirect, you are just a number on a piece of paper, but, like I say, if you rang me back in a month's time and actually had a conversation with me, I would feel that that was more personal than me having to ring and getting somebody completely different every time. That's all."* Faith, age 52, telehealth only

It was apparent from one of the interviews that in order to overcome the lack of continuity of care the patient purposively re-contacted the service so that they would speak to the same physiotherapist they had previously spoken to (see case example Steve). This could be partially explained by the need to build a trusting therapeutic relationship, where good care comes from someone who knows the patient on a personal level that is only reached through continuous contact and interaction. Other patients in the study suggested that they did not re-contact the service as they did not want to repeat their information to a different physiotherapist (see section 4.7.4.2). The finding that patients value continuity of care is similar to what is found in the general practice (Freeman and Hughes, 2010, van Walraven *et al.*, 2010) and physiotherapy literature (Beattie *et al.,* 2005, Russell *et al.,* 2012). Therefore, one situation in which patients might find the

PhysioDirect service unacceptable is when they value continuity and do not receive it. The qualitative data also uncovered that the physiotherapists also valued continuity of care. These findings are presented in Chapter 5, section 2.4 and are further explored and discussed in Chapter 7, section 3.4.1.

4.7.2 Communication difficulties

A large proportion of communication is known to be non-verbal (Knapp and Hall, 2009) and the importance of non-verbal communication specifically in clinical relationships has been highlighted (Finset and Del Piccolo, 2010). Non-verbal communication is multifaceted and consists of emotions, with the face being the foremost place for this to occur. Empathy, reassurance and support are often given and received through gestures such as eye contact, a smile or touch (Roter *et al.,* 2006). A concern highlighted by patients who received PhysioDirect telehealth only was the loss of non-verbal communication, i.e. the lack of visual and physical contact.

> *"The person that I spoke to was, you know, pleasant, I won't say polite but pleasant and things like that and, of course, you know, when they're explaining things to you over the phone, you don't see their face and they don't see yours, you know. You don't see that."* William, age 81, telehealth only

Patients felt that the loss of non-verbal cues in the PhysioDirect telehealth assessment affected not only their ability to describe their musculoskeletal symptoms, but also negatively impacted upon the relationship they formed with the physiotherapist.

> *"I think phone calls, for me, fits into a part of life where it, sort of, you ring somebody up, sort it out, put the phone down and you've done it. I don't have ongoing relationships on the phone, except for family. But, it felt odd to conduct a professional relationship on the phone, it just didn't feel very familiar over the phone with somebody to get something done and close it down."* Bridgette, age 35, telehealth only

Other patients had unanswered questions about the advice and information they received over the telephone, and this appeared to result in some patients feeling uncertain about their assessment and diagnosis. It can be suggested that for some patients the lack of non-verbal communication might have led to their inability to fully disclose information which could have affected their physiotherapy treatment, and this was evident in the data.

> *In retrospect, no, because it left me with more questions and like I said, although I knew I could phone them, I didn't want to talk to someone on the phone. I wanted to be able to sit opposite someone face-to-face and say X, Y, Z, you know."* Helen, age 59, telehealth only

Helen described performing the exercises advised by the physiotherapist at home, but also having doubts regarding the specifics of how to perform them. Therefore a lack of supervision brings doubt to the mind of the patient. She still felt unsure about the prognosis for her hand problem and had questions she wanted to ask the physiotherapist which she felt she could not ask over the telephone. She suggested that if she had been offered a face-to-face consultation she would have

felt more able to ask these additional questions about her chronic hand condition. Thus, the PhysioDirect service appeared to inhibit this patient in creating a relationship with the physiotherapist by asking questions over the telephone.

As previously described, in the PhysioDirect arm of the trial, patients were assessed by the physiotherapist over the telephone. If they were advised to attend for a face-to-face physiotherapy appointment, they would then be assessed in the department. The lack of visual cues made it difficult for patients to explain where they experienced pain. For example, a patient in a face-to-face situation would explain where the pain was by physically showing the physiotherapist by pointing to where the pain was on their body with their finger, often pinpointing the exact anatomical position. This occurred during the patient interviews with patients who were describing where they had the pain again pointed to the pain and said how difficult it was to describe those symptoms over the telephone. A recurrent theme throughout the interviews was that some patients found it difficult to describe their symptoms adequately over the telephone. It is acknowledged that describing pain is often challenging for patients (Morse, 2000). However, it appears that describing symptoms over the telephone, rather than showing the physiotherapist face-to-face, exacerbated the difficulty that patients had in describing their pain.

> *"Yeah, I found it a bit, quite difficult, because it's hard to explain isn't it, even, not just on the phone but to anybody. I mean, the pain I was in was really, really bad, so, um, I would have preferred to have saw somebody, you know, because when you try and explain the areas or, you know, where the pain was, which it goes all the way down, down to there, it's a bit hard to*

describe on the phone, so, that's when I would have liked to have seen somebody." Jenny, age 36, telehealth only

Most patients found it difficult to explain the movements they were making in order to feed back to the physiotherapist over the telephone during the assessment process. Reliance upon their own descriptions and interpreting what the physiotherapist said and meant resulted in the assessment creating some doubt about whether patients had described their problem correctly in order for the physiotherapist to make a clear diagnosis. It is interesting to note that none of the usual care patients interviewed reported finding it difficult to describe their symptoms to a physiotherapist during their assessment. It also appeared from the data that patients who were unable to explain their problems well over the telephone were invited in to the physiotherapy department for a face-to-face appointment. The recurrent themes within the patient treatment experiences of PhysioDirect telehealth services are that some patients did not perceive the telephone contact as 'proper' physiotherapy; some patients could not remember the telephone call or the treatment provided by the physiotherapist.

Many of the older people interviewed (aged 75 years and over) appeared not to recall the consultation with or the advice given by the physiotherapist. This was not specifically related to PhysioDirect as there was some evidence that an older patient in usual care also found the referral process to physiotherapy confusing. He could, however, remember the treatment he received in both his physiotherapy treatment sessions.

> *"But I also said at the same time and I tend to save things up 'cos by the time you get to see a doctor, I mean if you go along with two or three complaints. Anyway went with, I went about the shoulder um I then suggested, asked if I could go back to the physiotherapist to see if they could do anything about my back to make things a little bit better from. So that was a referral, they were both referrals were from the doctor on pretty much the same day."* Johnny, age 71, usual care

It is difficult to make a direct comparison as there was only evidence from one patient in usual care who felt confused about the referral process to physiotherapy, as he had two problems. He was referred to physiotherapy for both but at different times.

Other patients struggled to adhere to exercise treatment prescribed by the physiotherapist over the telephone. Patients also reported it difficult to do some of the exercises, for example:

> *"Although I did exactly what they asked me to do and I answered the questions and he sent me the diagram book to show me the three different exercises, there was four on there. I did phone him back to say there's one I'm not able to do because I can't get down on the floor because of my arm, so he said, just do the other three. I've done it longer than he's decided, but, although his telephone manner and his questions were very good, I would prefer to be face-to-face with the therapists."* Mark, age 65, telehealth only

Another example highlights how receiving the telephone contact in the PhysioDirect service meant that the physiotherapist was not able to physically show the patient how to perform the exercises. Some patients wanted the physiotherapist to show them the exercises in person to make sure that they were performing them correctly. The PhysioDirect service was unable to provide this over the telephone. In addition, patients who perceived that the PhysioDirect service did not work and their problem did not improve were the most disappointed with the service.

> *"Well, nobody's diagnosing correctly what's wrong, you know, it's like you go into the doctor and you say you've got a headache, you take some tablets and maybe it works and maybe it doesn't, I don't think it's a lot of good personally. I've got all these forms how do you rate things 0 to 10, well sorry, I put it at 0. I fill all these pages and pages of things in, does it hurt you, yes, but nothing's happening is it? I fill all these pages and pages in, can we contact you in a few months time. If I'm still suffering in a few months time, of course it's not working is it?"* Walter, age 79, telehealth only

These less acceptable features of the PhysioDirect service tended to be centred upon poor communication between the patient and the physiotherapist. This lack of communication meant that the patient felt unsure about how to self-manage their condition. Personal communications between the physiotherapist and the patient meant the PhysioDirect service was perceived as impersonal compared to face-to-face contact. The views of the physiotherapist and physiotherapy managers regarding the reduction of personal communication are discussed in Chapter 5, section 2.4. The case study of Steve provides examples of some of the

less accepted features of the PhysioDirect service, focusing upon communication and impaired continuity of care. The case also highlights the important role of expectations of the PhysioDirect service in how patients evaluated their experience of the service.

4.7.3 Case example: Steve

Steve provides an insight into some of the key themes that were less acceptable to patients when they evaluated the PhysioDirect service. At the time of the interview Steve was aged 40, and was employed full time as a bricklayer for his local council. He was an avid cyclist and had strained his groin whilst exercising. To contextualise further, in Steve's case, he had been affected by the problem for a long time and had undergone several investigations. He suspected that it might be a groin strain and wanted physiotherapy in the first instance. He was happy to accept the first telephone call consultation to see how it went, but when his symptoms did not improve he decided to consult again. Steve was also unsure of the treatment provided by the physiotherapist and felt that he was not doing the exercises perfectly:

> "*They gave me exercises lying on the floor, which was illustrated. But you still might not be doing, because sometimes, when you've done exercises all your life, like I've been to the gym and different things, you like knowing you're doing them dead right. Because you'll get more out of something if you get them exactly right. So, I just feel as if I may not be doing them perfect like.*"

Steve was aware of the importance of doing the prescribed exercises correctly and was concerned that he might not be. In not physically seeing the physiotherapist and doing the exercises with their initial supervision his doubts were exacerbated. After following the prescribed exercises to the best of his ability, and with no improvement in his symptoms, he decided to contact the PhysioDirect service again. Interestingly, he phoned at the same time as he did previously in the hope of speaking to the same physiotherapist, and was reassessed. It was decided, after this second telephone assessment with the same physiotherapist, that he should carry on at home with his exercises.

> *"Yeah. So, I just felt as if it's like, you know, towards the end of the conversation, this was the second phone call, I felt like the lady was telling me it's got better and I was trying to say well, it hasn't really, you know, but, it's not got any worse."*
>
> *"So, how did that make you feel, when somebody was telling you that it had got better?"* Interviewer
>
> *"Well, not very good really. I decided not to phone again after that one like, to be honest, because I felt like I was just being railroaded into just, you know, recognise there is an improvement. The lady was telling me there is an improvement so, you know, keep up the exercises and that like. I said I'm not sure I'm doing them right, I think I'm doing them right but is it worth just showing me how they do, you know, if I'm doing the exercise correctly. I do them now, I still do them now, I do one in the morning an one at night like and she upped the exercises a little bit, which is okay, but, I just felt the*

second call was more of a, she was telling me I was better but I didn't feel any different like, you know, I didn't feel much different."

After the second call to the PhysioDirect service Steve was extremely dissatisfied. He felt that he was not listened to and should have been brought in for a face-to-face assessment. After his expectation to be seen were not met he disengaged with the service and decided that he was not going to contact the service again, even though the problem still remained. One of the concerning features of the PhysioDirect service is that some patients disengage from the service. This case highlights the range of themes that led this patient to evaluate the PhysioDirect service as unacceptable. In order for the PhysioDirect service to be acceptable the physiotherapists assessing Steve should have invited him to attend a face-to-face appointment when he called back the service a second time. The less accepted features of PhysioDirect might have contributed to why some patients who were randomised to the PhysioDirect arm chose not to contact the service, which is discussed in the next section.

4.7.4 Explanations as to why patients did not contact the PhysioDirect service

This section explores the reasons as to why patients who were randomised to the PhysioDirect service in the trial did not proceed to telephone the service. The quantitative evidence shows that 85% of patients in the PhysioDirect arm contacted the service at least once. Therefore, 15% of patients who were randomised to the PhysioDirect service and consented to take part in the trial did not contact the PhysioDirect service (Salisbury, 2013a). It was important to understand why patients chose not to contact the service or access physiotherapy, in the hope that this could provide insights into the explanations and perhaps

illuminate issues of acceptability of this type of healthcare delivery. It appears that there were straightforward and practical reasons why patients did not contact the service, but there were also more complex reasons why patients failed to contact the service. These are highlighted in Figure 5 (section 4.2, page 109).

4.7.4.1 Straightforward reasons why patients did not contact the service

Straightforward reasons as to why patients did not make the telephone call included patients seeking care in private physiotherapy, others no longer feeling the need for physiotherapy because their musculoskeletal problem had significantly improved and patients having low expectations of the benefits of physiotherapy. Practically, some patients felt unable to call the service because they could not afford the cost of the telephone call and others felt that the opening times of the PhysioDirect service (principally during daytime working hours) were a barrier to access.

Brian is an example of a patient who, despite consenting to participate in the trial (of NHS physiotherapy services), alternatively sought care from a private physiotherapy. The impetus for this was twofold: firstly, he felt he needed care urgently and secondly, his employment arrangements meant that he did not have to pay for private physiotherapy himself.

> *"It was, yeah, it was basically because I was going on holiday that, they were going to do it on the phone but I was going on holiday on the Friday or the Saturday and it was getting worse, my back and I thought I've got to do something, I've got to drive down to PLACE_AN like, you know and that's why I went private."* Brian, age 48, randomised and did not ring

This, however, was not a unique finding in the patients randomised to PhysioDirect. One patient randomised to usual care who was also interviewed also sought private physiotherapy and DNA her NHS physiotherapy appointment in the trial. Her interview data also showed that the explanation for this was frustration with the wait for an NHS usual care appointment. Another patient who was randomised to the PhysioDirect service and who did not ring described feeling that his musculoskeletal problem had improved and he felt that the service was no longer required. He reported that he would have forgotten about the PhysioDirect service if it was not for the number of letters he received regarding the trial.

> *"The only reason I didn't phone was because, you know, the injury was gone and I just didn't feel like I needed to, sort of, take that step forward."*
> Harry, age 23, randomised and did not ring

It is reasonable to assume that some patients with common musculoskeletal injuries may have improved over time. Such patients would also have been randomised to the usual care arm of the trial. However, none of these patients were interviewed.

The cost of the telephone call, or its perceived cost, was clearly an issue that some patients considered in deciding whether or not to use the PhysioDirect service.

> *"Yeah. You see, my problem again, I could have done that because they turned around and said they could help me over the phone. Yeah, which I*

> *found perfectly clear and they said this could take up to 20 minutes or a bit longer or whatever and it came down to funds again for phoning. But, the frustrating thing for me was contact with them because I couldn't get in touch with them because of my funds with, you know."* Arron, age 42, randomised and did not ring

The interviews revealed that some patients phoned PhysioDirect from their mobile phones. Other patients, when prompted on how they thought the service should be improved for the future, suggested that the telephone call should be free of charge to patients. One clear recommendation for the future is that the patient information could make it clearer that the physiotherapist can call the patient back if they need to, therefore transferring the cost of the telephone call to the PhysioDirect service.

Another participant was randomised to the PhysioDirect arm of the trial and did not ring due to her inability to make contact with the service. She described how she had tried to contact the service on a number of different occasions, but was unable to access the service conveniently, given she was in full-time employment.

> "*I've had this problem a while and I've got an understanding of how to deal with it, with what the doctor's given me I thought yeah, over the phone I might be able to get in touch and the frustration is I haven't been able to get in touch because it doesn't fit into the criteria of a person who is working."* Pauline, age 43, randomised and did not ring

Pauline found her inability to access the PhysioDirect service frustrating. On prompting her as to when would be a more suitable time for her to telephone the

PhysioDirect service, she suggested an evening opening time or access over the weekend would have been more appropriate for her. Some practical barriers to contacting the PhysioDirect service were reasons as to why some patients did not contact the service. The unavailability of the PhysioDirect service during the evening and at weekends was a contributing factor as to why one patient, although randomised to the PhysioDirect trial group, did not contact the service. This patient was not happy to call during their working week, as she felt, due to confidentiality concerns, that the telephone call could not be appropriately carried out whilst she was at work. Similar issues have been raised by McKinstry (2009), who found that patients were concerned about confidentiality breaches during telephone consultations. These centred upon patients' conversations being overheard in their GP's surgery, error in patient identification, third party conversations and leaving messages on answering machines. Concerns about consent, privacy and confidentiality have also been reflected in the wider telehealth literature (Fleming *et al.,* 2009, Irvine, 2005). It has been suggested that there were relatively simple reasons why patients chose not to contact the service. However, there were other more complex reasons why patients did not contact the service after consenting to take part in the study or after initially contacting the service. The reasons why they chose not to contact the service are now explored in detail in the following section.

4.7.4.2 Complex reasons as to why patients did not contact the PhysioDirect service

It was clear that patients' complicated lives served as barriers that prevented access to the PhysioDirect service. Of the ten participants from the group randomised to PhysioDirect who did not telephone the service, five appeared to have multiple physical and social problems or 'chaotic/complicated' lives. In the

context of multiple health problems and family members with care needs, these trial participants did not prioritise contacting PhysioDirect to have their musculoskeletal problem assessed. Such complicating factors included, for example, caring for disabled relatives and having other health complaints which were of greater priority to the patient than the telephone call to the PhysioDirect service. To exemplify the complexities faced by these patients, the case of Aarron is presented.

Aarron, aged 42, was randomised to the PhysioDirect service but chose not to ring. He had sustained fractures at both ankle joints and in his lumbar spine after jumping off a building in a suicide attempt. He was admitted to hospital, where he was treated for a number of months. On discharge from hospital, he reported that he was provided with no physiotherapy care. He supported himself through Disability Living Allowance (DLA) and was in contact with a local NHS mental health team under the care of a psychiatrist and his GP. He also had support from a caseworker from a local charity. At the time of interview he was using pain medication, had other health issues and was in regular contact with his GP.

> *"It comes to a time when you think bugger it, I can't be bothered, you know. It's just too much, for me, it's just too difficult to try and get out of here, get to the doctors to try and find out, get an appointment with them, come back."* Aarron, age 42, randomised and did not ring

During the interview he searched for the PhysioDirect trial information that he had received in the post, in order to aid the conversation and recall the date he was referred to physiotherapy from his GP. In doing this, he showed a number of

letters and appointments for other health services that he was due to attend; again highlighting that patients with multiple health problems may not have been able to prioritise their PhysioDirect telephone call.

This section has highlighted that some patients with complicated lives did not prioritise contacting the service to be assessed for their musculoskeletal problem. However, three interview participants who were randomised to the usual care arm of the trial neither contacted the physiotherapy service nor attended their appointments. In one of the interviews there was a suggestion that the interviewee had multiple health and social problems and was in regular contact with healthcare professionals. The reason she did not contact the service was because she was already in contact with the physiotherapy service for a different problem, and thought the PhysioDirect service was the same service she would be attending in the near future.

From amongst the patients who had been randomised to PhysioDirect but did not telephone, two were interviewed who had low expectations of the benefits of physiotherapy for musculoskeletal problems. Hannah had multi-site OA and visited her GP about her recurring hip pain. She had low expectations of the benefits of physiotherapy, given that she viewed her problem as a degenerative disease with no cure:

> *"Because I think that, um, arthritis can probably be treated in a better way. I do exercise quite a lot, I do walk and do that sort of thing. I don't think physiotherapy would be getting to the root problem."*

"Okay. Why's that?" Interviewer

"Because arthritis, I don't think it's something you can cure with physiotherapy."

"Okay. Can I ask why?" Interviewer

"Because it's a degenerative disorder isn't it? It can't be regenerated."

Hannah, age 65, randomised and did not ring

This preconception that she might not benefit from physiotherapy explained her decision not to contact the PhysioDirect service. This patient clearly did not believe that the input by physiotherapists would improve her musculoskeletal problem. This was because she had had physiotherapy previously which, although it helped to manage the pain, did not resolve the underlying cause of her pain. However, this patient suggested that if she had been randomised to the usual care treatment arm she would have attended a face-to-face physiotherapy appointment. Therefore, this suggests that there is a difference in how patients evaluate physiotherapy compared to how they assess and appraise PhysioDirect. Those randomised to PhysioDirect who did not telephone the service tended to place greater value on face-to-face contact than on telephone contact. As suggested in the previous section, when some patients were asked whether they would have attended a usual care appointment had they been randomised to usual care, their responses were that they would have done so. This suggests that there was a difference in the importance patients placed on telephone contact compared to on face-to-face care. Examples of this are highlighted in the cases of Pauline and

Hannah. As described earlier, in section 4.6, Pauline did not call the service due to her inability to access it during the times that the service was available.

> *"So obviously, um, I can do things like that because they fitted in. Why did that one fit in? I was able to fit in it but I can't make the phone calls. Every time I phone them, sorry, they're not in."*
>
> *"If you had a face-to-face appointment?"* Interviewer
>
> *"I would make the effort to do it."* Pauline, age 43, randomised and did not ring

This is important, as it appears there is a perceived difference in how patients view contact. It could be suggested that the value is greater for a face-to-face physiotherapy appointment than the PhysioDirect telephone call. It was acceptable for Hannah to make a telephone call at a time convenient or appropriate to her, for example outside office hours, when she was not working. However, she would have considered taking time off work for a face-to-face appointment, but not to make a PhysioDirect telephone call. Further implications and discussion are found in Chapter 7, section 4.

Thus, the reasons explaining why patients who were randomised to PhysioDirect chose not to contact the service were both practical and complex. There was difficulty in accessing the service because of unsuitable opening hours; the cost of the telephone call was too high; some patients attended private physiotherapy instead; there was a perception that the patient's problem had resolved; there

were low expectations of the benefit of physiotherapy; and there were patients who had complicated lives. There is little recent research evidence about the reasons as to why patients fail to attend physiotherapy appointments (Vasey, 1990, Jack, 2010). However, in this study three of the usual care patients interviewed failed to attend their physiotherapy session. The first patient failed to attend the face-to-face physiotherapy appointment due to the waiting time and subsequently paid for private physiotherapy. The second patient had moved and his address details were lost so he was unaware of his usual care appointment date, and the last patient failed to attend but was in touch with the physiotherapy department. This study has identified that the reasons why patients did not telephone the PhysioDirect service for physiotherapy advice are similar to the reasons why patients DNA face-to-face appointment. This is important, as it can reassure physiotherapists and physiotherapy managers, as well as with commissioners, that some of the barriers are not entirely related to the telephone. One of the key components of acceptability is patients' willingness to use the service in the future (Field, 1996a). Therefore it seemed appropriate to ask patients how they envisioned a future PhysioDirect.

4.8 Patients' vision of a future PhysioDirect service

In their interviews patients were asked about how they thought the PhysioDirect service could be improved and what changes, if any, they might suggest for the future. There were mixed views and opinions regarding how the PhysioDirect service could work in the future, and these views often depended on their experience in the trial. There were three main issues that patients felt were fundamental to the future of the PhysioDirect service. Firstly, they thought that it was most appropriate for use as an initial method to access the physiotherapy

service, which would precede a face-to-face appointment with a physiotherapist. Secondly, they had broad views regarding the role of the GP when they refer to physiotherapy and, finally, they suggested innovative ideas relating to technology that could be used alongside the PhysioDirect service to help improve their overall experience.

4.8.1 PhysioDirect as an initial contact service

It appeared from the qualitative data that patients envisioned the future of the PhysioDirect service as an initial advice service that would lead to face-to-face care. As described previously in this chapter (see section 4.3.1), patients randomised to the PhysioDirect service were assessed by a physiotherapist over the telephone and often perceived the initial telephone contact as the 'first step' to physiotherapy. All patients were asked how they thought the service should operate in an ideal world and their recommendation was that the telephone call should be a precursor to face-to-face care. It also became clear from the qualitative data that patients liked the idea of having the telephone assessment first and then face-to-face contact, to check they were performing the exercises correctly. However, others expressed a preference for initial face-to-face care with a physiotherapist followed by telephone follow-up, if they needed it. Patient participants did not, however, express the view that the telephone care alone was preferable. To illustrate this, the case of Robert is presented.

Robert, aged 30, had injured his ankle in a fall, and his experience of the PhysioDirect service was positive. He thought the response from PhysioDirect was quick, he found the physiotherapist helpful and perceived that this early intervention enabled him to return to work quickly. However, in the interview

Robert reported that he thought a future service could be improved by having initial face-to-face contact with the physiotherapist and subsequently telephone follow-up.

> *"As I say, um, probably if you had an initial consultation to start with just for them to be able to see you, just to say oh yes, this is what we want."*
> Robert, age 30, telehealth only

It appeared that when asked about how things might work in an ideal world, many patients still voice preferences for face-to-face physiotherapy care. Reasons for this might be that although patients feel that they have a positive experience with the PhysioDirect service, there might remain an element of doubt for patients after they have had their telephone assessment. Patients, perhaps, are less reassured over the telephone than they would be in a face-to-face consultation. It is interesting to note that none of the usual care patients interviewed mentioned lack of reassurance as a problem. It is also important to highlight that many patients, when asked if they would use the service again for a different problem in the future, reported that they would. This could suggest that the PhysioDirect service was broadly acceptable to patients despite the perceived barriers. This sub-theme presented patients' views that the future of the PhysioDirect service is a 'first step' to physiotherapy services. It is acknowledged from the qualitative data that some patients, despite a positive experience with the PhysioDirect service, still expressed a preference for some form of face-to-face care.

4.8.2 Patients' views on GPs referring to physiotherapy

This theme centres upon the lack of consensus amongst those patients interviewed about the role of their GP in their referral to physiotherapy. Some patients suggested that direct access to a physiotherapist, without the referral of the GP, would be more suitable, whilst others thought that the role of the GP was pivotal in the decision to have physiotherapy treatment.

> *"No, no, no I think the doctor would have to be involved. You'd have to, you know, go to the doctor and him say yes I think physio is appropriate."*
> Padma, 46, telehealth + face-to-face

In particular, it appears that the relationship with the GP was important for some of the older patients, who saw the GP as the care provider and the person taking overall responsibility for their care (Infante *et al.,* 2004). There was some qualitative evidence that some of the older patients might still have referred back to their GP, and not to PhysioDirect as advised, to reassess their musculoskeletal problem, if it had not started to resolve.

> *"I mean, I'm not saying that talking to the physiotherapist again on the phone wouldn't be beneficial, it might be. I mean, she might say well, okay, um, you need to do something else or we need to do something else about this and maybe she would know, I don't know. It's just that I, um, I suppose going to the doctor, I know, she would say okay, this is what we do now or we get back on to them or whatever, you know, whatever she thought was the right course of action."* Giro, age 80, Telehealth only.

There was also contrasting evidence in the patient accounts that some would prefer not to involve the GP in the management of their musculoskeletal problem but would like immediate access to a physiotherapist. However, there was little suggestion from patients that the PhysioDirect service might sit within that system. It appeared that some patients were more likely to want self-referral to face-to-face physiotherapy care, allowing them to walk directly into a physiotherapy clinic to be seen, rather than being assessed over the telephone.

> "*In an ideal world, how would, how would you like to see a physio service?"* Interviewer;
>
> "Walk-in."
>
> "Really?" Interviewer
>
> *"Well yes! Must have, it must have enough patients around here (laughing) for be able fill your days. Yes I would."* Louise, age 63, usual care.

It is shown that some patients felt strongly that their GP should refer them to physiotherapy but others expressed a preference to be able to self-refer. One solution to this problem could be a media campaign raising public awareness of the role and skills of physiotherapists in the care of musculoskeletal problems. This could also define what the role of the telephone assessment would be if the PhysioDirect service was likely to sit within a future self-referral system (see Chapter 7, section 4.2.1). It became clear that after evaluating the service that patients had ideas about how they thought a future PhysioDirect service might

develop in terms of the technological medium of its delivery. These patients' views of how technology may improve future PhysioDirect services are now presented.

4.8.3 Patients' technology recommendations for the future of the PhysioDirect service

The focus of this discussion centres upon how patients used the internet to support the information given by the PhysioDirect physiotherapists, exploring how the PhysioDirect service could incorporate the use of video technologies in its assessments. There was also evidence in the qualitative data that patients looked at health information online before and after the use of the PhysioDirect service. The patients suggested that a future service could be improved if the physiotherapists directed them to approved websites where they could access information regarding their specific problem. Fox and Jones (2009) reported that the internet has changed the way people access health information. A study from the US found that of the 74% of adults who use the internet 80% have looked online for health information topics such as a specific disease or treatment. In a similar UK study, Ayantunde *et al.,* (2007) found that 63% of patients had access to the internet and 42% had previously searched the internet for health information. However, there have been a number of critiques of how patients access that information and concerns about the quality of online health information (Purcell *et al.,* 2002, Butler and Foster, 2003). One can envisage integrated PhysioDirect services similar to what is currently provided at NHS Scotland (NHS 24, 2012), which helps to direct patients to approved information where they might find helpful and evidence-based information about their condition and available treatments.

As previously highlighted in this chapter (see section 4.7), the less accepted features of the PhysioDirect service centred upon the loss of the visual component of assessment. Therefore, it was not surprising that patients suggested that a future PhysioDirect service might include video technology whereby the patient and physiotherapist could interact, thus removing some of the concerns mentioned in section 4.7.3 regarding difficulties in communicating with the physiotherapist. The patients created innovative ways of amalgamating the process of providing treatment advice along with the use of the internet. The use of technology and health advocated by some patients and highlighted by Wyatt and Sullivan (2005) who suggest that the role of e-health for individual patients offers opportunities for prevention, choice, home-based care and chronic disease management, thus widening the access to healthcare for most patients. This is supported by recent evidence for the use of video based technologies to deliver physiotherapy interventions (Eriksson *et al.,* 2011, Eriksson *et al.,* 2009, Tousignant *et al.,* 2011b, Russell *et al.,* 2011) and highlights the potential future role of technologies within the PhysioDirect service. It appears that patients generally accept the role of technology in healthcare and are especially receptive to the role of the internet. This probably reflects the technological revolution that has occurred and the impact that technology has had on society (DiMaggio *et al.,* 2001) and the medical community (Casper and Morrison, 2010) (see Figure 5, section 4.2, page 109). The next section of the chapter concludes the key points from the patients' perspective of the acceptability and implementation of the PhysioDirect service.

4.10 Conclusion

This chapter focused on the acceptability of the PhysioDirect service from the patients' point of view. The PhysioDirect service was broadly acceptable to

patients. In conclusion, patients' expectations of PhysioDirect influenced how they evaluated the service, and these expectations were often based upon their previous experience of physiotherapy and also on what they perceived 'proper' physiotherapy to be. In addition, the acceptability of the service is in part determined by the manner in which patients traded off less acceptable features with the more acceptable features of the PhysioDirect service. The data provided evidence that many patients concluded that they would choose to use the service again if they had another musculoskeletal problem, which is indicative that the PhysioDirect service was broadly acceptable. The next chapter explores acceptability from the physiotherapists', physiotherapy managers' perspective and starts to unravel the implementation issues of providing the PhysioDirect service.

Chapter Five: Acceptability and implementation from the physiotherapists' and physiotherapy managers' perspectives

5.1 Introduction

This chapter focuses on how the physiotherapists and physiotherapy managers experienced the PhysioDirect service. The analysis uncovered three central themes which underpinned the acceptability and implementation of the PhysioDirect service from the perspective of the physiotherapists and physiotherapy managers. These are the clinical application, professional concerns of delivering and the organisation of the PhysioDirect service. These themes are, therefore, the basis upon which the chapter is structured. Firstly, the clinical applications of PhysioDirect are explored, then the professional concerns are examined and finally the organisational aspects of the PhysioDirect service are presented and discussed. The chapter is supported through examples of physiotherapists' narrative data and complementary tables (see Tables 11, page 187 and Table 12, page 197). The tables are structured upon the themes and sub-themes highlighted within the chapter. In order to provide evidence of whether their views about the PhysioDirect service changed or remained the same, examples of illustrative quotes from both the physiotherapists' first and second interviews are highlighted throughout the chapter. The following sections of this chapter explore physiotherapists' and physiotherapy managers' beliefs about whether the PhysioDirect service did, in their view, impact on the clinical quality of physiotherapy care provided to patients.

5.2 Clinical application of the PhysioDirect service

The physiotherapists and physiotherapy managers perceived the PhysioDirect service as broadly acceptable. They thought they could safely diagnose patients

with musculoskeletal problems using the PhysioDirect services and suggested there were groups of patients who would manage with the PhysioDirect service and those who would not. However, these views about patient suitability to the PhysioDirect service changed over the course of the trial. It also became clear that in order to assess and treat patients over the telephone the physiotherapists used a range of techniques and adapted their existing skills. One of the key initial concerns of the physiotherapists was the loss of some aspects of communication. However, they had some reservations about the way in which the PhysioDirect service affected how they communicated with patients. They felt that providing the service by telephone may affect the ability of the physiotherapist and patient to create a rapport and may ultimately undermine their relationship. In addition, the physiotherapists were also concerned about the lack of continuity of care, given that few patients called a second time and if they did they often spoke to a different therapist. The following section presents and discusses findings relating to how the physiotherapists assessed patients and reached a diagnosis over the telephone.

5.2.1 Assessment and diagnostic capabilities over the telephone

In order to understand how the physiotherapists viewed the PhysioDirect service it was important to consider how they viewed their own physiotherapy service. This was in order to compare whether the physiotherapists and physiotherapy managers felt the PhysioDirect service positively or negatively impacted on their existing physiotherapy service. The quote below is indicative of the physiotherapists' point of view:

> *"I think the quality of care people receive is generally good. I think we've got a really good structure in our team, a really good in-service training programme and the fact we've got a clinical lead, I think you can see that the general level of clinical practice has increased consistently through the years, so, we've got, on the whole, a stable staff base and it's become a more and more skilled one. So, for example, many of our senior team have been in that role for five years or more and actually, they're a really experienced bunch with a high level of skills so, I think the patients coming in, generally, get a good standard of physio."* Jason, first interview

This view was a common theme articulated by the physiotherapists interviewed across all the Primary Care Trusts (PCTs). The physiotherapists thought that they provided a good quality service with a good standard of care. One of the areas where they felt that they could improve quality was in access to the service, as they often suggested that the waiting times for an appointment were too long. They also suggested that the time allocated for administration duties and note writing after an assessment with patients should be increased. They felt that if administrative time was to increase it would lead to improvements in record keeping and the quality of patient records. This may help to ensure that the information for future audits of physiotherapy services is of good quality. However, the physiotherapists and physiotherapy managers felt that overall they were providing a good quality service. The next section explores how the introduction of the PhysioDirect service changed the way in which the physiotherapists worked clinically and whether or not this was acceptable to them.

The PhysioDirect telephone assessment involved both a subjective and a limited objective assessment (this has previously been described in Chapter 1, section 7). As a result, this meant that the assessment of a patient via the telephone, resulted that the objective assessment[5] was largely impossible. During the assessment over the telephone, patients were asked to move the affected body part and explain their symptoms or movements to the physiotherapist. The fact that the physiotherapists performed an assessment without visual input is a way of working that is very different to usual physiotherapy practice. This was acknowledged by the physiotherapists in the first set of interviews, as their main concern centred upon the misdiagnosis of the patient's problem over the telephone.

> *"I think the main concerns are probably, from speaking to the other physios involved, it feels alien to not do the objective assessment, the way they normally work, so I think there's a lot of worry that that'll create misdiagnosis and then giving the wrong treatment, that's probably the main issue I've come across from the other physios."*
>
> Adam, first interview

In the second set of interviews the physiotherapists seemed more confident about making a diagnosis over the telephone and felt that it could be done safely.

[5] Objective assessment includes observation and palpation around the site of pain or problem, assessing movement and pain response during movement, both active (in which patients move themselves) and passive (with the physiotherapist controlling the movement) and further special tests that examine muscles, tendons and ligaments in order to inform the differential diagnosis of the problem (Hammond and Wheeler, 2008, Thomson, 2003).

> *"I think you can still get; if I was to talk to someone who'd sprained their ankle, I could still get the same diagnosis from talking to them. As if I just, if I looked at it as well."* Adam, second interview

Another physiotherapist suggested:

> *"So pretty much I would say that the diagnosis that the physios were making over the phone were pretty accurate really, so that was good."* Fern, second interview

Although physiotherapists felt that they were reaching an accurate diagnosis over the telephone, they also expressed that, at times, they were not as confident with their diagnosis as with a diagnosis made face-to-face.

> *"I would almost paint a picture of this is where we want you to be in that time frame and come back if you're not and that gives me some sense of clinical comfort in thinking, that's my equivalent of, if I was getting them back in face-to-face you know where I would be able to see for sure; that's not gonna be the case here but I'm gonna try and give them a really clear picture of what it, what good progress looks like in this time frame for this problem."* Jason, second interview

Another physiotherapist commented:

> *"I can't be sure that they're doing that, so you are going to get a wrong perspective of what's going on. So yeah, I felt it was more difficult and to*

> *cover my back I would give them some strengthening exercises and I'd give them some stretches to make sure I'd given for both if I felt it was, if I was unsure."* Adam, second interview

They used the phrases 'cover my back' and 'clinical comfort', suggesting that they were not completely confident with their diagnosis and their decision to manage some patients over the telephone with advice and exercise only. The physiotherapists seemed to stress the importance of patients re-contacting the service if their symptoms did not improve. The PhysioDirect model of care is different to how they have historically treated patients, as in usual physiotherapy care physiotherapists generally see patients more than once. Issues regarding physiotherapists' views on how the PhysioDirect service impacted on continuity of care are further discussed in section 5.2.4. It also became clear from the physiotherapists' interviews that they perceived that there were groups of patients who were easier to assess and treat over the telephone than others.

5.2.1.1 Patients the physiotherapists perceived would do well with the PhysioDirect service

The physiotherapists' perception of the patients that would do well with the PhysioDirect service were of those who have a 'simple' or acute musculoskeletal problem, have busy lifestyles and a good understanding about their long-term condition. In their first interviews, the physiotherapists suggested that patients with simple musculoskeletal problems would be most suitable for the PhysioDirect service. Examples of problems that the physiotherapists expected would work well

with the PhysioDirect service were Colles' (wrist) fracture,[6] sprained ankles and simple back pain.

> *"My, sort of, hypothesis is that the simple stuff, is there a simple physio problem, but, things that are what I call bread and butter physio, the things that clinically are fairly straightforward for us, your sprained ankle a week ago, I know we're not seeing the consultants patients, but, you know, your post-op total knee replacements, Colles' fractures, that sort of stuff, maybe some of your simple back pain, things where it feels fairly obvious what they've probably done, should respond."* Delia, first interview

The physiotherapists in the study also expected that the PhysioDirect service would assist the secondary prevention of chronic musculoskeletal problems.

> *"I feel there's a place for PhysioDirect and in those instances where some advice could have been given early on and they could have been doing something, you could prevent them becoming more chronic."* Anna, first interview

From the second interviews it appeared that physiotherapists still felt that simple clinical problems of this type responded well to the PhysioDirect service. The physiotherapists defined these simple problems as having a clear pattern of behaviour, a complete history and no other complicating factors.

[6] Colles' fracture is a transverse fracture of the distal radius with dorsal (posterior) displacement of the distal fragment (Kenyon and Kenyon, 2009: 86).

> *"I think that's just because some problems you just, they're quite clear cut. And you know someone's sprained their ankle you know, that's telling you they're getting the pain in the place you'd expect. There's no other issues."* Charles, second interview

Another patient group the physiotherapists thought would benefit from the service were patients with busy lifestyles. They thought that patients would be able to phone the service at a time that was convenient for them.

> *"Yeah, for some patients I think it'll be great. I mean, for the patients, I mean, everybody goes at 100 miles an hour these days and I think, you know, people, if we can help people without having to bring them in, from their point of view as well as ours, then that's got to be good for them."* April, first interview

It was clear that in the second interviews the physiotherapists still thought that patients with busy lifestyles benefited from the PhysioDirect service. They had feedback indicating that patients liked the quick access to physiotherapy advice. The physiotherapists reported that patients rang from their offices, cars and sometimes from other places, for example in the middle of a field or abroad on holiday. In some of these situations the physiotherapists found it difficult to assess the patient's problem and give them appropriate advice, often feeling that patients may not have really taken on board all of the relevant information. This was particularly relevant in those instances where patients were clearly busy or doing something else whilst telephoning the PhysioDirect service. The concern for some

physiotherapists was that the patients might not have fully engaged with the service as much as they would have liked.

> *"If they're in a hurried you know, environment they're not gonna take on board what you're saying. They just want to get to the end of it and get off the phone."* Audrey, second interview

From the physiotherapists' perspective these patients seemed happy to be assessed over the telephone, as it was convenient. They were then advised about the exercises needed to treat the problem. However, the fact that they may have been at work created difficulties for the physiotherapists' assessments. Some physiotherapists reported this to be less than satisfactory as it changed the dynamic of care, from the provider who is in control (Shaw and Baker, 2004) to the patients controlling where and how they access the service.

5.2.1.2 Patients the physiotherapists perceived would not do well with the PhysioDirect service

There were also patients who the physiotherapists, in their first interviews, thought might not do well with the PhysioDirect service, as they would be difficult to assess and treat over the telephone. Initially, they perceived that patients with psychosocial problems might not be appropriate for the PhysioDirect service, as they felt that the telephone would inhibit their ability to assess such issues. Patients with chronic pain and older patients were also perceived not to be suitable due to the complexities of patients explaining their problems.

"Chronic pain patients, I don't think they'd respond very well over the phone. I think they'd have to be seen face-to-face.

"And why's that?" Interviewer

"because I think they might need more reassurance, they might need a one-to-one, in order for them to, kind of, talk to you about everything, what's going on. They might not feel comfortable doing it over the phone if they don't know who they're talking to. I don't know. They might find that's even better, that they can't see who they're talking to. Who knows." Sidney, first interview

Data from the first interviews also suggested that the physiotherapists perceived that patients with chronic pain might have psychosocial barriers to recovery of their musculoskeletal problem and would, therefore, be more difficult to assess via the PhysioDirect service. These psychological barriers are described in the literature as 'yellow flags' and were initially used in the assessment of back pain as an indicator of an increased risk of long-term pain and disability (Kendall *et al.*, 1997, Kendall, 1999). 'Yellow flags' are psychological factors such as low mood, fear-avoidance beliefs and catastrophising,[7] which have frequently been shown to be predictors of poor outcome (Trief *et al.*, 2000, Pincus *et al.*, 2002). They are useful in clinical practice to assess the probability of the development of chronic problems from acute pain (The New Zealand Guidelines Group, 2004, Hunter Integrated Pain Service, 2005).

[7] Catastrophising is broadly conceived as an exaggerated negative 'mental set' which arises during painful experiences (Sullivan *et al.*, 2001)

> *"It's hard, with the chronic pain patients, because they need a different way of managing really and I think they do need more one-to-one, face-to-face contact and then decisions on which way to post them, treatment-wise. So, that's hard, I don't think it's as easy, because you can't get to all the issues on a phone call."* Anna, first interview

Interestingly, a different view was expressed by one physiotherapist, who felt that the PhysioDirect service might actually be more helpful for these patients, as traditionally they may come to physiotherapy with unrealistic expectations. In these cases the PhysioDirect service might be used as a filtering system, essentially removing some inappropriate physiotherapy referrals.

> *"Yes, some patients would just come to physio forever and a day, if we let them, and that would potentially be a problem if we start to let patients self-refer, which we are going to look towards in the future. But, they tend to be patients who perhaps are a bit yellow flaggy, they come and tell you what they want, but, it's not what they actually need and you couldn't justify giving them that treatment, in a clinical sense, other than they've come and asked for it, so, they're the ones who I think over the phone would work well, to filter out."* Catherine, first interview

In the second set of interviews, the physiotherapist group view of this issue changed from thinking that these patients were unsuitable for the PhysioDirect service to a more mixed opinion. Some physiotherapists felt that for patients with chronic conditions, advice and information provided by physiotherapists via the PhysioDirect service was appropriate. In particular, they felt that patients who had

had their problem for a long period of time, and who had a good understanding of it, did well with PhysioDirect. This concept is related to the management of these patients, which is discussed in section 5.3.1.

> *"You see the chronic, chronic patients that had the problem for a while that maybe had input before, that have got a good grasp of maybe what you're trying to tell them, you'd be happy to leave. If it was a chronic condition, you'd be happy to give them advice, give them the exercises, they've maybe done the exercises before, they've got a pretty good idea of, of maybe a bit of self-management."* Audrey, second interview

However, there was still a sense from other physiotherapists that patients with complex psychosocial obstacles to recovery, such as the belief that pain and activity are harmful, or those experiencing negative mood and social withdrawal (The New Zealand Guidelines Group, 2004), did not do well with PhysioDirect telehealth only. This aspect may not be unique to the telephone and may also occur in usual care too. The physiotherapists suggested why the PhysioDirect service was not suitable for these patients. They felt it was impractical to try and fully understand what other problems may be present in the 20 minutes allocated for the PhysioDirect telephone assessment.

> *"So they've generally got things, unless they're a quick, acute this came on two weeks ago, this is what I was doing when it happened then that would be quicker but generally most of them, say the chronic backs or chronic necks that were phoning take longer to go through the whole assessment*

> *'cos they've got a lot more history to impart basically so you can get a picture of what's gone before."* Anna, second interview

They also felt that the PhysioDirect service as a system was not very effective at addressing the psychosocial problems of patients.

> *"One thing PhysioDirect doesn't do particularly well is look at the sort of non, look at the side of things of how it's affecting them, the more the psychosocial side of it. It's very much a bio-model but that could be incorporated. Like I say, things have changed since it was set up and I think I do, on the phone, if you just follow the model straight um it doesn't flag up that sort of you know, um questioning at all."* Beatrice, second interview

However, the physiotherapists suggested that future developments of the service could rectify this by incorporating the psychosocial elements into the system. The addition of questions may help to identify these patients and address their needs.

Interestingly, older patients were a group who physiotherapists felt often had multiple health problems and thus would be more difficult to assess over the telephone. The physiotherapists had mixed views on the potential value of PhysioDirect for older people.

> *"The elderly, I think, would struggle, maybe and again, it might be hearing, it might be communication, it might be that they haven't spent hours talking on the telephone to people, I mean, whether there'll be a cost to the patient I don't know."* Audrey, first interview

In the second interviews it was clear that some of the physiotherapists did indeed find it hard to assess some older patients over the telephone.

> *"Yes I think the, I'll put this diplomatically, the older group. That was harder but yes I think so. Just I think they found it hard to get their head round just being, having that chat and then being told what was going on rather than traditionally being looked at and assessed objectively and then been given a diagnosis. I don't think it added up to them but yes that was really the group that struggled the most."*
>
> *"And what did, how did you manage them?"* Interviewer
>
> *"You'd probably take, have to take a little bit more time and I don't know maybe, maybe they were the group that you, that would have come in (for face-to-face care following the telephone call) more probably than the other groups."* Charles, second interview

A differing view suggested:

> *"I think they coped very well actually. I was expecting them to perhaps struggle more. But didn't have any particular problems. No, I can't think of any patient, elderly patients that couldn't kind of participate. So that was alright." Marie, second interview*

Physiotherapists expressed a concern in their first interviews over some patients of lower socio-economic status because they are more likely to have lower levels of education and might not be able to completely understand the information provided by the PhysioDirect service. Thus, the physiotherapists struggled to see how the PhysioDirect service might work for these patients.

> *"It could be that the middle classes do lovely out of it and that people, socio-economically deprived people maybe just don't really access it and don't do well."* Jason, first interview

The views were mixed in the second interviews. A concern of one physiotherapist was that the PhysioDirect service did not work for her urban/deprived dwelling population. She suggested that patients in this particular setting, because of their low levels of education, did not quite understand, nor did they engage with, the PhysioDirect service.

> *"I'm not sure that it would work for our patient population. So I don't think it's the best thing for us. But that's not to say that it wouldn't work for other people and if it was somewhere else."* Francis, second interview

However, a physiotherapist who worked in the same PCT provided a contrasting view:

> *"I think that would be the only concern that I have, or that I had, but again I didn't really come across it as a major issue on the phone, so maybe it's just from, maybe it's just from what I've seen face-to-face in assessments*

> *with people when I was working here, compared to other areas, but no matter where you are there's always going to be someone who doesn't understand what you're saying to them."* Julia, second interview

Although not an initial concern for the physiotherapists, the second interviews uncovered their view that the PhysioDirect service did not work well for patients who had multiple musculoskeletal problems, for example patients with a combination of a lumbar spine, knee and shoulder problem. The interviews revealed that these patients were often 'fast tracked' through the PhysioDirect system. This meant that the physiotherapists initially took the history from the patient and made a judgement that they were not suitable for the PhysioDirect service, and they were subsequently invited for a face-to-face appointment. The reason for this was that patients with more than one problem generally took longer to be assessed over the telephone, and the physiotherapists felt it was quicker to bring them in for a face-to-face appointment rather than assess every problem over the telephone.

> *"Sometimes people may have a couple of problems going on which make it not so clear so it doesn't fit that so you may need to get them in then to differentiate."* Charles, second interview

The other examples of patients who were fast tracked for a face-to-face appointment were those who had un-resolving neurological symptoms, such as patients with diagnosed conditions such as suspected rheumatoid arthritis and fibromyalgia, as it was felt that these patients should be seen face-to-face by a physiotherapist. These patients were fast tracked along with those patients who

should have been excluded but were mistakenly referred into the main trial (the PhysioDirect exclusion criteria can be found in Appendix W).

A distinction between the findings of the first and the second set of interviews with the physiotherapists (between individuals and across the whole group) was that they were initially clear in their beliefs as to which patients may benefit from a PhysioDirect service. In the second interviews their initial expectations of who might benefit from the service were confirmed for the most part. However, they appeared to have overlooked the challenges of PhysioDirect for some groups of patients. For example, those patients who phoned from their place of work often had very short amounts of time to spend on the telephone, and many could only be assessed at the time that they made contact with the PhysioDirect service, and were perhaps not in the ideal physical environment for a personal telephone call about a health problem. This seemed to serve to limit the patients' attention during the telephone call, which physiotherapists felt compromised the patients' concentration, making it difficult for the physiotherapists to conduct a satisfactory assessment.

Table 11: Illustrative quotations representing individual views of the clinical application of PhysioDirect

Overarching theme	Sub-theme	Quotations from physiotherapists in their first interviews	Quotations from physiotherapists in their second interviews
Clinical application of PhysioDirect	Assessment and diagnostic capabilities over the telephone	*"I think that'll affect certain results, because, the people that are going to respond better to Physio Direct are people who are having, kind of, acute injuries I think, and they need to be managed or get that advice straightaway." Adam* *"I think a lot of the patients that we see, especially with the whiplashes, the acute shoulders, the acute ankle injuries and the acute backs, if we could give them advice from day one when we see them two weeks later, they'd already be so much better than what they were if they had nothing at all and I think that's quite a big part of it really." Julia* *"I think some will like the fact that they can just call up and get some advice, have a go at the busy lifestyle people that just want to be told what's wrong with them and what they need to do." Charles* *"It's hard, with the chronic pain patients, because they need a different way of managing really and I think they do need more one-to-one, face-to-face contact and then decisions on which way to post them, treatment-wise. So, that's hard, I don't think it's as easy, because you can't get to all the issues on a phone call." Anna*	*"Obviously any kind of simple acute problem, where they've twisted an ankle or they've got a little strain, those type of things, if it's more; we have lots of problems that are kind of, there's no tissue really at, in any, that's injured, the tissue's healthy but is a bio-mechanical problem, and when they're just saying I've got knee pain...do I know what position their ankle's in, are they flat footed or does that implicate the ankle, so if it was more of a bio-mechanical problem, obviously I'd give them just simple exercises for the knee." Adam* *"People with like, more acute problems, because normally, normally acute problems do go away quite quickly anyway, and normally if you can get in there from the first week or so, rather than them waiting on the list for it to become chronic, then, they do respond quite a bit quicker so, I'd probably still agree with that." Julia* *"Yes I think it's definitely a good option for that group (patients with a busy lifestyle) they can access it easily you know." Charles* "*So they've generally got things, unless they're a quick, acute this came on two weeks ago, this is what I was doing when it happened then that would be quicker but generally most of them, say the chronic backs or chronic necks that were phoning take longer to go through the whole assessment 'cos they've got a lot more history to impart basically so you can get a picture of what's gone before." Anna*

Table 11: continued

Overarching theme	Sub-theme	Quotations from physiotherapists in their first interviews	Quotations from physiotherapists in their second interviews
Clinical application of PhysioDirect	Assessment and diagnostic capabilities over the telephone	*"I think the elderly might struggle, um, just with the level of understanding." Fern* *"I think, I mean, convenience in a way because a), they haven't got to come out here and be in the department, for a busy mum or an elderly person that might be quite attractive really, much rather speak to somebody on the phone than go and see them.." Beatrice* *"Generalising obviously, with the lower economic status, sort of, group, you don't tend to get highly educated people and when people don't have a great understanding of what you're trying to do, sometimes they don't respond quite so well to just exercise alone and it takes quite a lot of explaining and spending a little bit more time with them to explain exactly what the exercises are doing it and exactly why the exercises will get them better. So, I think if those sort of patients probably won't respond in the way that you would hope them to and expect them to." Julia*	*"I think the patients that probably didn't do so well was maybe more the elderly patients where that level of understanding perhaps wasn't so – so good because they're maybe the patients that you need to spend more time in clinic with checking that the exercises that you're giving them they're actually doing correct." Fern* *"Because it wasn't fair to sort of expect them to be able to self manage so with the elderly, it's really borderline there because yes, it's great they don't have to get into the department, transport or whatever which might be a problem, they can be doing something at an early stage but wasting their time and ours if they were slightly over that sort of, cosp where they couldn't really, where you didn't feel they could self manage so." Beatrice* *"I think, just the understanding that sometimes the exercises is going to help or explaining the ins and outs of different problems can be difficult if people aren't fully understanding what you're saying to them, but, I think that would be the only concern that I have, or that I had, but again I didn't really come across it as a major issue on the phone, so maybe it's just from, maybe it's just from what I've seen face- to -face in assessments with people when I was working here, compared to other areas, but no matter where you are there's always going to be someone who doesn't understand what you're saying to them." Julia*

5.2.2 Physiotherapists' adaptations to PhysioDirect

The physiotherapists described how, in order to assess patients, they needed to adapt and adopt new skills to deliver the PhysioDirect service, for example visualisation techniques, enhanced listening and computer skills. In particular, the physiotherapists reported that they had to enhance their verbal communication skills in order to safely assess and treat patients over the telephone. They reported the need to question patients carefully in sufficiently lay language in order to obtain the appropriate information. Although questioning patients in lay language is also prevalent within usual physiotherapy care, the physiotherapists reported that assessing patients via PhysioDirect service meant that their questioning needed to be more specific. They reported questioning patients in a variety of ways in order to ensure that they could glean the correct diagnostic information from the patient.

> *"I think it normally takes me quite a long time, because obviously that's really important for exactly you know, where you're talking about and obviously you know, different people have different perceptions of where their shoulder is, you know, is it up by the neck or is it kind of, down by the arm or you know, your exact and you know, you do need to know quite specific areas when you're kind of, talking about different pathological structures, so I think that is quite difficult over the phone."* Eva, second interview

The second set of interviews also provided insights into the physiotherapists' use of visualisation techniques in assessing patients in order to overcome the lack of visual feedback in the assessment process:

> *"I think you've just - you've just got to totally switch off from everything else that's going on and put yourself in the - in the shoes of the patient, you've got to kind of imagine that they're at the end of the phone, they're, you know, sat on the bottom step or, you know, what's - what's going on and - and you're just trying to totally focus on what that patient is, you know, describing to you. And imagine almost as if you are in a cubicle [treatment room] with that patient."* Fern, second interview

As part of the PhysioDirect training package, physiotherapists received a published article by Edwards (1998) which described how NHS (National Health Service) Direct nurses visualise their patients whilst triaging them over the telephone. It is clear from the data that the physiotherapists used similar techniques whilst assessing their patients. However, it is less clear whether they would have visualised their patients in their assessments had they not been trained to do so. On the one hand this finding may suggest that the training for the PhysioDirect system worked well, but on the other hand it could highlight that physiotherapists instinctively use those techniques when assessing patients over the telephone.

In performing the assessment over the telephone, the physiotherapists described how they joined in with the assessment with the patient, moving their own arms and legs around to test if their explanations, questions and descriptions were accurate and comprehensible. Although this may occur in face-to-face consultations, it appeared that this process helped some physiotherapists focus on

visualising the problem. They reported staring into space, indicating intense concentration, and that moving their arms helped with their diagnostic reasoning.

> *"But you know, you've just got to try and switch off from, you know, if - if I'm moving my arm up and I know that a physio is laughing at me as I'm, you know, you've just got to shut everything else and just, you know, sort of stare into space and - and get on with it. And I think what you would do is try and sort of move your arm or move your leg because you're trying to think well how can I explain this to the patient so that they understand what I'm asking them to do? So it's almost like you've got to join in as well so that you know you're instructions are clear."* Fern, second interview

Other physiotherapists described focusing and listening attentively to the patient, which they identified as a key component in the assessment, required in order to achieve an accurate diagnosis.

> *"From the patient and I think from that information, provided you're listening carefully and not just assuming answers, provided you do listen really carefully and that, you, you can I think our diagnoses were fairly good."* Beatrice, second interview

Thus, physiotherapists' telephone assessments of patients combined a mixture of enhanced questioning, listening and visualisation techniques, as well as simultaneous participation in movements with the patient. The implications for

practice may be that these techniques are further developed and taught to physiotherapists when they are training to use the PhysioDirect service to assess patients over the telephone. Although some of these techniques are the same as those used by physiotherapists to assess patients in usual care, the evidence suggests that these skills are enhanced if an assessment is conducted over the telephone. It has been shown that communication, for example effective listening, probing questioning and explaining treatments, is an important part of the clinical process. The next section further explores the extent to which the PhysioDirect service had an effect on communication between the patient and the physiotherapist.

5.2.3 Communication

The initial interviews provided evidence that the physiotherapists had concerns regarding how they were going to communicate with the patients over the telephone. Some physiotherapists perceived that various aspects of physiotherapy treatment could not be easily communicated over the telephone, that physiotherapy ‘is more than just words’ and that the relationship with the patient is integral to effective physiotherapy. The therapeutic relationship often builds over time from a number of treatment sessions (Beattie *et al.*, 2005, Valraven, *et al.*, 2010).

> *“I think it's more the rapport that you have to build up with a patient, to get them to comply with what's going on. You need to get some trust there and if you keep on talking to different people, it's hard to build up any trust.”*
>
> Adam, first interview

These concerns were realised, as data from the second set of interviews provided evidence that the physiotherapists felt that the PhysioDirect service tended to inhibit the normal therapeutic relationship that develops over time in face-to-face consultations between the physiotherapist and patient. The physiotherapists perceived that some patients were unable to fully trust them and therefore did not disclose information over the telephone.

> *"But when you see a patient face-to-face, you build up a bit more of a rapport, you get to know them a little bit better, you know how to approach it better, and you can't do that on the phone, so part of your experience, your, what you're getting paid more to do, is lost, so."* Adam, second interview

A related concern of the physiotherapists was that the PhysioDirect service might not only impact on their therapeutic relationship with the patient, but might also negatively impact on the continuity of care of patients. In particular, it was clear that an enjoyable aspect of physiotherapy work was the personal relationship that developed with patients over time.

> *"It's just nice, you can build up a really nice rapport with patients and I like that, whereas, you wouldn't necessarily get that over the phone because perhaps it would be more of a one-off, or, you wouldn't necessarily be the person taking the call off the same patient, if they phoned back. So, in turn of, maybe, kind of, consistency, I enjoy being there physically for my patients and being there in person."* Catherine, first interview

In the second set of interviews it appeared that this concern was indeed realised. The lack of continuity of care in the PhysioDirect service meant that developing rapport with patients was made more difficult.

> *"They're loads and loads of things around this issue that might be influencing their physical problem. So that only comes out sometimes at first contact to a certain degree. If you then get that patient back in, they'll often tell you a little bit more and you can, you can get a better insight as to exactly what is going on and if you are treating that patient face-to-face, I think that is, is easier. On the telephone, you're a stranger; you're just a voice and they don't maybe want to give you things in as much detail. So you might be trying to delve but they're putting the anchors on and saying this is all I want to tell you at the moment."* Audrey, second interview

This theme of continuity of care is also linked to the professional identity of physiotherapists, (details of which are discussed in section 5.5.1 later). Evidence from the first set of interviews with physiotherapists highlighted their concern that the PhysioDirect service might serve to disengage patients from physiotherapy. They described how disengagement from the PhysioDirect service would mean the withdrawal of patient interest and participation with physiotherapy and may result in them not re-contacting the PhysioDirect service if their musculoskeletal problem did not improve.

> *"My concern is that sometimes patients, you speak to the general public about seeing the doctor and they say I spoke to the doctor and he said this, this and this but it hasn't really helped and I didn't go back. And you say*

why didn't you go back. Oh well, what he gave me for it, it didn't help. And, I think one of my concerns would be it empowers the patient, it puts the ball in the patient's court, but actually, if they think I tried those exercises, I had this assessment on the phone and we took half an hour, but it didn't really help, they might write off physio they might say it didn't help and I'm not going down that route thank you, I want to go down a different route and we'll never know." Jason, first interview

This concern remained in the second set of interviews. Although many physiotherapists were surprised by how many patients they felt they could manage over the telephone, they were also surprised by how few patients seemed to re-contact the service, even though patients were advised to if their problem persisted. Thus, this overriding concern that the PhysioDirect service might disengage patients continued after the completion of the trial. Some physiotherapists were left feeling uncertain as to whether patients simply did not call back because they were disappointed with the service.

"So I've been staggered so I'm taking from that that, that what we are giving them is actually proving to be quite helpful or they've been so disappointed in the advice given that they've decided not to bother coming back. I don't know. That's what's going to be really interesting."

"And how would you feel if that was the case?" Interviewer

"That they were so disappointed that they didn't? Very disappointed. Very disappointed." Marie, second interview

The explanations of the reasons why some patients did not re-consult have previously been discussed in Chapter 4, section 6. Table 12, page 197, shows a summary of the key themes within this section of the chapter (5.2). The first column highlights the physiotherapist's initial concerns. The second column provides details of what their beliefs and opinions were in the second interviews. The two columns are presented in this way to show whether the physiotherapists' views changed or remained the same. It appears that the PhysioDirect service was acceptable to the physiotherapists in the context of patients with simple and acute musculoskeletal problems or patients with chronic conditions who had a good understanding of their problem and previous physiotherapy experience. The physiotherapists' overriding concern was the sense, even after the trial was completed, that the PhysioDirect service impaired the therapeutic relationship that they had with their patients. They feared that this may serve to disengage patients from physiotherapy more broadly. The next section investigates the role of the physiotherapists as a profession and explores how the PhysioDirect service model of care impacted upon that identity.

Table 12: A summary representing the physiotherapist group view of the clinical application of PhysioDirect

Overarching theme	Sub-themes	Physiotherapists' beliefs about the PhysioDirect service in their first interviews	Physiotherapists' beliefs about the PhysioDirect service in their second interviews
Clinical application of PhysioDirect	Assessment and diagnostic capabilities over the telephone	- Had concerns regarding misdiagnosing musculoskeletal conditions over the telephone. - They thought that PhysioDirect would be good for both simple and acute musculoskeletal conditions. -Quicker access for acute musculoskeletal problems to help prevent chronicity. -Thought that patients with a busy lifestyle would benefits from the PhysioDirect service. - Patients who had chronic conditions would be difficult to assess and treat with PhysioDirect. - Perceived that older patients who were poor communicators might not be suitable for the PhysioDirect service. - Did not foresee that patients who had multiple problems would not be suitable to assess. - Patients who were from a poor socio-demographic background might not manage the PhysioDirect service. - They were concerned that the PhysioDirect service might serve to disengage patients.	- The physiotherapists felt that they could reach a good diagnosis. However, they still lacked confidence with patients who found it difficult to describe symptom and those patients who had complicated histories. - Still thought that the PhysioDirect service was good for both simple and acute problems that had clear pattern and complete history. - Still suggested that the PhysioDirect service helped improved access for patients with acute musculoskeletal conditions. - Still agreed that patients with a busy lifestyle. However, when patients were phoning within tight timeframes the physiotherapists found these patients difficult to assess. - They found that chronic pain patients can be managed with the PhysioDirect service. However, some patients with psychological problems took longer to assess. - They had mixed views about how older patients managed with PhysioDirect service and suggested that patients who were poor communicators were not suitable for the PhysioDirect service but the other older patients who were able to communicate were. - They had mixed view some still had concerns that patients from lower socio-economic areas would not manage with the PhysioDirect service others disagreed. - They found that patients who had multiple problems were not suitable for PhysioDirect due to the length of time it took to assess them over the telephone.

Table 12: Continued

Overarching theme	Sub-themes	Physiotherapists beliefs about the PhysioDirect service in their first interviews	Physiotherapists' beliefs about the PhysioDirect service in their second interviews
Clinical application of PhysioDirect	Physiotherapists adaptations to the PhysioDirect service	- They expressed concerns about not having all of the information to assess patients over the telephone.	- Physiotherapists felt that they were able to glean all of the information from the patient but used a number of strategies. - The physiotherapists described in order to assess a patient, they would have to focus in on the patient, which often mean joining in the assessment moving their body parts to understand to assess that patient, making sure the physiotherapists was describing each aspect on the assessment correctly. - The physiotherapist enhanced their communication skills by using effective listening and described, in lay language, detailed anatomical parts of the body in order to assess patients over the telephone. -In order to assess the patient the physiotherapists often visualised a non-descript person and visualised the pathology.
	Communication	- They perceived that PhysioDirect reduces personal contact and relationships with patients. - They thought that the PhysioDirect service would reduces continuity of care - They felt that the PhysioDirect service might serve to disengage patients from physiotherapy.	- They still though that PhysioDirect reduced personal contact and the impacted upon the therapeutic relationship. - The physiotherapists still held beliefs that the PhysioDirect service impaired continuity of care. - They still felt that the PhysioDirect service disengaged patients from the service as they had limited second calls to the service.

5.3 Professional concerns about delivering the PhysioDirect service

The Chartered Society of Physiotherapy (CSP) describes that physiotherapy is a healthcare profession that assesses and treats patients' movement and function (The Chartered Society of Physiotherapy, 2012). It has been suggested that the PhysioDirect service fundamentally changed how physiotherapists assessed and treated patients. This section explores details of how the physiotherapists perceived that the PhysioDirect service changed how they provided physiotherapy treatment. It also explores how the physiotherapists' professional identity evolved with the introduction and use of the PhysioDirect service, providing new insights into the skill set needed for the delivery of the PhysioDirect service.

5.3.1 Treatment and generalised management

Treatment in physiotherapy may involve a number of different techniques and treatment modalities within tailored packages of care for patients with acute and chronic musculoskeletal problems. These include education, advice, manual or manipulative therapy, exercise therapy, acupuncture, injection therapy, electrotherapy, hydrotherapy and cold or heat therapy (Chartered Society of Physiotherapy, 2010). After the PhysioDirect telephone assessment was completed, the physiotherapist would make a decision about whether the patient could be managed over the telephone or should be brought in for a face-to-face assessment. In either scenario, it was likely that the physiotherapist gave some advice to patients about their musculoskeletal problem. For those patients who were managed entirely on the telephone, the physiotherapists gave patients specific advice and exercises.

One of the key findings, arising from the physiotherapists' initial interviews, is that they expressed concerns that working within the PhysioDirect service may mean that they would only provide generalised, rather than individualised, treatment to patients with musculoskeletal problems.

> *"The other ones that are involved on the phones, from the peer discussions that we've had, they seem to be feeling similar things to me, from what I can gather. One of them said to me that it's more of a generalised analysis at the end because you can't look at which specific movements that are stiff or weak, you're making a more general feeling that yes, this is probably a stiff knee or a weak knee and therefore, you're more likely to be giving them general exercises."*
> Delia, first interview

There was some evidence in the second set of interviews that the concern remained that the PhysioDirect service appeared to restrict physiotherapists' treatment to the provision of generalised advice rather than individualised care. Within the PhysioDirect service these standardised procedures were, generally, in reference to the suite of patient information leaflets provided for use within the trial, with some physiotherapists feeling restricted in what treatment they could advise.

> *"It would have been better if I could, give; if there was flexibility for me to just give the exercises I wanted to do, so I'd find that, I get a leaflet, there is a couple of things I'd like to give to the patient, one was in one leaflet, one was in the other , which was obviously difficult, so there's*

things that I probably thought clinically, I want them to do this, but the leaflet that was more relevant to them didn't contain that." Adam, second interview

However, another physiotherapist disagreed and thought that the information leaflets were of high quality:

"It was good, good quality information um that we gave out and like I said, it was nice to, to have something good quality to back up what you'd said on the phone. You wouldn't want to, to think oh I've done a really good job talking to that person and then send them you know, something that wasn't really very good paper you know, exercise written information wise." Catherine, second interview

As previously highlighted (see section 2.1.1), it was shown that patients who had been affected by their condition for a long period of time and had a certain level of knowledge about that condition who were viewed by the physiotherapists as suitable to be managed over the telephone. These data support this view, as the physiotherapists thought that the PhysioDirect service would be helpful in providing general information to support the self-management of patients with some long-term conditions, for example, patients with osteoarthritis (OA).

"I think the OA knees like those sort of situations. The osteoarthritic patients generally who need more range of movement and strengthening exercises

just generally, those patients and I think really what I said before, those patients who need more self-management; those people that maybe are on the mend but just need that extra push to get better. Those sort of patients are ideal for, are ideal for a PhysioDirect." Anna, first interview

In the second interviews the PhysioDirect service was perceived by physiotherapists to be helpful in providing supported self-management.

"Sometimes they just need something explaining, for example, the doctors x-rayed my knee and told me there's a bit of wear and tear, but what does that mean or they said there were some changes but I'm not clear about what and then it just takes, it just needs someone to sit with them and talk to them for ten minutes and say, this is what's going on, this is why and just educate the patient and then obviously you can reinforce that by sending information, you know, through the post on exercises but that's all some people needed, just somebody to listen to them." Catherine, second interview

The physiotherapists overall in their second interviews still agreed that the PhysioDirect service was effective at providing self-management advice. However, they highlighted that since patients were 'only' receiving PhysioDirect telehealth, the physiotherapists felt obliged to spend longer on self-management advice during telephone calls than they would normally do in usual care.

"The telephone assessment almost feels like it's more of, makes a bigger proportion of your treatment because you can't do any manual treatment

perhaps. You're giving them advice and exercises and that's the package and so I think maybe I, I put a bit more emphasis on those sort of self treatment approaches then perhaps I would have done face-to-face. It feels that way. I'm not sure if that's accurate but I feel I gave good general self-management advice." Marie, second interview

In physiotherapy terms, treatment (including self-management) should involve the participation of the physiotherapist and the patient (Cott and Finch, 1991, Parry, 2004). However, the physiotherapists perceived that the PhysioDirect system did not facilitate that aspect of physiotherapy, suggesting that they provided general advice and were less able to individualise their treatment plans. These concerns are discussed in the next section.

5.3.2 Evolving professional identity

An initial concern for the physiotherapists related to the potential for them to become de-skilled with respect to their physical and manual assessment and treatment techniques as a result of providing PhysioDirect. These skills were clearly viewed as core skills for successful physiotherapy. However, the PhysioDirect trial was organised to ensure that no participating physiotherapist would spend more than half of their working week providing the new service, and many spent only one or two half-day sessions per week on the telephone.

"I'd hate to be a physiotherapist who only talked to people on the phone, that would be terrible, you know, you'd really de-skill and obviously, that wouldn't be good." Eva, first interview

In the second interviews, the physiotherapists still felt strongly that they did not want to spend the majority of their working week delivering the PhysioDirect service, but thought a mixture of PhysioDirect and usual care would be the most suitable combination. This may have been related to their recent experience of mixing the two in delivering the new service in the trial. The physiotherapists clearly did not view the PhysioDirect service as something they would want to universally adopt in place of usual face-to-face physiotherapy care.

> *"I wouldn't want to do any more than that, and I couldn't do more than half a day in any one stint, you couldn't do a day of that, it would be very difficult, I wouldn't do that as a job, I wouldn't be happy with that. If that was the way physio went, I'd go and get another job." Adam, second interview*

Another reason as to why the physiotherapists did not want to spend the majority of their time on the telephone was that the PhysioDirect assessments were perceived as rather monotonous.

> *"By the end of the day, I'm sick of saying the same questions, you know, because you're kind of repeating the whole, this format of questions if you're kind of, you know, just repeating those continuously."* Eva, second interview

A further element that emerged was the impact on physiotherapists of conducting their work whilst being seated, a very different setting to that in usual physiotherapy care. The qualitative data provided some evidence to suggest that physiotherapists disliked sitting at a desk in front of a computer.

> *"No in the fact that it was true. I wanted to get up. I can't sit for any length of time (laughing). I'm too active. I hate sitting so between consultations I was walking, I was pacing, I was on the bike (laughing). I was doing anything to get out of the sitting position so that would be a problem for me. I don't like, I don't enjoy sitting at a desk. I don't enjoy computer work but that's me but anybody else will be you know will be quite happy to do that."* Audrey, second interview

This suggests that the PhysioDirect service changed the job role of a physiotherapist from one that is often moving to one that is rather sedentary. It also appeared that the professional identity of physiotherapists was not only influenced by the type of physiotherapy they delivered, but by the extent of continuity of care they provided to patients. The issue of how the PhysioDirect service might impact on the continuity of care with patients was clearly a concern for some, aired in their initial interviews (see section 2.4 of this chapter). This concern remained in the second set of interviews. One physiotherapist in particular reported that feedback from patients as to whether their symptoms had improved or worsened, which was largely missing in the PhysioDirect service, facilitated reflection on clinical decisions. This physiotherapist suggested that the PhysioDirect telehealth system limited that feedback, as few patients seemed to call back to discuss how their problem was progressing and, in cases where they did, they often spoke to other physiotherapists, losing the sense of continuity of care and any hope of a feedback loop to the initial physiotherapist.

> *"You don't get the closure and the feedback loop and so it's difficult, more difficult to learn as a clinician using PhysioDirect about how your patients are doing 'cos you don't get the feedback loop whereas when we see them face-to-face and we say I want to see you again in a month to see how you're getting on, we get that feedback of how they're progressing and that helps us learn and develop."* Jason, second interview

Thus, an important point to consider is how the lack of continuity of care within the PhysioDirect system might negatively impact on the physiotherapy profession. The physiotherapists were concerned that if the PhysioDirect service was to become the only way for patients to access physiotherapy, it might impede the physiotherapists' ability to reflect as practitioners and may ultimately de-skill the workforce's knowledge base and the skills needed to provide manual therapy.

> *"I think the big concern is if all you did was assess on the phone, if that was what the whole profession did in the NHS, you know I think yes there'd be a real issue there with professional clinical development so it is very, potentially a very useful and effective service for managing resources and cost effectiveness and may have acceptable outcomes. If it was all you did, I think there would be real big shortfalls. Yes, long tum it would be very damaging probably to yes, to the skill level within the profession."* Jason, second interview

One barrier to the acceptability and implementation of the PhysioDirect service was the overriding concern of the physiotherapists and physiotherapy managers that the PhysioDirect service might have a negative effect on the knowledge base

and skill level of the profession. This fear appeared to be related to how future physiotherapy services may develop, with physiotherapists on the telephone for all of their working week. It appeared that the physiotherapists felt that once the move to telephone care was introduced, much more of their work might be transferred to telephone-based care. These fears might be unfounded, as many PCTs in England and Wales which provide a PhysioDirect type service do not have physiotherapists providing the service for all of their working week. There are, however, some private companies with NHS contracts who do employ full-time physiotherapists in a PhysioDirect service (ShropDoc, 2012). Therefore, their concern appears justified in terms of the physiotherapists who would not want to provide the service and who would not endorse the movement to provide physiotherapy in such a way for fear of de-skilling the workforce. Therefore, the PhysioDirect service would be unacceptable to the profession if it was provided in this way. Further discussion related to the professional impact of the PhysioDirect service is presented in Chapter 7, section 4. The next section discusses the skills perceived to be needed to assess patients over the telephone, some of which have been previously highlighted (see section 2.3 of this chapter).

5.3.3 PhysioDirect and the development of physiotherapists' skill set

In the first set of interviews, some physiotherapists recognised that new or improved skills were needed to assess patients' musculoskeletal problems over the telephone. The additional development of these skills was suggested as a reason why some physiotherapists took part in the PhysioDirect trial (i.e. they hoped that both their subjective assessment and communication skills would improve).

> *"There's skill, obviously, in trying to get the information out of someone who struggles to relate and that's obviously part of the physio's ability to take that information. So, you know, for the patient, the experience is going to depend a lot on the person they're speaking to and how effective they are at getting that information and understanding what the patient's trying to tell them. So, there's a two-way thing, if the physio misses the point completely what the patient's trying to say, they're going to get the wrong diagnosis and the patient's going to feel that they've not really listened or understood."* Charles, first interview

The second set of interviews provided insights into how the physiotherapists felt that specific skills in assessing patients over the telephone had improved. They felt that their subjective questioning and their diagnostic skills had improved as a direct result of working within the new PhysioDirect service.

> *"From listening to what the patients say, I think you can see, like sometimes you would spend less time doing your subjective part of the assessment, which is your questioning, and then you've got - you're obviously your objective side of things..I think, yeah, you start to maybe draw a diagnosis a little bit sooner. Not with every patient became obviously you've got complicated patients but yeah, I think from listening to the patient you're starting to form...a diagnosis a little bit sooner now."* Fern, second interview

In the second set of interviews, physiotherapists had clearer ideas as to what skills PhysioDirect physiotherapists should have. There was consensus from both the managers and the physiotherapists that the PhysioDirect service should be

delivered by experienced physiotherapists with at least Agenda for Change (AfC)[8] Band 6 musculoskeletal experience. The skills that the PhysioDirect physiotherapist needed to have were perceived to centre on the ability to listen carefully, visualise the patient and their musculoskeletal problem and rapid decision making.

> *"A kind of an upgrade Band 6. Um so...but, but then saying that, I mean PERSON_H, who is in the study, he, he did very well and he's probably mid, mid kind of grade. I mean somebody with a lot of musculoskeletal experience. I mean we certainly wouldn't be looking at a Band 5 junior. They need to have had a good three, three years minimum."* Michelle, physiotherapy manager

Participants expressed specific concerns with regard to junior physiotherapists delivering the PhysioDirect service. Interviewees perceived that they might not have attained a suitable level of knowledge about and experience of treating patients with a range of musculoskeletal problems in practice to assess patients over the telephone. The concern centred on their relative inexperience in managing clinical risk and their lack of expert knowledge of how to assess and treat patients with complicated musculoskeletal problems.

> *"There are just so many concerns around how it could pan out if juniors would be trained up. A junior has got a lot to learn anyway in turns of face-to-face care, you know, without adding another system to train them up in*

[8] Agenda for change pay band is the tariff that NHS staff are allocated to on the basis of their knowledge, responsibility, skills and effort needed for the job.

so you need to make some sense of the decision about what you don't, so you don't train a junior up on the PhysioDirect but it might be part of a Band 6. At the bottom end of a Band 6, somebody engages in the training process with increments but when, by the time they're half way through you know that second gateway then actually they're then started begin to practice and manage clinical risk well whilst managing the paperwork of PhysioDirect and you know it's about where you pitch it, then you need extra training. You've got two systems going; you train for that as well as training for their face-to-face and it, yes, so two systems." Jason, second interview

It was the concern of the more experienced staff that their junior colleagues might not have assessed and treated a sufficient number of patients with differing musculoskeletal problems to be able to have a clear idea of how to assess and treat patients with certain musculoskeletal problems over the telephone. On the other hand, these findings may reflect how two physiotherapists may treat the same musculoskeletal problem differently within a face-to-face context. There are data in the qualitative study that supports this view:

"If you came into a department and watched us working, say if we all had five patients to assess, the same patients they'd probably go out with completely different views from every physio but that's and that's going to be the same over the phone. I mean it would be similar advice but it would differ in some respects I'm sure so." Charles, second interview

Overall, it appears that the introduction of a PhysioDirect service leads to changes in the profession's identity, from one that is mobile and 'hands-on', to one that is stationary and remote in which therapists provide generalised rather than individualised advice and treatment.

5.4 The organisation of the PhysioDirect service

The final section focuses upon the organisational features of the PhysioDirect service. This section explores how the physiotherapists experienced the brief PhysioDirect training programme that they participated in prior to the trial commencing and considers which aspects of that training were felt to work well and which did not. It highlights the concerns of the physiotherapy managers about their ability to incorporate the new PhysioDirect service within an already existing physiotherapy service and explores the potential future of PhysioDirect after the trial.

5.4.1 Training

As previous presented in Chapter 3, section 4.3, prior to using the PhysioDirect service the physiotherapists were involved in a training programme. The physiotherapists interviewed were positive about their training experience at Huntingdon; they found it beneficial, as it helped them to understand how it might work within their own services. In particular, they valued the time spent observing other staff experienced in using the PhysioDirect computer software in real time.

> *"That was really good, really well delivered and really good to see the software in action and have a go. Yes, really, really helpful. I think without*

that, we'd be struggling a lot more to get our head around the software and stuff. It was essential, I would say." Jason, first interview

One of the concerns of practising on the telephone is the idea of cold calling the patients on the waiting list. Most of the physiotherapists did not enjoy this aspect of training.

"No, not as good as I'd like really. January seems quite a long way away, but our problems with the practice was that we spent quite a lot of time just having to contact patients ourselves and having to cold call them a little bit and I didn't like that particularly, but, we didn't have any other way of doing it really. I mean, literally, we were going through the waiting list and if they picked up the phone we'd say, "Oh hello" and I suddenly felt like I don't want to sound like a saleswoman here, I don't want to sound like I'm selling double-glazing." Beatrice, first interview

However, what appeared to work well for some physiotherapists was the ability to follow up these patients in face-to-face appointments later, in order to check that their diagnosis and treatment recommendation were correct.

"I think having had these practice patients where we've been seeing them anyway, eight out of 10 have been right, I think. There have been a couple which have been, none of them are way out, you're on the right track with them, it's just you haven't asked one particular question that, you know, has thrown you completely." Molly, first interview

Allowing the physiotherapists to check whether both their diagnoses and their treatment plans were correct enabled them to see how the PhysioDirect service worked in practice. In particular, it gave the physiotherapists the opportunity to grow in confidence with the system, letting them reflect on their ability to diagnose a different range of conditions over the telephone. It was clear, however, that there were still some patient cases for which the traditional face-to-face clinical assessment was pivotal in making an accurate diagnosis.

> *"When she actually came in and she did this to show me, it was glaringly obvious straightaway, but, without seeing that movement, I didn't pre-empt that at all, that she looked like that. So, that really brought it home for me and I shared it with my colleagues that sometimes, even though you've asked the right questions, you can't rely on what the patient is telling you because it may, for them, be normal and they might see it as I've been like this for ages, whereas to you, that's your diagnosing question, if you know what I mean. That was a bit of an eye opener for me because I would have put her down as a much less severe condition than what she was."* Molly, first interview

On reflection, this physiotherapist felt that she had perhaps been overly confident with the new PhysioDirect system.

> *"It's made me think just don't get too cocky with yeah, okay, I've got this right and run into that diagnosis too quickly. Just reiterate things at the end and what I've started doing now is just so let me get this right, you get*

problems with doing this, that and the other, is there anything else, you know." Molly, first interview

This physiotherapist described this case to her colleagues so that they would become aware of the potential problems of the PhysioDirect service. None of the other physiotherapists interviewed mentioned this as a concern. It also highlights the important role of training, especially the practice of inviting patients to be assessed after they have had an assessment over the telephone. The other components of becoming familiar with the difference processes of the PhysioDirect service are now explored in the next section.

5.4.2 Familiarisation

This section explores how the physiotherapists became familiar with the PhysioDirect computer software program, and investigates the difficulties experienced by some physiotherapists in attaining sufficient confidence to assess a patient over the telephone without the usual integral visual component of patient assessment. It explores their views and experiences of the PhysioDirect service, particularly with respect to simultaneously entering information in the PhysioDirect computer software program whilst also conducting the patient assessment over the telephone.

"I think there's two sides to the practice; one is getting your head around operating the software whilst talking, which some people call multi-tasking, some people in this trust suggest there are gender differences around that but, so one half of the challenge has been getting used to taking down the assessment in electronic form whilst doing your subjective examination and

> *the second half has been actually the clinical challenge of working just on subjective information and not being able to do any clinical testing, not being able to see the patient, observe anything, and so trying to clinically reason and be, have a good level of certainty in your impression at the end, so, it's basically clinical reasoning in a different way, with less information."* Jason, first interview

A key concern of physiotherapists was whether they would be able to complete a patient assessment over the telephone within the recommended 20 minutes. This recommendation of a 20-minute telephone assessment time from the training team at Huntingdon caused some anxiety and unease amongst participating physiotherapists. Initially, the physiotherapists reported in their first interviews that 20 minutes was too short a time to be able to glean all the information required from the patient to make an accurate diagnosis. Some suggested that although this was the 'target time' for a telephone assessment, they would not let their clinical judgement be affected by that time frame:

> *"If I can get all the clinical information out that I need to make an appropriate decision then yes. I haven't got to that stage yet, but, I may do, I don't know. I'm quite open-minded about it really. I'm not going to compromise my clinical judgement because of the time but I'm prepared to be not exactly proved wrong."* Delia, first interview

Data from the PhysioDirect information technology (IT) system and the qualitative interviews suggested that some physiotherapists achieved this guide of 20 minutes per telephone call, whilst others did not. In general, call times decreased

in all participating services over the course of the trial. The second interviews suggest that as the physiotherapists became familiar with the process of assessing patients over the telephone, their call times decreased. Reasons as to why some physiotherapists' call times did not decrease were associated with not feeling sufficiently familiar with the PhysioDirect system. This was due to their lack of 'hands-on' experience with it, either because of their limited number of PhysioDirect clinic sessions per week and/or the lack of patients phoning the service. The second set of interviews with the physiotherapists suggested that they became accustomed to this new PhysioDirect way of assessing patients and, overall, reported that their confidence eventually improved with practice.

> *"So...but yeah, you just get used to when to ask, when it best fits into the assessment. But that just comes with doing it. The more you do it, the more slick you become".*
>
> "*And when did you start to feel slick?" Interviewer*
>
> *"After about six to eight weeks, probably." Molly, second interview*

Some of the older physiotherapists involved had reservations about their competence to use the IT systems within PhysioDirect, and it was clear that they lacked computer literacy skills.

> *"I didn't realise, when I initially signed up for it or said that I would be interested in doing it that it was going to be so computer based, because I'm an old lady and I tend to be handwriting based as opposed to screen*

> *and at the moment, I'm still finding, I mean, I've got used to it now but I'm finding it very hard to work on the screen instead of handwriting the notes, partly because I've used the same sort of assessment forms for donkey's years and I always ask my questions in a very set order so I know that I haven't missed anything out and it doesn't come up in that order on the screen and I find it hard to dodge backwards and forwards, because I'm just not competent with it yet, but, I'm sure it will come with practice."* April, first interview

Concerns regarding how to navigate the IT system did not seem to affect younger physiotherapists, as they were quite happy with the software and the computer.

> *"Yeah, well, I've grown up with computers and I can touch type, so, typing and listening at the same time doesn't worry me."*

Another physiotherapist noted:

> "*Being quite young, I can quite easily work my way through a computer package, so, that's not a problem."* Adam, first interview

For the most part, in the second set of interviews the physiotherapists who had previously indicated a lack of confidence with the IT aspect of PhysioDirect found that their typing skills and speed improved. There were, however, a few others who did not share this experience.

> *"Well, typing, I knew, would be a problem for me. I am quite slow and I tend to, I do quite like to have things written neatly rather than not having capitals or full stops, so, I do have to go over it a little bit, but, it's one thing I have done a lot more at home is do a lot more typing on the computer, so, I am a bit faster now."* Beatrice, second interview

This problem of failing to gain sufficient confidence with the PhysioDirect computer system appeared to be an issue for some physiotherapists who only worked within PhysioDirect clinics once per week. A clinic's duration was about four hours and participants felt they did not take a sufficient volume of calls for them to feel familiar with the PhysioDirect IT system.

> *"And I knew I'd identified that you know, before I went into the study. As something that I, yes that, yes that I was concerned about because I don't sit and type and I haven't got the background of sitting and typing. I haven't done so I thought right I'll probably improve as I go along and I did and my times came down so I was quite happy but again it was like lack of experience, lack of practice time so that was a bit of disappointment to me but I know that if, once you become more familiar with what's coming up on screen, then that would come."* Audrey, second interview

On a more practical level, it was evident that older physiotherapists took longer to assess and manage a patient over the telephone. The qualitative evidence suggests that this might be because they lacked generic computer skills. This could affect how the PhysioDirect service is implemented in future. Perhaps physiotherapy managers and team leaders could encourage physiotherapists who

are more computer literate, and who can confidently use the technology, to deliver the PhysioDirect service. A physiotherapy manager also commented upon the differences between the older and younger practitioners.

> *"But that was actually the fact of the matter. They were able to adapt much more easily to it. They were able to get through the pace. They were much more receptive, much more assertive. Perhaps willing to take a little bit more...not a risk, but it was...and we had, we had kind of a fair balance of younger...by younger physios I mean that they'd been kind of maybe qualified round about the ten to 15 year mark, and the, what I would turn more of the old school, who were yeah maybe more like myself. 20, 25, 30 years qualified. And they struggled that little bit more to adapt the speed that's kind of they, they did kind of struggle. And I think that was where we saw the difference in the times, times of how long they were, they were taking. They were wanting to be much more thorough and less able to skip and they had, they had to kind of go... whereas the others were able to kind of...and, and I suppose that's a generation thing, isn't it? They were less familiar with the IT. They were less confident using the IT. Whereas slightly younger physios, that...all that multitasking, several screens open type scenario was all. So that was quite interesting."* Michelle, physiotherapist manager

This evidence suggests that younger and less experienced colleagues appeared to be more computer literate, quickly assessing patients and taking more clinical risks. They were happier giving advice over the telephone rather than bringing a patient in face-to-face compared to their older, more experienced colleagues. This

is interesting, as evidence from earlier in this chapter (see section 3.3) suggests that younger, less experienced physiotherapists may not be trusted by their senior colleagues to diagnose accurately over the telephone.

5.4.3 Operational concerns about the PhysioDirect service

One of the initial concerns of the physiotherapists, prior to their use of the PhysioDirect service in the trial, was that they might not be kept sufficiently busy. Hence, they anticipated that it might not be a very good or efficient use of their clinical time.

> *"That's not such an issue because although they're sitting on the telephone, they're still doing physio, they're still assessing a patient and giving them advice for a problem. It's not like they're sitting doing nothing, that'd be worse."* Charles, first interview

This concern was realised to some extent as physiotherapists reported that the PhysioDirect service was not 'busy enough' and that there were times when there were insufficient telephone calls in the allocated PhysioDirect clinics. This resulted in some physiotherapists suggesting that the PhysioDirect service was an inefficient use of their time.

> *"So that was a hard part of it actually because we were sitting feeling like we were wasting important clinical time so from that perspective, I have to just you know, mention that. That was quite a large part of it. And that, I think influenced how we felt about things in general. So I think if we had, if I*

had been in a busier session I might feel a little bit more positive about it." Audrey, second interview

In relation to this, the interviews with physiotherapy managers highlighted that the unpredictable number of telephone calls in each PhysioDirect clinic session made it difficult to allocate the correct number of staff to effectively manage the service.

"Or when they got there the phone was absolutely mad. It seemed to be all or nothing. So I mean we had staff going there, I mean going there, sitting there, nothing to do, bored. A lot of them got a lot of CPD and discharges done, but other times they were going and then they were feeling under a lot of pressure because the phone was ringing." Michelle, physiotherapy manager

However, by the end of the trial, one of the physiotherapy managers reported that they had been able to make improvements in this aspect of the service:

"As I told you, and I think it was done with a purpose really, okay, we probably had more capacity than demand initially okay. I think probably the safer way, of doing it, okay. When we had a clear idea of the demand, and in turns of patients preferred days, yeah, then we planned accordingly, and for the period of the real trial here; not towards the end but obviously, it stood out a lot towards the end, so it was very unpredictable; during the call time of the trial after it start, I think we coped about right really, so the amount of time that my physios weren't busy, there weren't many, okay, I believe you will always have this factor if; for a telephone based service." Manuel, physiotherapy manager

The concern about the physical geography of the participating PCTs and the population they served also appeared to be an important aspect dictating the ease of managing the PhysioDirect service. It was not considered feasible for physiotherapists to travel long distances in order to get to the PhysioDirect office to provide the service, since this would impact on the working day as therapists move from one site to another. Hence, geographical position was a particular issue for the physiotherapy managers of services in largely rural areas.

> *"There were quite a few logistical things which you wouldn't...if you were running it yourself out with the trial, you wouldn't have some element of that. So if you were working in an acute trust it would have been much more straightforward, because everybody would have been in one building, your call centre would have been in the building and it, it wouldn't have been...but we had to move staff, as I say, from one part of the patch to another part of the patch and be mindful of what was happening at their original base."* Michelle, physiotherapy manager

Another manager suggested:

> *"I think we'd have to – we would have to look it quite differently as to how we rolled it out because if from what we're scoping, if patients aren't going to use it we can't afford to have a physio in every hospital, sitting waiting for phone calls. Because that would be half my workforce, you know, it would – it just wouldn't be feasible. Not with 31,000 referrals."* Carmen, physiotherapist manager

Another initial concern of the physiotherapists was that the PhysioDirect service might simply serve to duplicate the assessment time in the physiotherapy outpatients department. Such instances may have occurred if physiotherapists were inaccurate with their diagnosis over the telephone; the person might then be asked to attend a face-to-face session in which the same assessment would be repeated.

> *"The other side of it that could become a factor is if we are assessing people on the phone and we're actually, based on only information, if we're not actually accurate with our impression of the end, if, when they come in, it becomes clear that's not what's going on then actually, they're going to have to go for a whole assessment and in a sense, that may create a greater inefficiency."* Jason, first interview

It was hoped that, should a patient require a face-to-face appointment after the initial telephone assessment, the information generated could be used to reduce the amount of time patients needed for a first face-to-face assessment. In the second interviews the physiotherapists had mixed views about how patients were managed after their initial telephone assessment. Some physiotherapists found that they duplicated their own subjective assessments, whilst others did not.

> *"I think what I found and also a lot of my colleagues found, was hard was if somebody had done the subjective report it was because we're so use to our routine of doing subjective, it was hard picking up somebody else's notes. It gave you a bit of an overview but you did tend to recap a little bit over the subjective bits and pieces again because, so the layout isn't*

> *exactly as we would do it in the department so I know a lot of people and I think that found that as well, I found it was quite hard because we'd normally got a picture and we normally draw on it the areas where the problem is and things like that and of course, it's all in writing from PhysioDirect. It, normally you'd pick it up. You'd see from the picture and then you'd read through. It'd give you; you picked up a lot of visual information again whereas of course with PhysioDirect it was all written.*
> Anna, second interview

It was perceived to be difficult to assess a patient in the usual face-to-face way using the notes generated from the PhysioDirect system. The amount of time physiotherapists were able to spend assessing and treating a patient referred for face-to-face care from the PhysioDirect service differed between each PCT. For example, one PCT allocated a 30 minute face-to-face appointment slot for the PhysioDirect patients who had been referred by the system, whilst the other PCTs allocated 40 and 60 minutes.

5.4.4 Implementation of PhysioDirect after the trial

Two of the four physiotherapy services that participated in the trial carried on using the PhysioDirect service after the trial ended, but, importantly, each one changed an aspect of the way in which the service was offered and operationalised. This gives further insights into the implementability of the service and suggests that adaptations were needed even though the model of PhysioDirect adopted in the trial was identical to the one that had been provided for over twelve years in Huntingdon. The main differences related to how they managed patient referrals from General Practitioners (GPs) and calls into the service. In the amended

services offered after the trial, the GP patient referrals were screened by a senior physiotherapist and then, depending upon the musculoskeletal problem and the length of the local waiting list for physiotherapy, the patient was either sent a letter inviting them to call the PhysioDirect service or put on the waiting list for a traditional face-to-face appointment. This adaption thus essentially omitted any patient choice in how they accessed the physiotherapy service. In particular, in one PCT, patients with shoulder pain problems were viewed as needing to be seen in traditional face-to-face consultations, given the clinical complexity of shoulder assessment, whereas those with back or lower limb problems were viewed as more suitable for PhysioDirect. Again, this adaptation thus prevented any patient choice, as it was left to the physiotherapist to decide which patients should and should not be managed in PhysioDirect.

> *"And we've obviously now in a way cherry-picked what patients we think do best, so now when the patient referrals come into the department if they're shoulders we just straightaway put them on face-to-face waiting list and if they're kind of lower limb or backs that we think would do well then we put them to the - to the PhysioDirect method of working."* Carmen, physiotherapy manager

This may suggest that the physiotherapists themselves found it more complex to assess and treat specific musculoskeletal problems (i.e. shoulder complaints) and these were the cases which they then decided should not access telephone assessment and advice. In addition, the two sites that continued to use the PhysioDirect service did so in a way that completely changed how patients

accessed it so they could better predict the number of people ringing the service. Although these modifications increased the service's implementability from the managers' perspective, they fundamentally removed the ability to realise one of the key objectives of the PhysioDirect service, namely to facilitate patient choice of how patients accessed physiotherapy. In the amended PhysioDirect services, an administrator responded to patients' initial calls and arranged convenient call-back times for the physiotherapist to contact the patient later; essentially, PhysioDirect was only being used as a call-back service. Despite these two key changes, interviewees stated that they still faced some challenges in accurately predicting how many patients they could assess over the telephone in one day.

> *"And the other challenge was when we totally overloaded the system and had about 20 calls in one day and only one physio. Well, it wasn't that bad but it really overloaded the system and so, managing the right capacity and demand was quite difficult."* Beatrice, second interview

It appears that the managers perceived the PhysioDirect service as a key way to deal with the long waiting lists for physiotherapy.

> *"We used PhysioDirect very much to siphon off some of the bulge in referrals, so that some of the more urgent stuff could go through there, and that, you know, it was used as a sort of management tool really in that respect; worked quite well."* May, physiotherapy manager

The reasons why the two other PCTs did not continue to provide the PhysioDirect service following the trial completion included their desire to wait for the results of

the randomised trial upon which to base their decisions, a lack of support for continuation of PhysioDirect from service commissioners and financial constraints.

> *"The official reason they used was that; if you do a drug trial okay, for a drug you don't know it's effectiveness, you wouldn't continue giving it to patients until you know, if it's really effective or not. So basically they [physiotherapy service commissioners] asked me to stop providing the service. If it's proven to be effective, to start again, but until then, they wouldn't pay for such a service."* Manuel, physiotherapy manager

This provides some insight into what extent the commissioners of PCTs had in terms of deciding whether or not the PhysioDirect service continued in the associative PCTs. The commissioners' perspective of implementing PhysioDirect is discussed further in Chapter 6, section 3, and Chapter 7 section 4.4 and explores some insights into the different perspectives. There was clearly a difference between the two PCTs that continued to use the service compared to the PCTs that did not. The physiotherapy managers who did not continue the service felt disappointed, as they had worked hard to set up and implement the service in the trial. They both felt that the service would be difficult to restart without the support of the trial team. Indeed, this was one of the reasons why the PCTs decided to continue using it despite not knowing the trial results. All of the service managers had a clear idea of how they thought the PhysioDirect service should sit within their physiotherapy service. Therefore, it seemed appropriate to ask how the physiotherapy managers envisaged a future PhysioDirect service.

5.4.5 The future of the PhysioDirect service

The physiotherapists and physiotherapy managers could see PhysioDirect working within their PCT in the future and were not averse to the idea of offering a PhysioDirect type service. They saw it as a tool to reduce physiotherapy waiting times or to help deal with long waiting lists. The physiotherapists also mentioned the future of PhysioDirect working well as one option within a service that also offered face-to-face care and patient self-referral to physiotherapy or direct access without the need for a referral from a GP or other healthcare professional (Holdsworth and Webster, 2004). They saw the PhysioDirect service working within a self-referral system as a way of promoting patient choice in how to access the physiotherapy care they preferred.

> *"They could ring so I think on its own, it would be okay but it would be better in conjunction with other direct access systems because then you, it gives the patient more choice of how to have physio and also it wouldn't inundate the PhysioDirect system because they've got other options if they don't like the phone option."* Charles, second interview

Another manager's view:

> *"Yeah, I don't know, that's my question and I wonder whether we could – I suppose our gold standard where we're always heading is if, if direct access is sustainable can we run the two side by side? So when a patient rings up for their same day, next day appointment we can ask them would you like this over the telephone or would you like it as a face-to-face?"* Carmen, physiotherapy manager

This was supported by the physiotherapy managers who suggested that the PhysioDirect service could be used to improve patient choice in how they could access and receive physiotherapy (Department of Health, 2000). They suggested that the choice would be given to the patient at the time of ringing the physiotherapy department, either to have a face-to-face appointment or a call-back telephone assessment and advice session.

> *"I believe it has a place in physio, okay, however, I don't think this will be the only way for patients to access a service, okay; there have been issues in their own economy that patients were not given a choice really so if it looked like a choice service."* Manuel, physiotherapy manager

It was evident from all the interviews that the PhysioDirect service was not seen as a panacea or the only way to deliver physiotherapy services to patients. Rather they saw it as an option, and as part of the solution to the challenges they were then facing in providing services.

5.6 Conclusion

This chapter has considered the acceptability and implementation of the PhysioDirect service from the perspectives of the physiotherapists and their managers, which adds to the understanding of what is already known from the patients' perspective. The chapter provided details about the three key themes of clinical application of the PhysioDirect service, professional concerns about the delivery of the PhysioDirect service and the organisation of the PhysioDirect service. These themes help to understand how the physiotherapists and their managers evaluated the acceptability and implementation of the PhysioDirect service. Overall, both the physiotherapists and their managers considered that the

PhysioDirect service was broadly acceptable. However, the implementation of the PhysioDirect service, after the trial, was a challenge. The next chapter explores acceptability to GPs and commissioners, considering the wider contextual issues regarding implementation of the PhysioDirect service.

Chapter Six: Acceptability and implementation from the General Practitioners' (GPs) and commissioners' perspectives

6.1 Introduction

The previous chapters have presented the perspectives of patients, physiotherapists and physiotherapy managers regarding the acceptability and implementation of PhysioDirect. The findings show that the PhysioDirect service is broadly acceptable to both groups. This chapter explores the GPs' and commissioners' perspectives of the PhysioDirect service, which adds another layer to the understanding of the acceptability and implementation of the PhysioDirect service. Currently, GPs are providers of healthcare services (Roland *et al.*, 2012) and they will also, in the near future, be involved in commissioning National Health Service (NHS) services (Department of Health, 2012b). Their views and experiences are considered to be important due to the central role that GPs play as gatekeepers to services (Loudon, 2008). The interviews were intended to provide evidence of their views about the PhysioDirect service, views about physiotherapy and the wider issues relating to musculoskeletal services.

It was also important to look at some of the issues related to the context of NHS structures, for example where musculoskeletal services are situated within the provision of healthcare and the impact of telehealth technologies on the NHS. Commissioner's views were also sought, and although these stakeholders perhaps have little to do with the delivery of the service, they are powerful key players in deciding whether or not the services are implemented. It was also important to consider how the PhysioDirect service fits within local NHS provision of musculoskeletal health services. These findings are presented in two parts: GP findings and commissioner findings. Although these interviews focused on

PhysioDirect, given that neither the GPs nor the commissioners were very familiar with the new service, much of their interviews involved discussing the broader issues, for example indicators of service quality.

6.2 GPs' perspectives: key themes

There were four key themes that emerged from the GP data: GPs' waiting times for access, general ambivalence about the PhysioDirect service, perception of physiotherapy as a face-to-face service and increased access, patient choice and self-referral. Although GPs felt that PhysioDirect provided faster access to physiotherapy and generally worked quite well (i.e. they received no complaints from their patients), it was clear that the GPs ultimately took the view that physiotherapy needs to be delivered in a face-to-face context in which physiotherapists are able to use manual methods of treatment for musculoskeletal patients. In terms of the advice and self-management information provided through the PhysioDirect service, the GPs felt that they themselves could provide this type of simple exercise advice and information to patients with common musculoskeletal problems rather than directing them to a PhysioDirect service to provide similar information. In general, the GPs who were interviewed were of the view that a physiotherapy service should provide patients with face-to-face 'hands-on' treatment based on the clinical assessment of the GP at first contact.

6.2.1 Waiting times for physiotherapy access

In relation to physiotherapy services, it appeared that a particularly important indicator that served to signify problems in service provision was the waiting time from patient referral to first physiotherapy appointment. The GPs in the four Primary Care Trusts (PCTs) expressed few concerns about the quality of the

physiotherapy service provided, but they felt that the long waiting times for patients to access physiotherapy services were unacceptable.

> *"I think the service that we offer is actually excellent. The waiting list is too long, most of the time."* Dr Vivian Ross (GP)

Some of the GPs highlighted the consequences for patients of long waiting times.

> *"For some patients their waiting time is sometimes quite significant so sometimes by the time their appointment comes their condition improves so there are few things. In some conditions it's, it might be a little bit, quite lengthy time. So some of, of the patients choose to go privately."* Dr Arthur Lestock (GP)

In addition, GPs in their interviews suggested that an ideal waiting time for physiotherapy was underpinned by patients' clinical and social needs. They commented that they would like patients with a 'routine' musculoskeletal problem to be seen within four weeks, and patients with an urgent problem to be seen within one week. Interestingly, some GPs suggested that patients whose musculoskeletal problem was affecting their ability to attend work should be prioritised for a physiotherapy appointment. This idea about prioritisation, or rationing, of NHS physiotherapy services was reinforced by another GP, who recommended that patients who are consulting with sports injuries should not be entitled to NHS physiotherapy treatment but instead should pay for physiotherapy privately.

> *"I don't think that the NHS can provide physiotherapy for every sports injury. And I think it's very difficult to know when is it an NHS emergency physio and when is it in that person's life and they can or can't afford it. Do you see what I mean? So if I play tennis and if I get a bit of tennis elbow, you know, I could go to my GP and do that but I could also spend my £45 and go and see somebody and I might want to see them three times because my tennis is very important to me, but I'm not sure the NHS can do that."* Dr John Locker (GP)

The GPs suggested that it would depend on the cause of the patient's musculoskeletal problem as to whether or not they should be entitled to NHS treatment. For example, a patient who received an injury at work was seen by Dr John Locker (GP) to be more entitled than a patient who received an injury whilst pursuing a leisure activity. Each PCT has its own criteria for urgent patients referred to physiotherapy services. The PhysioDirect service did not affect which patients would be prioritised as urgent. Overall, the GPs thought that the PhysioDirect service seemed to improve access to physiotherapy advice.

> *"Because generally I think during that period my impression was what actually, they got access quicker and generally it worked quite well."* Dr Arthur Lestock (GP)

The belief that the PhysioDirect service increased access was the predominant view. Many GPs could see the benefit of accessing physiotherapy through the PhysioDirect service. However, it became clear that many GPs could not remember the RCT or the PhysioDirect service. This meant that their opinions of

and beliefs about PhysioDirect had to be specifically sought. This general ambivalence about PhysioDirect is discussed in the next section.

6.2.2 General ambivalence about PhysioDirect

In general, GPs tended to be ambivalent about the new PhysioDirect service in that they perceived it to be an issue for physiotherapists to decide upon and it had very little impact on their day-to-day work. Many of the GPs, when asked how they felt about the PhysioDirect service, reported that they did not have strong feelings either way. This general ambivalence about PhysioDirect was due in part to their lack of knowledge about the details of the new service and to their receiving little direct feedback about it from patients. For instance, in some interviews the researcher had to offer an explanation of the role and function of the PhysioDirect service. The only information they recalled receiving about the service was the information provided by physiotherapists in their discharge letters for individual patients.

> *"I mean the only feedback I get really is at the end of their treatment, so when I get a discharge letter from the physios. But I didn't have any positive or negative feedback from the patients."* Dr Leona Main (GP)

One GP commented that his patients did report that they found it a little 'unusual' to be assessed over the telephone and that some patients seemed rather negative about PhysioDirect. Despite this patient feedback, this GP viewed the faster access to physiotherapy within the PhysioDirect service as a positive feature.

> *"Yeah, I mean there were a few who were not really, you know, that, that happy. Said, you know, just had this discussion over the phone and they didn't, after that, you know, didn't, probably being a bit unusual made them more actually ... negative I would say probably"* Dr Arthur Lestock (GP)

Another reason for the general ambivalence amongst the GPs interviewed was that the trial did not impact on GPs' working practices when referring patients to physiotherapy. They continued to refer patients to physiotherapy in their usual ways and patients were identified and invited to take part in the trial after the GP had referred them to the physiotherapy service.

> *"Well we got the feedback, but I didn't even bother reading the pieces of paper; they said this patient was triaged this way or that way, and you know, as long as they were dealt with, I didn't really care, and so I knew it was happening, but I didn't really know what was happening, I didn't know how it worked or how well it was going."* Dr Henry Radcliff (GP)

This lack of direct involvement of GPs with the new PhysioDirect service might account not only for their general ambivalence but also for a lack of understanding amongst GPs about the service. The PhysioDirect service itself aimed not only to provider faster access to a physiotherapist who would assess the patient's musculoskeletal problem, but also to provide a physiotherapy package of care for patients. For most, this treatment was initially commenced over the telephone, but for those patients who needed it, it also involved face-to-face care. The interviews highlighted that in general the GPs understood the service to be a triage service,

to help sort patients by clinical need and to manage waiting lists rather than a service to provide advice and treatment.

> *"Well only that it seemed very easy to do, there wasn't a problem and the patients seemed to accept it, so we didn't have any resistance and they were quite happy to be contacted but I think they were contacted by phone and then it was kind of triaged what happened to them and that seemed all very straightforward."* Dr John Locker (GP)

This misunderstanding about PhysioDirect being simply a triage service could be related to the GPs' previous experiences of practice nurse-led telephone triage systems for patients with other clinical conditions. It could also be related to their own experience of telephone consultations with patients (Richards *et al.*, 2004).

> *"Right, yes. I mean we are using triage more and more. I personally - I mean we're having to do more telephone consultations because we haven't got the manpower or the time to see everybody face-to-face."* Dr Leona Main (GP)

This lack of understanding of the PhysioDirect service might have several important implications. The GPs were content that patients were having physiotherapy treatment and, most importantly, were not complaining about the service. On the other hand, the relative lack of patient feedback to GPs might also suggest that the PhysioDirect service was broadly acceptable to patients as they did not appear to give specific feedback to GPs about their experience of the service. However, again, when prompted there was a general sense from the GPs

that physiotherapy treatment should be received face-to-face rather than on the telephone.

6.2.3 Perception of physiotherapy as a face-face service

Given the lack of knowledge amongst GPs about the PhysioDirect service, an explanation of it was given during their interviews. Once the interviewer explained the PhysioDirect service, what it involved and the implications for treatment of patients, GPs expressed some concerns about the relative lack of face-to-face physiotherapy care.

> *"And I think, I think that would be my concern, is getting the proportion of phone time as opposed to seeing the patients. Cause there is only so much you can do on the phone. And if the purpose of the GP referring the patient is to get them treated, you know, to actually have hands on treatment for the injury."* Dr Leona Main (GP)

It was clear that the GPs perceived physiotherapy to include 'hands-on' treatment, and by removing the face-to-face component for many patients in the PhysioDirect service they felt that an essential and important aspect of physiotherapy care was lost. Although many patients randomised to the PhysioDirect arm of the trial had a telephone consultation and face-to-face care, approximately 40% were managed by telephone care alone, and it was this telephone care alone that GPs expressed concern about. The reduction of face-to-face care in the PhysioDirect service appeared to shape its acceptability to GPs, as they believed that physiotherapy over the telephone would be less effective than face-to-face care.

> *"The reason we refer them is, and especially in our, you know, you want hands on treatment, you want them to be seen. And a phone call's fine but, but that's not what people are expecting from a physio. You know, I can give them advice about ice and elevation and analgesia and that sort of thing. So if the purpose of the, the triage phone call is to assess urgency and like a function, fine, but not, but I don't think there's an awful lot ...You know, I'm not a physio but my views, when you go see a physio you expect to be shown some exercises, you might have a bit of ultrasound, you will have, you might have some massage, that's the sort of thing you're gonna have. And you can't do that down the phone."* Dr Leona Main (GP)

This GP thought that a physiotherapy service would provide patients with the 'hands-on' treatment required by the patient based on their own clinical assessment. This highlights GPs' misconceptions of what physiotherapists actually do in clinical practice, in that they perceived that physiotherapy treatments consisted of 'hands-on' therapies. In terms of the treatment provided by PhysioDirect, the GPs felt that they themselves could provide simple advice to and advise on exercises for patients with common musculoskeletal problems in primary care rather than directing them to a PhysioDirect service that would provide similar information.

> *"The reason we refer them is, and especially in our, you know, you want hands on treatment, you want them to be seen. And a phone call's fine but, but that's not what people are expecting from a physio. You know, I can give them advice about ice and elevation and analgesia and that sort of thing.* Dr Leona Main (GP)

The qualitative evidence suggests that although many GPs are confident about providing self-management advice, other GPs are not. There were four GPs who suggested that they would happily manage and treat musculoskeletal pain patients with common conditions within their own practice. This would involve advice to exercise and self-manage rather than a referral to PhysioDirect services if they were not to receive face-to-face care. It is important to consider that the content of the advice may differ to that of a physiotherapist. GPs might be more inclined to provide oral information only, without clear guidance on specific exercise, which may not be based on a thorough assessment of the musculoskeletal problem, such as a physiotherapist would carry out. Further implications of this are discussed in Chapter 7, section 3.2.

Although not specifically related to the PhysioDirect service, it was felt important, as PhysioDirect delivers physiotherapy to patients using assisted technologies, to ask GPs about the growing use of technology in primary care. It may be that those who are more negative about the role of technology might have similar views about PhysioDirect. In relation to the management of musculoskeletal pain in primary care, the GPs interviewed found it acceptable that patients come into the practice with information from the internet about their conditions. The interviews also provided evidence that GPs find it acceptable to use information sourced from the internet, which helps them to manage musculoskeletal patients in primary care. The websites that GPs used varied from those containing specifically patient-friendly information, for example Patient UK, to information sourced from their local information system. One GP used an American rehabilitation website.

> *"I think the use of the internet for patient information is generally great, you know, I don't discourage it. I mean they have to be aware that, you know, to try and be aware that not all the information is reliable, you know."* Dr Bruce Knox (GP)

There does, however, seem to be a generational shift with the use of technology and the familiarisation with software programs, as there was an example of one older GP, in the interview sample, who found computers and the information sourced from the internet difficult to use. This particular GP felt that healthcare should be predominantly face-to-face. However, this is only the view of one GP and must be viewed with caution. Future studies could investigate whether there are similar differences between how different generations of healthcare professionals interact with telehealth technologies, such as PhysioDirect. However, it is noted that most GPs could foresee such facilities being used in the future, for example information being sent via e-mail and telerehabilitation services being used in the assessment of musculoskeletal problems. This view is particularly relevant, as it appears that there was no specific concern about using technology in healthcare.

6.2.4 Increased access, patient choice and self-referral

As previously highlighted, delayed access to physiotherapy care was a concern of the GPs. They suggested that one problem of delayed access to physiotherapy is the uncertainty faced by patients after visiting the GP and having to wait several weeks to gain a physiotherapy appointment. For the GPs interviewed, a good physiotherapy service was one which had rapid access as well as providing both clinical-effectiveness and cost-effectiveness.

> *"So an effective service basically, so good access and availability and an effective service, with the right skills and expertise to deal with the problem and enough resources to deal with the problem and a cost effective service, so a service that's not going to blow our budgets."* Dr Henry Radcliff (GP)

Although most GPs felt that the PhysioDirect service would be helpful in improving access to physiotherapy, one GP who was interviewed, when asked how he would like to see musculoskeletal services manage demand, suggested that an online booking system would be most effective. He described it as a system which would generate instant feedback from appointments. He thought that this would also help manage patients' expectations of when they would receive physiotherapy treatment. He described it as comparable to what is available when booking flights or train journeys over the internet.

> *"Dream it up. Oh I'd like it to be all online and just use it as a, you know, getting templates, filling it on line and, you know, like choosing, using, through, going through choose and book system and directly getting a feedback and appointment for, for a patient."* Dr Arthur Lestock (GP)

The GP could envisage booking either a face-to-face consultation or a telephone consultation using the PhysioDirect service to assess and treat patients. Another method to improve access and patient choice is related to self-referral to physiotherapy. This would allow patients, physiotherapists, GPs and other healthcare professionals the ability to simultaneously access and book an

appointment that would be similar to the NHS Choose and Book[9] system (NHS Connecting for health, 2012).

When GPs were asked about self-referral to physiotherapy, many had mixed views. Some suggested that they were positive about patients self-referring to physiotherapy, and others were not. However, they did consider that the PhysioDirect service could be the 'first step' in that process.

> *"I don't mind how they access physiotherapy, they can access physiotherapy directly or through the GP, you know, I don't, I'm not sure if the GP is actually a very good way of managing that referral stream. I mean it is the traditional way, you know, people would go to the GP and the GP would be the gate keeper to go on for those additional services, but maybe the patient would be a better discriminator at doing that you know, at deciding when they want to go to physio. My worry is that with direct access to physio, by patients, that the flood gates will open and a large amount of um; we will basically have to you know, increase the capacity of the service, because I think that the need would suddenly rocket because patient expectations would be such that you know, got a sprained ankle, I'll go to the physio, I've got a bad back, I'll go to the physio, I woke up this morning with a stiff neck, I'll go to the physio, it's free, it's on the NHS you know."* Dr Henry Radcliff (GP)

There was a sense that self-referral would increase demand for physiotherapy services and that there should be a professional group that acts as a gatekeeper

[9] Choose and Book is a national service that combines electronic booking and a choice of place, date and time for first hospital or clinic appointments (NHS Connecting for health, 2012).

to specialised NHS services. However, this may indicate that GPs feel protective about their professional identity. On the other hand, other GPs welcomed physiotherapists assessing their musculoskeletal patients, and thus reducing their workload. There was also a sense that although self-referral to physiotherapy would be welcomed, some patients might not like the idea.

> *"That would be good for me, you know, I've got really enough work. I mean but I don't think they, you know, they might choose that but that's quite a new idea. So not sure how patients would, would take it and how popular would that be."* Dr Arthur Lestock (GP)

There is debate professionally between GPs and physiotherapists about which professional is the most appropriate to assess and treat musculoskeletal problems. This is because each has their own areas of expertise. For example, GPs are general practitioners, rather than specialists in one particular field. GPs' future roles are now too extended to commission NHS services. This means that GPs might make key decisions regarding commissioning physiotherapy services and may choose to improve access by stipulating that telephone-based services are introduced. As part of the most recent government reforms, NHS services in England are being led by clinical commissioning groups (CCGs) but not all practising GPs will be involved in commissioning services (Department of Health, 2012b). It is acknowledged that only a proportion of GPs will be involved; however, some GPs felt that the profession might not have the skills to commission healthcare services.

> *"Yeah, I mean that is, a tricky question. The right information, you know because if you're talking commissioning that is, that's exactly the problem, you know. I have no skills in commissioning a service, so I don't know what the right information is; I don't know what to look for."* Dr Bruce Knox (GP)

This GP had an understanding of the role of evidence and had increased awareness of the patients' voice. They felt that they might, however, lack the commissioning skills needed. The concerns of the critics of the government's reforms are that the newly formed CCGs (Department of Health, 2012b) will have to employ consultants skilled in process commissioning (Hawkes, 2011, Hawkes, 2010). This is due to the professional skills of commissioning services that were lost due to the disbandment of PCTs by the government (Imison *et al.*, 2011). At the time of the interviews, commissioners were the key in deciding what healthcare services should or should not be commissioned. Therefore, it was considered important to ask for their experience, opinions of and beliefs about the PhysioDirect service.

6.3 Commissioner perspectives: key themes

There were four key themes that emerged from the commissioner data: the importance of waiting time as a key quality indicator; the relative importance of physiotherapy, PhysioDirect and the allocations of resources; the importance of trust between the provider; and commissioner findings. All the commissioners felt that the physiotherapy service provided in their PCTs was of good quality. The interviews highlighted that physiotherapy services were generally not considered high priority unless there was evidence of problems such as patient complaints or unacceptably long waiting times. Waiting time was identified as a key quality

indicator in the commissioners' evaluations of physiotherapy services. The data provided evidence that, at the time of interview, commissioners were acutely aware of the pressures to make cost savings in the NHS. Commissioners assumed that the PhysioDirect service would be a cheaper option in providing physiotherapy services. The key to successful commissioning appeared to be the development of relationships with providers which were characterised by mutual trust.

6.3.1 Importance of waiting time as a quality indicator

In order to ascertain information about how a service is performing, commissioners discussed a number of quality indicators, including waiting times to access the service, patient do not attend (DNA) rates, patient complaints and feedback from GPs.

> *"Well, one would be problematic performance against some of the key areas, key performance indicators, others are continual feedback from patients; complaints from patients through our PALS service (Patient Advice and Liaison service). You know, regular feedback from other key partners like GP's that the service isn't you know, it's delayed or they're having problems engaging with the service or any other issues like that."* Mr Nicolas Rutherford (Commissioner)

Waiting time was a key quality indicator, and varied across the four PCTs in a similar way to national variation, with one PCT having a very short wait of two to three weeks and others having waits of between six to eight weeks and longer. Within the interviews a specific example was highlighted in which, previous to the

trial, one of the PCTs had a waiting list for the first physiotherapy appointment of approximately 13 weeks. This waiting time caused the service commissioners to intervene and investigate this with a view to ensuring this long wait was reduced.

> *"As far as our cluster goes we've been involved in some of the physiotherapy discussion because waiting lists went up through the roof, the service wasn't commissioned in time, a 13 week wait, so we wanted to get the physiotherapy rates waits down. So we were involved in saying was the capacity right, were we matching capacity? Were there enough physios? It was at that level we were involved."* Dr Paul Wright (Commissioner)

This suggests that, for commissioners, waiting times were an important indicator of the performance of physiotherapy services. The commissioners, however, did not indicate at what point waiting times became unacceptable. It was assumed that a waiting time of thirteen weeks breached the Service Level Agreements (SLA)[10] with the PCT (commissioner) and the physiotherapy service (provider). The commissioners were less sure about whether the PhysioDirect service reduced waiting times for physiotherapy. At the time of the interviews the main trial results were not available and the commissioners had little or no feedback about the trial's impact on the physiotherapy service. In relation to other indicators, the commissioners felt that it was important to ensure that PhysioDirect provided a quality service.

[10] An SLA is a document that sets out an agreement between two or more parties, describing the expectations and requirements of each party (NHS Commissioning Board, 2012).

> *"I'd need to know what are the competency frameworks that, that need to sit around the people undertaking the um, telephone assessment and triage, how are you going to assure that there is a good clinical governance framework, the quality assurance, is there. How do you quality control the individual who's making the call, so what's, what's your um, audit rate, you know, are you gonna listen to one in ten, one in 20, one in 50 calls, who's going to do that, how are they gonna quality control the advice that's being given?"* Mr Perry Hargreaves (Commissioner)

Such issues are an important consideration if PhysioDirect services are commissioned. These standard quality control measures are used in telehealth organisations where all telephone calls are recorded, monitored and regularly reviewed by senior colleagues (Piette *et al.*, 2001). However, such standardisation in the form of protocols could be unhelpful in increasing bureaucracy and cost. It appears that there is some tension between the goals of ensuring quality and containing costs of services, for example one commissioner suggested that services may not be able to satisfy both of these conflicting goals.

> *"The risk is that we, this health system, over the last ten years, has moved to a fixed price, so we had a tariff, a national tariff for a lot of work and so the differentiator between providers is quality. Where we have gone to the market on price and quality, mostly quality has been the dominating, indicator, so you give 60% of your weighting to quality, 40% to price. The risk, as we go through the next five/ten years within the NHS is we've got 20 billion pounds worth of money to save over the next three or four years.*

How are we going to achieve that? Well there's, there's things that you can do around system reform and there's things that you can do around, you know, efficiencies but fundamentally, you've got to make some huge changes. So when you're tendering, and this government, the coalition government have changed the rules- are changing the rules, they're moving away from a fixed tariff and saying price can become more of an option to play with. So then you'll get into what happened in the'80s which is who will do the hip replacement the cheapest, they get the business. Whether they do the hip replacement well, whether they have one that lasts 10 or 15 years, whether they have one um, they have an infection rate, you know, those quality indicators of success, become lower priority or can become low and that's what we've got to be really careful in managing." Mr Perry Hargreaves (Commissioner)

This is important, and relates to some of the concerns surrounding commissioning services. Issues concerning the quality and cost-effectiveness of services are raised. The commissioners felt that the PhysioDirect service may help reduce cost in providing the service. In order to maintain quality across the PCT, the clinical commissioner recommended that patient information leaflets about musculoskeletal problems should be standardised across the health economy, recognising that quality is often derived from maintaining clinical standards (Darzi, 2008).

"We're trying to work on - all the physios are trying to work on self help leaflets and one of the things - what we've noticed is that general practice we don't - we don't have a common information system for patients with

common musculoskeletal problems. So things like - so to give patients information, we don't have the same information physios have so we're trying to - these are - it's a problem we're trying to iron out by giving comprehensive - everybody using the same sheet, information sheets, for patients. So we can have a bit more 'joined-up-ness' with physio and us reinforcing what physios advise." Dr Paul Wright (Commissioner)

The commissioner here is not only suggesting maintaining standardisation ensures quality but highlights the importance of providing consistency between the professional groups. Therefore, each professional group should provide the same consistent, relevant best evidenced patient information for common musculoskeletal conditions. These are important findings, in how commissioners view the PhysioDirect service within the physiotherapy service. The next section considers the relative importance of physiotherapy in the context of providing healthcare in the NHS.

6.3.2 Relative importance of physiotherapy

It appeared that physiotherapy services were generally not high on commissioners' agendas, unless one of several quality indicators such as waiting times or patient complaints alerted them to an underperforming service or when a physiotherapy contract was due for renewal.

"So unless somebody says, we haven't got enough physiotherapy, there's a problem with physiotherapy, our patients are complaining about physiotherapy, physiotherapy might not get looked at, because we can't look at everything, we have to align our health needs with our priorities and

if it's ticking along, nobody's complaining about it." Ms June Clarry (Commissioner)

It was clear that all of the commissioners interviewed felt that they had a good quality physiotherapy service in their local area, with good physiotherapy service leadership. In general, they took a reactive rather than a proactive approach to identifying services in need of their scrutiny as commissioners.

"I know that we have a detailed specification that I was part of drafting, with the provider and I broadly know what we are commissioning, okay. I broadly know that the service is meeting it's waiting time targets, it has few complaints, it has fairly limited DNA rates, I know it's got, had an influx of referrals, quite a hike in referrals in the last one or two years. I think it's a well managed service, I get a sense that, the leads, the Service Leads have their finger on the pulse, they really know the service well." Mr Nicolas Rutherford (Commissioner)

It seemed that commissioners were often dominated by top-down policy and that their views about health needs were particularly influenced by data related to the Quality and Outcomes Framework (QOF). Therefore, health areas such as mental health, cancer services and diabetes, for which QOF information is available than conditions for which it is not available, had a greater priority than the conditions that do not.

> *"Now that we've got QOF, Quality and Outcome Framework, as part of the GP contract; they've got lots of registers, clinical domains across all the main disease groups and it is the main ones, it's about 10 or 12, so you've got heart disease, stroke, cancer, diabetes, blood pressure, chronic kidney disease, dementia; there's all sorts of things where they have registers. So if 90% of the population are registered and about the same amount will access their GP once or twice a year, your main source of live patient data is in primary care."* Ms June Clarry (Commissioner)

The relative lack of importance of physiotherapy services was also reflected in some commissioners' opinions. For example, they would not recommend providers to use PhysioDirect as would be the decision of the service providers to choose whether or not to include the PhysioDirect service to help manage the demand.

> *"Why do I need to commission PhysioDirect? I don't, for example, as a commissioner, I don't. As I have block contracts, I have, you know, I have a service in place that needs to meet the needs of my population, so should the provider be commissioning it? You know, is it the way - is PhysioDirect a mechanism by which the provider could manage the demand on their services? That's a, you know, another way of looking at it, why does it have to be me or the GP commissioner. You know, if we're not gonna mess around with the contracts and unpick them and all of what that entails, maybe the provider needs to be commissioning PhysioDirect as a way of managing demand."* Mr Perry Hargreaves (Commissioner).

This would be important to consider when services like PhysioDirect are developed and are used to deliver a healthcare service. The qualitative evidence suggests that it would be up to the physiotherapy service managers to drive changes in the service rather than the directive and authoritarian decisions of commissioners. This seems to be the case unless physiotherapy services do not meet SLA agreement. The commissioners interviewed explained that there are a number of different and competing factors to be considered when deciding whether or not to commission a service. It appeared that availability of resources was the major concern for commissioners, and this is discussed in the next section.

6.3.3 PhysioDirect and the allocation of resources (implications for costs)

The context in which decisions about commissioning take place was also reflected in the discussions about the costs of services. There was a strong sense from all commissioners of the pressures they were under to deliver very substantial NHS cost savings within the financial year.

> *"One of our biggest issues, you asked me what the biggest issues were, is that we are financially challenged. We and about 60% I think of all PCTs up and down the country are significantly financially challenged, we're all looking at being in deficit by the end of the year."* Ms June Clarry (Commissioner)

In relation to the perceived costs, the interviews highlighted commissioners' assumptions that the PhysioDirect service was likely to be cheaper than face-to-face care.

> *"We're moving into very difficult times over the next three years where we've got to make...tens of millions of pounds of efficiency savings, so we are just not having a dialogue about more money, but if we can make better use of the pot that is allocated to physio, by having a PhysioDirect element, then that's very positive."* Mr Nicolas Rutherford (Commissioner)

The commissioners, however, had concerns about whether having experienced physiotherapists deliver the PhysioDirect service was the most cost-effective approach. One commissioner suggested that highly skilled physiotherapists might not be the most appropriate people to deliver simple advice and self-management information to patients via the telephone and suggested that this activity might be more appropriately carried out by less-qualified staff.

> *"The other opportunity around PhysioDirect though, is in using a different skill mix of staff. We've got to be careful that we use our experts wisely, exploit the specialism's, you know, and it; there would be opportunity to have a different mix of staff providing the information, I don't know, maybe skilled up assistant physios for example, which means that you know, the pot of money could go further because you have, less costly staff being able to provide that basic advice and information and reassurance, which is something that patients always need."* Mr Nicolas Rutherford (Commissioner)

Two of the commissioners who were interviewed talked about integrating the PhysioDirect service with the already existing musculoskeletal interface service.

> *"I suppose, the only other thing that you might ...want to think about is, how PhysioDirect relates to musculoskeletal CAT (Clinical Assessment and Treatment) services; so we've got an MSK CAT service, it's like an intumediate tier service, we've got GPSI (GPs with special interests), advanced practitioners and quite often our GP's will refer there first before they refer on to orthopaedics, so they'll go there first and that's a cheaper service, so how you, how you relate PhysioDirect, which is more of a primary care, community care end service, with an intermediate tier, and how that gets integrated there, because the more you can keep out of hospital, the better.* Ms June Clarry (Commissioner)

The commissioners were clear about their vision to reduce costs and make services more efficient. Therefore, it is not surprising that they could visualise the PhysioDirect service fitting into a service that was used to manage resources (i.e. reducing the amount of orthopaedic consultant assessments), through the musculoskeletal assessment and treatment services (MCATs). It was clear when discussing the wider use of PhysioDirect, physiotherapy and musculoskeletal services that the conversation was directed to orthopaedic surgery rather than to community services like physiotherapy. This is probably due to the commissioner's awareness of the costs involved in providing such services rather than the relatively low costs of providing physiotherapy in their PCT. The commissioner's attention was therefore directed towards a service that they could see reduces costs in the short term. It was clear that the cost of services was an important factor for commissioners when deciding to commission a service. The other aspect that seemed to be important was the role that the relationship between the

commissioner and the provider of the service, details of which are discussed in the following section.

6.3.4 The importance of trust relations between providers and commissioners

The importance of relationships between healthcare providers and commissioners and a good knowledge about the services that are being commissioned were highlighted in the commissioners' interviews as the key to successful commissioning.

> *"So an important part of the commissioning process is that you have well developed relationships, high levels of trust and that the Commissioner has a reasonable knowledge of the service being provided. If you take the example of a person who procures, why buys coffee for Waitrose or wine for Waitrose for example, they will be intimate with the product, they will know the growers, they will know the context, they will actually have a good sense of what a good product, they have to know the product. In order to inform which is the grower they want to purchase off and why, you know, so, but they need to develop a relationship over a long period of time, often, and you need to foster trust and that involves compromise on both sides."*
> Mr Nicolas Rutherford (Commissioner)

Commissioners described these relationships as being crucial for successful commissioning and the interviews underlined the important role that effective personal relationships have in positively influencing whether a service is commissioned and implemented. All of the commissioners suggested that they

had positive working relationships with the providers of physiotherapy services in their PCTs. However, when the commissioners were asked whether they would commission the PhysioDirect service in the future, their response was mixed. One commissioner reported that they wanted to wait for the results of the trial to make this decision. Others reported that they would commission the service if it added value. However, most expressed the view that the service should be adapted to best fit their patients' needs. Adaptations of services following initial testing are inevitable due to the fact that the implementation is determined by multiple factors, including the patients' clinical needs, the costs of providing and setting up the service and the relationships between the providers and the commissioners.

Interestingly, one commissioner suggested that it would be up to the provider of the physiotherapy service to decide to use PhysioDirect if they wanted to use it as a method to help manage long waiting lists. The vision of the future of the service varied across interviewees. This is interesting, as it is not the role of the commissioners to design and develop services. One commissioner suggested that the PhysioDirect service should be built into a booking system serving as the first point of contact for physiotherapy services.

> *"I think it would become the single point of access for the physio, I think it would have to become the single point of access for community based physio so that when you want to refer a patient or a patient wants to try and refer themselves, that's the route in. And so what would sit behind physio directives, the infrastructure that then has the booking systems, so that, you know, you go through the consultation with a patient, you're determine that actually they do need a clinical assessment, thank you very much, I'll just*

> *put you through to PERSON_N in the next room and the patient doesn't get kicked out the system."* Mr Perry Hargreaves (Commissioner)

He hoped that the service would include not only one but multiple physiotherapy service providers. One commissioner acknowledged a concern that the future system with multiple providers might add another layer to the patient journey, and suggested that this would not be acceptable.

6.4 Conclusion

This chapter has discussed both the GPs' and the commissioners' perspectives of the PhysioDirect service. The findings suggest that the GPs and commissioners felt that their local physiotherapy service provided a good quality service. The main area of concern was related to the waiting times for physiotherapy care. Both groups accepted that the PhysioDirect service was a helpful tool in triaging patients and improving access to physiotherapy in the face of long waiting lists. The GPs perceived the PhysioDirect less acceptable when referring a patient to physiotherapy for 'hands-on' treatment from a physiotherapist. However, the findings also show that GPs were generally ambivalent about the PhysioDirect service. The commissioners also acknowledged their lack of awareness of the PhysioDirect service and physiotherapy services more generally. The priority of commissioning services seemed to be centred upon the reduction of cost and providing quality. In addition, the data showed that positive relationships between provider and commissioner are important to consider, as they have been shown to be instrumental in the implementation of services. This chapter has explored a range of issues relating to the acceptability and implementation of the PhysioDirect service from the perspectives of the GPs and commissioners. The next chapter

compares and contrasts the acceptability and implementation of the service from the differing perspectives of the patients, physiotherapists, physiotherapy managers, GPs and commissioners.

Chapter Seven: Discussion – synthesis of three perspectives on acceptability and implementation of PhysioDirect

7.1 Introduction

This final chapter brings together the perspectives of the patients, physiotherapists, physiotherapy managers, General Practitioners (GPs) and commissioners in order to provide a more cohesive discussion and interpretation of the acceptability and implementation of the PhysioDirect service. The chapter is divided into three sections. The first section is a summary of the overall findings which sets the scene for the following discussion. The second section is separated into two overarching conceptual headings: the acceptability and the implementation of the PhysioDirect service. It is in this section that the findings from all three perspectives are compared and contrasted. As the qualitative study was nested within the Randomised Control Trial (RCT) of PhysioDirect, the quantitative results are woven into the discussion. This will further contextualise the qualitative findings and assist with a deeper understanding of the acceptability and implementation of the PhysioDirect service. Finally, the third section details the strengths and the limitations of this study and its implications for clinical practice and future research. Lastly, an overall conclusion is provided.

7.2 Summary of findings

Before discussing the findings further it will be useful to summarise the aims of this thesis and how these have been fulfilled. This thesis aimed to explore the acceptability and implementation of the PhysioDirect service from the perspectives of all key stakeholders (patients, physiotherapists and physiotherapy managers, as well as GPs and service commissioners). A full investigation of the new PhysioDirect service was conducted in order to understand the key issues that

ultimately determine its acceptability and implementation. The perspectives of the three different stakeholders were sought in order to provide a multi-perspective understanding of the factors that influence the acceptability and implementation of the PhysioDirect service both in and after the completion of the trial.

The thesis is structured using a perspectives approach in recognition of the different relative positions of the three groups; therefore, each of the data chapters (Chapters 4, 5 and 6) presented a different perspective. Chapter 4, the perspectives of the patients, highlighted issues of acceptability which centred on patients accepting the PhysioDirect service by trading between the services' more and less acceptable features. In Chapter 5 issues relating to both acceptability and implementation were explored from the perspective of those who provided the service – the physiotherapists and physiotherapy managers. It showed that the physiotherapists accepted PhysioDirect by familiarising themselves with the service, adapting existing skills and adopting new ones needed to provide the service. Finally, in Chapter 6 the perspectives of the GPs and commissioners focused on implementation, and highlighted the contextual issues concerning how the PhysioDirect service would fit within the delivery of musculoskeletal services in the National Health Service (NHS). Trial-specific data were not included within these results chapters. The next section of this chapter summarises the key issues related to the acceptability of the PhysioDirect service.

7.3 Acceptability of PhysioDirect

In exploring the acceptability and implementation of the PhysioDirect service, several key themes emerged from patients, physiotherapists, physiotherapy managers, and GPs and commissioners. In order to present a synthesis of the

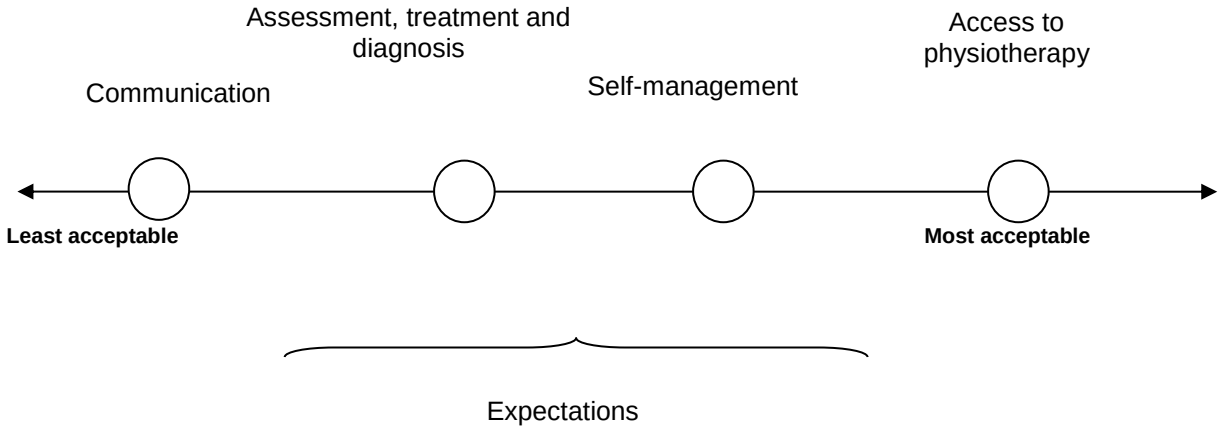
three perspectives, themes that resounded across the perspectives of two or more stakeholder groups were considered. Five 'key' themes were identified: access to physiotherapy; telephone-based assessment and diagnosis; the importance of communication; PhysioDirect as treatment to assist self-management; and expectations of the PhysioDirect service. By exploring the similarities and differences that each stakeholder group provided, a more in-depth understanding of the acceptability of the PhysioDirect service can be reached. Table 13 summarises which key themes were common to each group perspective.

Table 13: An overview of the findings from the three perspectives

	Patients	Physiotherapists and physiotherapy managers	GPs and commissioners
Access to physiotherapy	Yes	Yes	Yes
Telephone-based assessment and treatment	Yes	Yes	No
PhysioDirect as treatment to assist self-management	Yes	Yes	Yes
The importance of communication in the acceptability of PhysioDirect	Yes	Yes	No
Expectations of the PhysioDirect service	Yes	Yes	Yes

Figure 6 contextualises the combined view of the patients', physiotherapists', physiotherapy managers', GPs' and commissioners' perspective of which features of the PhysioDirect service were the most and least acceptable. It shows that access to physiotherapy advice was the most acceptable feature of the service, as all the perspectives agreed that PhysioDirect improved access to physiotherapy advice. Both the patients and physiotherapists felt that delivering self-management advice via the PhysioDirect service was acceptable

Figure 6: The acceptability of PhysioDirect from a combined view



However, as there was some disagreement between the physiotherapists, physiotherapy managers, GPs and commissioners regarding which are the most appropriate healthcare professionals (physiotherapists or GPs) to provide self-management advice, it was perceived as the next acceptable feature of the PhysioDirect service. All the three perspectives expressed less confidence in the PhysioDirect service for assessing and diagnosing patients over the telephone. There were some differences in the disagreement of both the patients and the physiotherapists about which patients the PhysioDirect service would be most suitable. However, both the physiotherapists and the physiotherapy managers agreed that the PhysioDirect service was an acceptable way to assess and treat patients with musculoskeletal problems. The least acceptable feature of the PhysioDirect service was the way in which the PhysioDirect service affected communication. The patients and the physiotherapists felt that PhysioDirect negatively affected the quality of physiotherapist–patient communication, and this was perceived, by both groups, as a less acceptable feature of the service. It was also evident that all groups felt that expectations of the PhysioDirect service often influenced its acceptability, for example if a patient wanted to a face-to-face physiotherapist's appointment and the physiotherapist did not recognise that expectation, then the PhysioDirect service was unacceptable. However, as

expectations varied widely but influenced acceptability, this theme is represented as a horizontal line rather than a circle that is fixed to the continuum. Each of these themes are presented and discussed in the following sections.

7.3.1 Access to physiotherapy

Table 13 (page 262) reflects that access to physiotherapy was a key theme across the three stakeholders groups. They all agreed that long waits to access to physiotherapy care were unacceptable. The consequences of a long wait to access physiotherapy services are multiple, for example some patients choose to access a physiotherapist privately, a number of patients find their problem improves and no longer need physiotherapy, and others have no option but to try to cope with their ongoing pain (Department of Health, 2006a). One of the central aims of PhysioDirect was to improve access to physiotherapy services (Foster *et al.*, 2011, Salisbury, 2009). At the time of the trial, the waiting times for a physiotherapy appointment differed in each participating Primary Care Trust (PCT), and fluctuated between two and sixteen weeks (Salisbury, 2013a). This reflects the national average wait of six to eight weeks to access musculoskeletal physiotherapy services in England (Jones, 2011a).

While all agreed on the need for improved access, there were subtle differences between each of the three perspectives. Patients were generally aware of the long waits for physiotherapy, considered these to be inevitable and were therefore to some degree resigned to the notion of having to wait. Some patients suggested that waiting times of more than 6 to 8 weeks were unacceptable. Physiotherapists' concerns about the delays in patients accessing their services were focused on the negative clinical consequences of long waits, as they felt faster access

enables patients to return more rapidly to normal function and may prevent some patients from developing chronic problems. This view is supported by a number of studies reporting that early access to physiotherapy improves clinical outcomes for patients with musculoskeletal pain (Zigenfus *et al.*, 2000, Nordeman *et al.*, 2006, Addley *et al.*, 2010, Wand *et al.*, 2004). The GPs and commissioners stated that shorter waiting times and increased access were priorities when evaluating services and were indicators of quality. They suggested that waiting times for physiotherapy were often too long. The GPs' rationale for reduced waiting times reflected key messages in the available literature, which shows that long waits for care are associated with poorer clinical outcomes, increased non-attendance for appointments and patients seeking physiotherapy care through non-NHS providers (including private physiotherapy) (Foster *et al.*, 2011). Although currently there is no national directive for physiotherapy waiting times, some physiotherapy departments have been set targets by their local service commissioners, with the target for the maximum length of time between referral and treatment most frequently being set at 3 to 4 weeks (Jones, 2011a).

All groups agreed that the ideal waiting time for physiotherapy should be less than four weeks. Patients thought that the wait for a physiotherapy appointment should be approximately two weeks, the physiotherapists reported between two to four weeks and the GPs and commissioners suggested around four weeks. Patients held the perception that there were benefits to a reduced waiting time for physiotherapy advice and that improved access would help them to return to normal function, reduce their pain and enable them to return to work sooner. The main difference between the stakeholders' views was that the clinicians felt that waiting times should be based upon clinical and social need, whereas the

commissioners' main focus was to reduce the waiting time for all patients. The clinicians felt that the PhysioDirect service could be used to assess which patients should be prioritised for faster face-to-face care. From the commissioners' perspective there was no mention that the service should make a judgement on the basis of the clinical or social needs of the patient. The patients who were interviewed responded to the question by assuming that an ideal wait related to face-to-face care and not the PhysioDirect telephone assessment, which suggests that although the PhysioDirect service was acceptable to the patients, their ideal scenario for physiotherapy was still face-to-face care.

The PhysioDirect trial tested the hypothesis that the introduction of a PhysioDirect service could reduce the patients' waiting time to access physiotherapy. The quantitative results of the trial showed that it certainly achieved this – the average wait was 7 days (to first telephone call) compared to 34 days in usual care (to first face-to-face visit) (Salisbury *et al.,* 2013a, Salisbury *et al.,* 2013b). However, for patients who were initially managed by telephone and who subsequently needed a face-to-face physiotherapy appointment (53% of those patients randomised to PhysioDirect), the waiting time for face-to-face care was still rather long – on average 30 days (in comparison to 35 days in usual care). Therefore, PhysioDirect did improve access to physiotherapy assessment and advice but not to face-to-face physiotherapy. The qualitative study data showed that all three perspectives perceived that improved access to advice was a positive feature of the PhysioDirect service, which is reflected in Figure 6, section 7.3, page 263.

One of the strongest arguments for the PhysioDirect service is that it improves access for patients with acute problems and appropriate advice is delivered more

rapidly than waiting for face-to-face care, thereby assisting self-management and helping prevent chronicity (Foster *et al.*, 2011). Specifically, the PhysioDirect service as a model of physiotherapy aimed to provide earlier self-management advice and targeted treatment to patients with musculoskeletal problems (Salisbury *et al.*, 2009). Similar stepped-care models have been used within mental health services in order to manage high levels of demand and for where there is a need to target resources (Bower and Gilbody, 2005). The qualitative data suggested that in principle the PhysioDirect model of 'stepped' care was acceptable to patients, physiotherapists, physiotherapy managers, GPs and commissioners. They all agreed that early access to physiotherapy advice contributed to the successful management of musculoskeletal problems and that PhysioDirect was a useful way to deliver this. Recent evidence from Nordeman *et al.* (2006), Bleakley *et al.* (2010) and Hyldahl (2010) suggests that early access to physiotherapy care reduces pain and improves function for patients with musculoskeletal problems.

Although patients valued increase advice from a physiotherapist regarding their musculoskeletal problem, the data also highlighted that patients viewed the PhysioDirect service as a 'first step' in a stepped-care service. Many patients mistakenly thought that after receiving initial advice from a physiotherapist over the telephone, the next step in the process would then be face-to-face physiotherapy. Some patients felt that speaking to a physiotherapist first via the telephone actually delayed their access to subsequent face-to-face treatment. This tended to occur when patients had a clear prior expectation of face-to-face contact (discussed in section 7.3.5), even though the patient information leaflet stated that they might only receive PhysioDirect telephone-based care (see Appendix A). This

highlights the need to make the triage process clear to the patients, so that their expectations are realistic and aligned with the PhysioDirect care pathway. The commissioners, physiotherapists and physiotherapy managers also voiced concerns about the clarity of the PhysioDirect triage process, suggesting that it had the potential to delay face-to-face care for patients who needed face-to-face treatment. However, the quantitative evidence suggested that their face-to-face care was not delayed. Patients who needed face-to-face care waited an average of 30 days rather than 35 days in usual care (Salisbury *et al.*, 2013a, Salisbury *et al.*, 2013b). Therefore, the concerns expressed by all the stakeholders were not realised.

Another concern regarding the potential for delays in the delivery of care centred on the finding that a small number of patients had difficulty contacting the service because of engaged phone lines. Patients felt frustrated with this aspect of the service. The physiotherapists and physiotherapy managers also acknowledged this, suggesting that it would be unacceptable if patients were unable to get through to the service. Therefore, if physiotherapy services are to develop a PhysioDirect service, the availability of sufficient telephone lines and physiotherapists needs to be regularly monitored and maintained in order to ensure smooth access. Effective monitoring will hopefully ensure that patients are not frustrated and are not discouraged from using the service in the future. These findings are consistent with other telehealth studies that report delays due to limited availability of healthcare professionals, and these technical problems are a source of dissatisfaction with these services (Hallam, 1993, Wahlberg and Wahlberg, 2001, Kelly *et al.*, 2010b). The physiotherapists and physiotherapy managers reported the complexity of monitoring this from an operational

perspective. They described the difficulty in capturing peak call times and monitoring and staffing them appropriately. However, the managers suggested that it was difficult to get this right, as there were times when the physiotherapists were extremely busy and other times when they were waiting to take calls.

PhysioDirect within the trial was offered during specific times from Monday to Friday during usual day-time office hours. All three stakeholder groups suggested that an out-of-hours (OOH) PhysioDirect service would have been more convenient for patients, providing increased access to physiotherapy services. Although the desire for an OOH service is not unique to PhysioDirect, it is important to consider how the stakeholders envisioned a future PhysioDirect service developing. Campbell and Clay, (2010) suggest that rise in patient demand unlimited access to healthcare may be due to society's 24-hour expectations for many services. They suggest that this ‘patient expectation’ was fuelled by government policy on access by introducing services such as NHS Direct, walk-in centres, GP-led health centres, independent and NHS-based OOH providers, accident and emergency (A&E) departments, and 24-hour pharmacies.

The movement of physiotherapy services towards extended opening hours has been highlighted in NHS policy (Harden *et al.*, 2002, Department of Health, 2000b, Department of Health, 2000a). Physiotherapists felt that providing an OOH service was a positive move and also inevitable considering the changes to seven-day working in many NHS Trusts (NHS Improvement, 2012). There were, however, some physiotherapists who, although positive about the idea of implementing an OOH service, were less than enthusiastic about providing it themselves as they did not wish to work out of hours. They highlighted the significant logistical

problem of staffing a potential PhysioDirect OOH service, given that many physiotherapy services regularly have to carry unfilled vacancies (Harden *et al.*, 2002). In addition, the research team were keen to provide an OOH service in the PhysioDirect trial; however, none of the PCTs involved implemented the service in that way. Therefore, the barrier to providing the service in the evening or at weekends may be related to the physiotherapists not wishing to work OOH, as they traditionally had not been required to. Other professional tensions and barriers regarding the implementation of PhysioDirect are discussed in section 7.4.1.

However, it might be that providing such OOH care might not solve the problems in the delays of care and improving satisfaction with the service. The literature has focused upon the patient's experience of using GP OOH services. Egbunike *et al.* (2010) found that patients were most concerned about efficiency highlighting the problems with repetitive triage procedures and long time delays at various stages in the process. Egbunike colleagues concluded that patient's expectations for OOH services needs to be understood and incorporated into flexible triage systems. Another study by Kelly *et al.* (2010a) explored the predictors of user satisfaction and enablement across unscheduled care or GP OOH providers in Wales. They found that treatment centre consultations were significantly associated with decreased patient satisfaction and decreased enablement compared with telephone advice. The reasons for dissatisfaction with service were delays in call answering or callback for triage. In addition, shorter consultations were significantly associated with lower satisfaction. These studies, along with the PhysioDirect qualitative findings highlight that providing OOH services are

complex. This may mean that providing the PhysioDirect service OOH might not necessarily improve its acceptability.

The wider literature acknowledges the problems of access to physiotherapy (Department of Health, 2006a, Jones and Jenkins, 2011b, Jones and Jenkins, 2011a, Chartered Society of Physiotherapy, 2012). In addition, access has also been shown to be an important component of how patients evaluate quality (Campbell, 2000) and their satisfaction with physiotherapy services (May, 2001, Casserley-Feeney *et al.*, 2012). The current qualitative findings support the quantitative findings that show that the PhysioDirect service improved patient access to physiotherapy advice (Salisbury *et al.*, 2003b). In addition they support the argument that telehealth improves access to healthcare (Charles, 2000, Darkins *et al.*, 2008, Jennett *et al.*, 2003). However, the trial results showed that there was no difference between the usual care arm and the PhysioDirect arm satisfaction levels in terms of access (Salisbury *et al.*, 2013a, Salisbury *et al.*, 2013b). This may mean that improved access, although acceptable, might not be an important key priority to patients in terms of how they evaluate physiotherapy. The next accepted feature of the PhysioDirect service is presented and discussed in the next section.

7.3.2 PhysioDirect as treatment to assist self-management

Self-management is defined as being responsible for the day-to-day management of living with a chronic disease or engaging in some activity that promotes health (Lorig and Holman, 2003). This includes the learning of skills such as problem solving and decision making in response to fluctuating signs and symptoms and taking action, i.e. learning how to change behaviour (Lorig and Holman, 2003).

The trial results show that 47% of patients were managed entirely on the telephone, with the remainder having at least one-to-one face-to-face consultation (Salisbury *et al.*, 2013a, Salisbury *et al.*, 2013b). It would be likely that those patients who received telephone care would have received information about how to self-manage their condition at home. Table 13 (page 262) shows that self-management was a key theme within the findings of all the perspectives'. The patients, physiotherapists and physiotherapy managers perceived that the PhysioDirect service was an acceptable medium for providing self-management advice to patients. This is reflected in the position of the feature in Figure 6, section 7.3, page 263. Patients explained that the PhysioDirect physiotherapists were 'giving them knowledge'. They explained that the physiotherapist helped them to understand their problem by providing sufficient information and advice in order for them to confidently manage their musculoskeletal problem.

The physiotherapists reported that they felt PhysioDirect was an effective way to deliver self-management advice, explaining that self-management advice became the main component of treatment via the telephone because they could not provide 'hands-on' therapies. Once a decision to manage a patient solely over the telephone was made, they provided more self-management advice than would have been the case with traditional physiotherapy care. However, the physiotherapists interviewed felt that the PhysioDirect service reduced their ability to provide more individualised care. In addition, some GPs expressed the view that if they referred a patient to physiotherapy it was because they wanted the patient to be seen in a face-to-face consultation for 'proper physiotherapy' which, for the most part, included a 'hands-on' assessment and treatment, rather than telephone advice alone.

Overall, the patients and physiotherapists mostly perceived that the PhysioDirect service was an appropriate medium for providing self-management advice. The GPs and commissioners, however, held differing views. They both felt that it should be the GP's responsibility to provide patients with simple self-management advice about their musculoskeletal problems rather than referring patients for advice from a physiotherapist via the PhysioDirect telephone service. The GPs felt that they could provide that advice immediately in the patient consultation and that they could supply patients with self-management advice and information and suggest exercises prior to patients attending for musculoskeletal physiotherapy.

However, the commissioners interviewed commented on the importance of information that healthcare professionals provide to patients, suggesting that currently the information provided is inconsistent and that information given at a GP appointment should be standardised across both GP and physiotherapy services, which could include a PhysioDirect service. The commissioners recommended that such patient information should be standardised and based upon the best reported evidence in line with providing a good quality service (Darzi, A. 2008a, Darzi, 2008b). However, it could be suggested, if GPs had been providing patients with appropriate, evidence-based and consistent advice about their musculoskeletal problem, then services such as PhysioDirect may not need to have been developed. This evidence suggests that there appears to be tension in what GPs think they provide compared to what they actually offer.

As previously highlighted, some GPs may believe that they are the most appropriate healthcare professional to provide self-management advice for

musculoskeletal problems; however, recent evidence suggests this may not be the case. A study by Ludvigsson and Enthoven (2011) evaluating physiotherapists as first-line assessors of patients with musculoskeletal problems seeking primary healthcare found that patients assessed by a physiotherapist were more satisfied with the information received about their problems and self-management than patients assessed by a GP. The study acknowledged that the physiotherapists' consultation time was longer than the GPs', but the authors did not report how much longer. Ludvigsson and Enthoven (2011) acknowledged that the increased length of the consultation time might have resulted in patients being more satisfied with the care that the physiotherapist provided, perhaps because they spent more time explaining information to the patient. In England, GPs' appointment times last an average of 9 minutes and 40 seconds (Deveugele et al., 2002) compared to the physiotherapists (in the trial), who had appointment times of between 20 and 40 minutes for telephone assessments and 40 minutes to an hour for face-to-face physiotherapy assessments (Salisbury, 2013a). This suggests that the increased time that physiotherapists have in a musculoskeletal consultation may make physiotherapists the most appropriate healthcare professional to give self-management advice. The additional amount of time physiotherapists have may affect not only how a patient adheres to treatment but how they react to diagnosis, self-management advice and their subsequent behaviours post-diagnosis. This view is acknowledged by (Ong *et al.*, 2011), who suggested that standardised advice needs to be integrated within the context of the patient's own life in order for them to act in concordance with the advice and to aid their recovery. This evidence supports the view that physiotherapists are the most appropriate professional to provide self-management advice for patients with musculoskeletal problems.

The patients, physiotherapists and physiotherapy managers found the PhysioDirect service acceptable in providing self-management advice. GPs and commissioners could see the benefit of providing early advice to patients; however, they were less convinced that the PhysioDirect service was the most appropriate medium through which to achieve this and questioned which healthcare professionals (HCP) should be the primary providers of self-management information. Issues relating to how the physiotherapist assessed and diagnosed patients over the telephone may provide a greater understanding of the acceptability of the PhysioDirect service. This subject is examined further in the next section.

7.3.3 PhysioDirect telephone-based assessment and diagnosis

Misdiagnosing patients' musculoskeletal problems over the telephone was highlighted as an initial concern of both the physiotherapists and the patients (see Table 13, page 262). Their concerns centred upon the capabilities of physiotherapists to reach a clear diagnosis in the absence of visual information, as the usual objective assessment[11] of patients was impossible via the PhysioDirect telephone service. Performing a patient assessment without visual input is very different to usual musculoskeletal physiotherapy practice. Gamlin and Duffield (2001) similarly found that physiotherapists expressed concerns about the accuracy of musculoskeletal diagnoses reached over the telephone. This further highlights two of the major concerns common to telehealth services, which are clinical effectiveness and safety (Bunn *et al.*, 2004, Paré *et al.*, 2007).

[11] Objective assessment includes observation and palpation around the site of pain or the problem, assessing movement and pain response during movement, both active (in which patients move themselves) and passive (with the physiotherapist controlling the movement) and further special tests that examine muscles, tendons and ligaments in order to inform the differential diagnosis of the problem (Hammond and Wheeler, 2008, Thomson, 2003).

The qualitative findings show that after experiencing and providing the service respectively, the views of both patients and professionals in terms of their initial concerns about diagnosis over the telephone were largely allayed. The physiotherapists suggested that the experience of providing the PhysioDirect service increased their confidence in the process of reaching accurate diagnoses over the telephone. They reported that if they were in any doubt they could bring a patient in for a face-to-face assessment. In addition, patients who expressed low expectations about the ability to reach a clear diagnosis over the telephone were positively surprised that an accurate diagnosis could indeed be reached. They reported feeling confident with the diagnosis and subsequent treatment they received from the physiotherapists over the telephone. These findings support those from the study of Turner (2009), who showed a high agreement between the diagnoses reached via the telephone and those reached via traditional face-to-face consultations in physiotherapy. In the wider general practice literature, McKinstry *et al.* (2009) reported that both patients and providers were anxious about the ability to achieve a correct diagnosis and appropriate treatment plans over the telephone in primary care. McKinstry *et al.*, (2009) and McKinstry *et al.* (2010) recommended that until the safety of telephone triage was established, telephone consultations in general practice should be used only for follow-up appointments after a diagnosis is given face-to-face. However, there were no adverse events or missed serious diagnoses in over 2250 patients in the PhysioDirect trial (Salisbury, 2013a), suggesting that this model of telehealth appears to be safe (Lattimer *et al.*, 1998, Giesen *et al.*, 2011).

The trial results showed that patients randomised to PhysioDirect did not return to their GP more often than those in the usual care group. It was also shown in the

trial results that although there was little difference between the PhysioDirect group compared to the usual care group seeking private physiotherapy (17.9% versus 18.4%, on average) there was, however, a difference between how much patients spent. The results revealed that those in the PhysioDirect group spent more than the usual care group on private physiotherapy (£31.93 versus £18.87, on average) (Salisbury, 2013a). This again seems to suggest that, at least for some patients, the ideal model of physiotherapy remained face-to-face.

The qualitative study provided additional evidence as to why these patients chose to seek out private healthcare. Some patients explained that they felt that the PhysioDirect service did not meet their expectations (see section 7.3.5 in this chapter for further discussion). Evidence from one patient (of 57 interviewed) suggested that he felt he had been misdiagnosed, and subsequently he did not re-contact the service but instead chose to see an independent private physiotherapist because he had lost faith in the PhysioDirect service. Whilst it is not possible to draw any conclusions from this one example, it is interesting that there was no evidence from the usual care interviewees that they sought private care after feeling dissatisfied with the care they received. Other reasons why patients sought private physiotherapy were similar across both arms of patients randomised to receive PhysioDirect and usual care, for example patients held private medical insurance through their employer and had arranged an appointment with a private physiotherapy practice. Therefore, the qualitative findings show that the patients did not use the PhysioDirect service when it failed to meet their expectations, their symptoms improved, they had private medical insurance or they felt they had been misdiagnosed. The next sub-section explores the acceptability issues across different groups of patients.

7.3.3.1 Relationship between types of patient and acceptability

It became clear that there were some key differences between the perspectives of patients and physiotherapists concerning which patients found the PhysioDirect service to be more acceptable and which found it less acceptable. Physiotherapists suggested that specific types of patients would be more likely to use the PhysioDirect service. For example, the physiotherapists perceived that patients with busy lifestyles would particularly benefit from the service. However, in reality, after assessing these patients via the telephone, some physiotherapists found that these patients were more difficult to assess than they had previously imagined. This was because the phone calls were often made at their place of work during work hours, and the physiotherapists had to compete with various distractions, for example background noise, in order to safely assess the patient.

However, the majority of the patients that were interviewed did not share this concern, and they felt that the convenience of the service was an acceptable feature and valued the choice of contacting the service whilst they were at home, work or another suitable location. These results are comparable to the findings of Pinnock *et al.* (2005), who compared the preferences of asthma patients for telephone or face-to-face care. They found that those patients who worked or who had domestic commitments preferred telephone consultations to face-to-face care, as they were perceived to be more convenient. Additionally, telephone care overcame mobility and transport problems, eliminated travelling time and therefore reduced costs. These benefits may also relate to the idea that healthcare is a commodity (Ferlie, 1997). The PhysioDirect service seems to fit within that concept, with the patient taking on the role of a customer (Fox and Jones, 2009). Therefore, the provider is no longer in charge as the patient chooses the time and

place of care, adapting the service to their own individual needs (Roter, 2000). This flexibility was an acceptable feature to patients, even though physiotherapists sometimes felt it added complexity to the assessment process. However, the flexibility of the service was also restricted by the PhysioDirect service operated (see section 7.3.1 of this chapter).

The physiotherapists identified those patients in the oldest age range as having more complicated problems. Recent literature defines ‘older age’ as 75 years and above (Orimo *et al.*, 2006). These patients are more likely to have multiple morbidities, be using multiple medications and have more complicated social circumstances (i.e. the care they receive from family members, friends and carers) (Wanless *et al.*, 2006). The older patient group seemed more inclined to perceive the GP as in control of their care, and they therefore returned to their GP to seek further musculoskeletal advice rather than re-contacting the PhysioDirect service. This may mean, in practice, that the older patient group will be less likely to re-engage with PhysioDirect, thereby decreasing the service’s acceptability. There also appeared to be an issue with information retention, as when they were asked about this during the interviews it seemed that they were more likely to forget the information provided by the physiotherapist over the telephone. Conversely, they valued being able to speak to a physiotherapist from the convenience of their own home as they did not have to travel to the physiotherapy department, circumventing any mobility problems. There was a tendency for these patients to trade off the reduced personal contact of the PhysioDirect service with the increased convenience of the service.

The physiotherapists expressed mixed views about the suitability of this older group of patients for PhysioDirect. Some physiotherapists felt that these patients were more difficult to treat over the telephone; however, others felt that these patients managed with no obvious problems. All of the physiotherapists interviewed agreed that older patients took longer to assess over the telephone than younger patients. This was largely due to difficulties with communication or describing the number of both multiple morbidities (van den Akker et al., 1998, Marengoni et al., 2008) and prescribed medications (Chen et al., 2001). The qualitative evidence showed that some of the older patient population group are less likely to engage with the PhysioDirect services. This may be due to older patients being less likely to adapt and engage with to these technologies. However, the qualitative findings are in opposition to the results of Wade *et al.*, (2012) who investigated the acceptance as a predictor for usage compliance of in-home telehealth by frail older adults and carers. They found that frail older people and their carers perceived home telehealth is useful and easy to use. They demonstrated that of home telehealth was acceptable to older patients and acceptance was a significant predictor of compliance with frail older people and their carers'. It is noted that this study was from Australia, which may be a reason between the differences in the results. The qualitative findings from the PhysioDirect study also indicate that neither the GPs nor the commissioners expressed any concerns that the needs of older patients might not be met by the PhysioDirect service.

The physiotherapists reported and the patient data showed that patients with psychosocial problems (such as anxiety and low mood) represented a complex patient group where assessment and treatment over the telephone was

concerned. For example, the physiotherapists felt that patients who appear to catastrophise and believing that their problem would not resolve (Quartana *et al.*, 2009) were less likely to be identified and effectively managed over the telephone. The physiotherapists suggested that information about patients' psychological barriers to recovery would rarely be disclosed in the first assessment, but that such barriers were teased out over time during multiple physiotherapy treatment sessions. These concerns reflect the findings of others such as Innes *et al.* (2006) who investigated GP telephone consultations. They found that telephone consultations tended to focus more on biomedical rather than psychosocial factors and suggested that telephone consultations are less suited to the assessment and treatment of patients with psychosocial barriers to recovery.

The current study suggests that, although the PhysioDirect software program did not prompt physiotherapists to ask whether or not patients had any psychosocial problems, physiotherapists were able to recognise patients with psychosocial barriers to recovery (such as low mood) by the tone of their voice. The physiotherapists also suggested that such prompts could be a welcome addition to further versions of a software program. Although the physiotherapists had concerns about patients with psychosocial problems, in practice there is little evidence in the PhysioDirect qualitative or quantitative data that those with psychosocial obstacles to recovery fared less well in response to, or were more or less dissatisfied with, the service. Moreover, the patient qualitative results show such patients were more likely to request a face-to-face consultation. This could be explained by patients' familiarity with the healthcare service. Many of these patients had multiple experiences of physiotherapy, which meant that they knew what treatment they wanted and requested a face-to-face appointment. Thus,

there is no evidence from the qualitative data that patients with psychosocial problems were more challenging to manage in the PhysioDirect service, despite this concern being expressed initially by physiotherapists. This section has shown the importance of communication skills whilst assessing different types of patients over the telephone via the PhysioDirect service. Therefore, the next section explores a combined view of both the patients and physiotherapists and discusses the importance of communication in the acceptability of the PhysioDirect service.

7.3.4 The importance of communication in the acceptability of PhysioDirect

Communication was highlighted by both the patients and the physiotherapists as a key determinant of acceptability of the PhysioDirect service. It became clear that both patients and physiotherapists had to work hard to communicate effectively with each other over the telephone. As previously highlighted in Chapter 5 (section 2.3), the physiotherapists found themselves joining in the assessment, focusing in on the patients and visualising their movements as well as on the individual person. This is comparable to Edwards (1998) study, which showed that NHS Direct nurses, who also assess patients without any visual input, visualised patients while assessing them over the telephone. The patients described how they had to be clear in the way they worded the response to the PhysioDirect physiotherapist in order to correctly explain their problem. In addition, patients felt that, for the most part, the physiotherapists were clear in how they asked questions and ensured that they were eliciting the correct anatomical site of the musculoskeletal problem. Patients reported that the physiotherapists were helpful and clear, and patients often used terms of affection to describe them.

These findings are similar to the results of May's (2001) qualitative study investigating the satisfaction with musculoskeletal physiotherapy of patients with chronic lower back pain. He found that the physiotherapist was a key factor in how patients evaluated their physiotherapy treatment. In particular, patients valued the physiotherapist being friendly, sympathetic and respectful, and emphasised the importance of physiotherapists being good at listening. The professional manner of the physiotherapist was also identified as important, as well as other qualities such as the physiotherapist being skilled and thorough in their assessment and inspiring confidence in the patient. Therefore, in order for patients to feel satisfied and accept the PhysioDirect service it was important that an in-depth conversation with detailed communication between the physiotherapist and the patient occurred. However, at times both the physiotherapists and the patients considered communication to be a challenging process. Patients reported that they sometimes felt that the questions were circuitous. This may have been because the physiotherapists did not understand where the patient was feeling the pain. This caused some frustration to both physiotherapist and patient. There is no published literature with which to compare this finding; however, the wider telehealth literature acknowledges a repeated apprehension regarding the potential of telehealth to reduce communication between patients and HCP and diminish their clinical relationship (Miller, 2001).

These findings regarding the manner in which the physiotherapists adapted their communication style and acted out the movements simultaneously with the patients are similar to those in Roberts' (2012) study, which explored teleoperators' experiences of providing care for elderly populations. This longitudinal, ethnographic, UK-based study focused on managers, operators, older

people and their families. The authors described how teleoperators would talk their clients into performing a task and the range of techniques the teleoperators used to safely manage clients (often patients with dementia). In order to influence patients into tasks that the teleoperators wanted them to perform, teleoperators used the tone of their voice and changed the language they used. For example, teleoperators used the word ‘we’ in order to include themselves in the activity as if they were present with the patient in their home. The authors coined the term ‘virtual co-presence’ and suggested that the teleoperators did this in order to reduce the social space between operator and patient. This relates to the PhysioDirect service, as it appears that the physiotherapists also adopted different language in order to engage patients in instructions about how to move their bodies in the assessment. This highlights that the physiotherapists adapted their communication skills in order to make the PhysioDirect service acceptable to assess and treat patients over the telephone. The next sub-section focuses on the effect the PhysioDirect service had upon the therapeutic relationship between the patient and the physiotherapist.

7.3.4.1 The effect of PhysioDirect on the therapeutic relationship

Patients, physiotherapists and the physiotherapy managers felt that the PhysioDirect service impaired the therapeutic personal relationship, not only in terms of the interaction between the physiotherapist and the patient, but also in terms of the continuity of care. As previously described (see section 7.3.2), the telephone medium of the PhysioDirect service removed the physical component of non-verbal communication (facial expression, smiling, eye contact, head-nodding, hand-gestures and postural positions) but still retained speech rate, loudness, pitch pauses and speech dysfluencies (Knapp and Hall, 2009). Although the

service was positively experienced by some patients and physiotherapists, the perceived impersonal nature of the service was a concern DiMatteo (2010) suggested that in order for effective communication to occur, clinicians should be able to interpret and understand non-verbal messages.

The qualitative study found that some of the physiotherapists saw the telephone as a barrier to their ability to fully assess patients' non-verbal cues. This meant that some physiotherapists felt that it was difficult to develop a rapport with the patients over the telephone. However, others thought that it was much easier to develop a rapport than they had initially thought. The patients complained that they could not see the physiotherapist's face, which made the PhysioDirect service feel remote and impersonal. One reason for this might be that the face is a platform from which to view to view emotions (Darwin, 2002), and by having no visual cues this aspect was lost over the telephone. The physiotherapists also reported in their first and second interviews that they missed being able to receive patients' facial feedback and non-verbal cues that were essential to good practice. These subtle cues helped to provide physiotherapists with a clearer clinical picture, for example whether or not a patient was in discomfort whilst performing the physical assessment or whether patients understood the information provided by physiotherapists.

Patients, physiotherapists and physiotherapy managers also perceived the lack of continuity of care as one of the less acceptable features of the PhysioDirect service, as this also had an effect on the therapeutic relationship. Continuity of care is concerned with the provision of care over time by the same provider (Gulliford *et al.*, 2006). Evidence from the qualitative study showed suggested that

continuity of care was impaired. Each time a patient contacted the PhysioDirect telephone service they spoke to a different physiotherapist, or, if they were invited to a face-to-face appointment, it was unlikely that they would be seen by the same physiotherapist who had assessed them over the telephone. There was some evidence that such impaired continuity deterred some patients from re-contacting the service for further advice. Those patients described how they did not re-contact the service because they felt that they would have to repeat the same the information to a different physiotherapist. These results suggest that for patients and physiotherapists who value relationship continuity, the PhysioDirect service was less acceptable than face-to-face care.

These results conflict with the wider literature about different telephone services that suggests that telehealth actually promotes continuity of care (Gagnon *et al.*, 2011, Duplantie *et al.*, 2007, Gagnon *et al.*, 2006, 2011,Gulliford *et al.,* 2006) In the previously highlighted study by (Roberts *et al.*, 2012), teleoperators felt that it was important to create a relationship with the client. The study showed that the teleoperators assessed the same clients on a number of occasions, which meant they knew their client group. This knowledge influenced their judgement and decisions. The PhysioDirect service, however, tended to provide one-off advice rather than multiple assessments and treatments by the same physiotherapist. Unfortunately, the quantitative study did not report on the number of patients who made further telephone calls to the PhysioDirect service. Therefore, it is not known what proportions of patients were managed with one phone call versus two or more.

There is relatively little information about continuity of care in physiotherapy. However, a recent qualitative study by Medina-Mirapeix *et al.* (2011) explored outpatient experiences and perceptions in an ambulatory post-acute care setting. They found that although patients had multiple rehabilitation treatment sessions they still perceived their care to be disconnected. This was because their rehabilitation sessions were delivered by a multi-professional team, with patients being treated by a number of therapists. This finding is supported by Beattie *et al.* (2005), who found that patients were approximately three times more likely to report complete satisfaction when they received their entire course of musculoskeletal physiotherapy from the same physiotherapist than those who received care from more than one physiotherapist.

The PhysioDirect qualitative results show that patients found the lack of continuity of care a less acceptable feature, and the quantitative results provided some evidence that those in the usual care arm were slightly more satisfied with the quality of the consultation and overall satisfaction than those patents in the PhysioDirect arm (Salisbury *et al.*, 2013a, Salisbury *et al.*, 2013b). However, the quantitative results do not indicate whether this was a result of the perceived lack of continuity. Wider general practice literature also indicates that continuity is important to the therapeutic relationship (Freeman and Hughes, 2010). Ridd *et al.* (2006) found that personal continuity was especially valued in the treatment of chronic, complex or psychological problems as it helped to develop trust over time, enabling patients to disclose their ongoing and changing problems to the GP. However, the evidence is less clear in relation to how telehealth can be used to maintain continuity of care in general practice, as advocated by McKinstry *et al.,*

(2009), or to help manage demand and improve access to GPs (Freeman and Hughes, 2010).

The current qualitative results show that the PhysioDirect service was perceived to impair continuity of care for musculoskeletal patients. This was a less acceptable feature of the service from the perspectives of patients, physiotherapists and physiotherapy managers. This may have implications for how physiotherapists and service managers may want to deliver and provide the PhysioDirect service, as both patients and physiotherapists expect and want continuity within physiotherapy care. This might be particularly relevant when stakeholders, particularly patients, expect multiple physiotherapy treatments but do not receive them. The expectations of the PhysioDirect service and the impact they had on how the PhysioDirect service was accepted are discussed in the next section.

7.3.5 Expectations of the PhysioDirect service

Table 13 (page 262) shows that all the key perspectives had expectations of the PhysioDirect service. The findings suggest that these expectations influenced how the PhysioDirect service was accepted. In this combined perspective the patients seemed to have the most to say, as it was often their expectations of the service that determined its acceptability. Patients who had low expectations and who were initially sceptical of the PhysioDirect service and its ability to effectively provide a diagnosis over the telephone often changed their opinion after receiving the telephone assessment. Examples show that patients initially felt that the service was too remote, a ‘waste of time’ or could offer no solution to their problem; however, after experiencing it, they found that the advice and exercises were beneficial and a correct diagnosis was given. Their musculoskeletal problem

resolved and the PhysioDirect service was viewed as providing valued additional benefits of improved access and convenience. These positive experiences affected the patients' evaluation and ultimately led to the PhysioDirect service being perceived as acceptable. This highlights how patients' initial, negative expectations of the PhysioDirect service were unrealised; patients generally had positive experiences with PhysioDirect and this meant that the service was acceptable. Additionally, there were patients who had negative expectations and wanted to be seen face-to-face by a physiotherapist, and if, after the telephone assessment, the physiotherapist decided that the telephone call was sufficient then the patients were left feeling that the PhysioDirect service did not meet their needs. In addition, the physiotherapists' initial concerns over their assessment and diagnosis were largely allayed. It was also true that the physiotherapists changed their minds regarding which patients it would be particularly appropriate to manage over the telephone, for example those with busy lifestyles (as discussed in section 7.3.3.1).

It is, therefore important to acknowledge the role of expectations upon the acceptability of the PhysioDirect. The view that patients' prior expectations influence how they experience physiotherapy is shared by Clemence and Seamark (2003). Their qualitative study, which investigated GPs' views about referring patients with musculoskeletal problems, found that patients' previous experience of physiotherapy services influenced their expectations of the treatment and that those patients who did not have clear expectations of physiotherapy expressed uncertainty about the treatment process. Hills and Kitchen (2007c) supported this view and suggested that expectations of physiotherapy are related to patient satisfaction with musculoskeletal

physiotherapy. Therefore, it is important that physiotherapists investigate, recognise and meet patient expectations (Metcalfe and Moffett, 2005) as recommended for usual care practice by the CSP (CSP Physiotherapy Framework, 2010).

The trial results show that the usual care arm were slightly more satisfied with their consultations than those in PhysioDirect trial arm (Salisbury, 2013a). However, the qualitative results show that many patients perceived that the service was acceptable in a number of ways. As previously highlighted, the 'zone of tolerance model' (Parasuraman *et al.,* 1991) might explain these results. The model recognises that patients' expectations influence how patients evaluate services. It was considered that a scale of satisfaction could exist in relation to the service, with highly satisfactory at one end and dissatisfactory at the other. The area ranging from adequate to desired levels of satisfaction point is where a service is acceptable. The trade-off patients made between the aspects of the service were evaluated by patients as not acceptable or dissatisfactory with those more acceptable features. This meant that overall the PhysioDirect service was acceptable. In addition, it may also explain why, when a patient had high expectations of the service, a trade-off was insufficient. This was commonly when patients' prior expectation of the service was to be seen face-to-face.

It might be safe to assume that those patients who had strong expectations of being seen face-to-face also had preferences, before the start of the trial, for the usual care arm of the trial. However, the quantitative study explored whether there was an interaction between baseline patient preference and randomisation arm in terms of satisfaction with the service. They reported no interactions (Salisbury,

2013a). The qualitative results, nevertheless, show that if patients expect face-to-face care and do not receive it they are dissatisfied with the service and evaluate it as unacceptable, because it has not met their needs. Given that many patients expected that they would receive face-to-face care after the telephone call, it seems particularly important for physiotherapists to clearly communicate to patients the role and function of the PhysioDirect service, to increase its acceptability and to elicit any preferences for face-to-face contact. Egbunike *et al.* (2010) found similar results in their qualitative investigation of patients' experiences of OOH GP care. They reported that patients expectations moderated the relationship between patients concerns and satisfaction.

The findings above might also be explained by the stakeholder believing that the PhysioDirect service had less value than face-face care. The combined perspective of the three stakeholder groups suggests that they did not really perceive PhysioDirect as true physiotherapy. The qualitative evidence highlights that some patients who had negative expectations of PhysioDirect failed to contact the service. However, the findings also show that those patients who had negative experiences of PhysioDirect also had negative expectations of physiotherapy more generally, with some patients feeling that the PhysioDirect service would not be appropriate for their needs. Questionnaire data from the trial also confirmed this. It became clear that some patients, when asked to rate their experience of physiotherapy, failed to respond because they did not perceive that the PhysioDirect telephone call they had had was actually 'physiotherapy' (Salisbury, 2013a). Some patients reported that the PhysioDirect service had less value than face-to-face care. This was because they did not see how the PhysioDirect service could be 'physiotherapy' over the telephone, especially if it did not meet up to their

previous experiences of physiotherapy. This could be explained by patients perceiving the telephone as a medium for arranging appointments rather than as a method of receiving advice and treatment, despite the information they received about the service (Appendix A). However, it could also reflect lay assumptions and understandings about what might be called ‘traditional healthcare’ in that there is an expectation that healthcare is delivered face-to-face, as per the traditional norm.

GPs and commissioners data showed that, on the whole, they were the least aware of the details of the PhysioDirect service. GPs often perceived the PhysioDirect service as solely a triage service rather than as delivering a package of care to patients with musculoskeletal pain. This may be because some GPs provided telephone triage services at their own surgeries. Some physiotherapists also shared the view that the PhysioDirect service was not ‘legitimate’ physiotherapy. They suggested that physiotherapy is a complex intervention, comprised of a number of different elements and techniques, which include not only verbal education and advice, but manual or manipulative therapy, exercise therapy, acupuncture, injection therapy, electrotherapy and hydrotherapy, as well as cold and heat therapy (Chartered Society of Physiotherapy, 2006). The evolution of the physiotherapy profession from one that is centred upon the visual analysis of movement and application of physical treatments to one in which the assessment and treatment of patients in the PhysioDirect service is delivered without any visual cues may be seen as potentially eroding the core values and work of physiotherapy. Therefore, in order to make the PhysioDirect service acceptable, physiotherapists had to make professional sacrifices. These

professional concerns, along with other issues which underpin the implementation of the PhysioDirect service, are discussed in the following section.

7.4 The implementation of PhysioDirect

This second section of this chapter focuses on the implementation of the PhysioDirect service whilst the trial was running and once the trial was complete. The key themes common across the perspectives of patients, physiotherapists, physiotherapy managers, GPs and commissioners are explored. In order to provide a combined perspective, only themes that were found across two or more perspectives are discussed. Table 14 provides an overview of what themes were present in the different stakeholders' perspectives. The three key themes were the impact of PhysioDirect on professional identity, the difficulty of implementing patient choice through PhysioDirect and the complexity of commissioning NHS healthcare services.

Table 14: An overview of the findings from the three perspectives

	Patients	Physiotherapists and physiotherapy managers	GPs and commissioners
The impact of PhysioDirect on professional identity	Yes	Yes	Yes
Implementation of patient choice	Yes	Yes	Yes
Decision making	No	Yes	Yes

Overall, the physiotherapists and physiotherapy managers felt that the PhysioDirect service threatened their professional identity. The study provided evidence that although patient choice was valued by all stakeholders, there were unforeseen organisational challenges that made the implementation of choice through the PhysioDirect service difficult. The data also highlighted the complexity of commissioning NHS services. The barriers to and facilitators of implementation

of the PhysioDirect service after the trial was completed is discussed in the context of the two PCTs that continued to provide the service compared to the two PCTs that chose to discontinue the service.

7.4.1 The impact of PhysioDirect on professional identity

There was evidence from all the stakeholders' perspectives to suggest that the implementation of the PhysioDirect service had an impact on professional identity. The evidence from the physiotherapists and physiotherapy managers was the most compelling, possibly because it was the physiotherapists who provided the service. Physiotherapists felt that the PhysioDirect service 'standardised' and 'protocolised' the care they offered to patients, and they were concerned about whether this would limit their professional autonomy. Physiotherapists are autonomous practitioners who have the knowledge and skills to make clinical decisions and deliver the most appropriate intervention to patients as individuals (The Chartered Society of Physiotherapy, 2011). The trial restricted the ability of the physiotherapists to adapt the information leaflets, and therefore they felt that the PhysioDirect service in the trial restricted their ability to individualise care. However, both the physiotherapists and the physiotherapy managers recognised that this could be easily rectified once the trial was completed. Similar results have been found by Hendy *et al.* (2012); who found that, in relation to healthcare professionals, the standardisation of the trial protocols meant that the Whole Systems Demonstrator (WSD) trial was poorly aligned with the specific needs of the PCT.

The main concern of the physiotherapists was their fear of losing their manual assessment and therapy skills. They reported that if they had to work full time on

the PhysioDirect service they would search for employment elsewhere. (Mair *et al.*, 2008) found similar evidence regarding nurses' perceptions and experiences of telehealth. Nurses similarly perceived telehealth as having a negative impact on their professional identity, and articulated concerns about working in this way. Mair and colleagues were worried that telehealth might lead to a reduction in the number of nurses needed in the future and subsequently to a reduction in the quality of nursing care overall. As previously highlighted in this chapter (see section 3.5), the PhysioDirect service changed the way that physiotherapists worked. The physiotherapists involved were happy to do this as long as it was not for the majority of their working week. They also feared that the PhysioDirect service would be more broadly damaging to the profession as a whole if it was ever to become the main method of assessing and treating patients. These are similar to the findings of Mair *et al.* (2008), who found that nurses felt that telehealth would not only be detrimental to their clinical skills but would also negatively affect their professional identity. It is, perhaps, unlikely that PhysioDirect would be the only way to assess and treat patients; however, the physiotherapists' views highlight their fear of the potential success of future PhysioDirect services. These collective professional concerns emphasise a negative view of PhysioDirect which may affect the willingness of physiotherapists to provide future PhysioDirect services. A willingness to provide any service is one of the criteria suggested by Field (1996a) for assessing the acceptability of a service. Therefore, evidence suggests that future PhysioDirect services would be difficult to implement if it were the only way for physiotherapists to provide physiotherapy care.

It may be that to implement telehealth services such as PhysioDirect more widely, a change in the culture of how professionals regard the technology is needed in

the NHS. To some extent, this may be facilitated simply by the passage of time, as professionals become more comfortable with new technologies. The King's Fund, in its report, argued that the successful implementation of telehealth needs to include fostering of fundamental service redesign, which promotes professional development and staff training (Giordano *et al.*, 2011). They agreed that there first needs to be clear analysis, design and implementation of the infrastructure, highlighting that open international standards should be applied wherever possible to support their adoption. The King's Fund also suggested how the current NHS reforms could practically enable the commissioning of telehealth services on a large scale (Giordano *et al.*, 2011).

The GPs' narratives showed that they were generally content with the local physiotherapy service provided (with the exception of issues of access, which have been previously discussed in section 7.3.1), and were generally positive about physiotherapists as a profession. In relation to the PhysioDirect service, they suggested that it was the decision of the physiotherapy service providers whether or not they wanted to change the way the service was delivered and that this should not be based on the views and opinions of GPs. However, both the GPs and the commissioners had concerns regarding how the PhysioDirect service would maintain quality standards.

The GPs and commissioners suggested that physiotherapy services could use the same patient information leaflets, thus standardising information given to patients and helping to ensure consistency in the key messages patients receive about musculoskeletal pain. The commissioners suggested that telephone calls from patients to the service should be regularly monitored and checked for quality. On

the one hand, the GPs and commissioners suggested that there should be some quality standards in the provision of the PhysioDirect service, while on the other hand the physiotherapists suggested that the ‘protocolised’ nature of the PhysioDirect service affected their professional autonomy. The move to standardise care was noted in the government’s quality agenda (Department of Health, 2008a). Darzi (2008a) also advocated standards in clinical practice as a way to maintain and monitor quality. It is interesting and should be highlighted that the main trial results showed equivalent patient clinical outcomes at six months and slightly better outcomes at six weeks for patients randomised to the PhysioDirect service compared with patients randomised to usual care, so these concerns did not seem to be realised (Salisbury, 2013a, Salisbury, 2013b).

The patients, on the other hand, were unaware that the physiotherapists’ felt that their professional identity was affected. This is because often patients are not privy to the concerns of HCPs, as it would be unprofessional to let them know and ultimately undermine their own service. Patients expressed no concerns about the implementation of the service; in contrast, they felt that the service was very professional in terms of both the telephone assessment and the postal information they received. Patients also reported that the physiotherapists were professional in their manner, suggesting that there were no differences between the ‘PhysioDirect physiotherapist’ and the ‘face-to-face physiotherapist’.

So while the physiotherapists expressed concerns about their own professional identity in PhysioDirect, this did not seem to negatively affect the experience of the patients. Even so, the physiotherapists felt that PhysioDirect physiotherapy was different. They explained that they needed to adopt new skills and adapt to the

new medium of telehealth, as there were additional skills which were needed in order to be a ‘PhysioDirect physiotherapist’. These findings can be understood within the Normalisation Process Theory (NPT) (May, 2007). May (2009) describes when complex interventions are ‘normalised’ into routine care the processes of implementation, adoption, translation and stabilisation occur. It appears that the PhysioDirect service, for the purpose of the trial, was normalised. The qualitative and quantitative study both provide evidence that this happened. The qualitative evidence reported that the physiotherapists adapted their existing skills and adopted new skills in order for to deliver the service, suggesting that a period of approximately 6 weeks was needed to become familiar with the delivering the service. The quantitative data also showed that the process of normalisation within the trial did occur, because as the physiotherapists became more familiar with providing the service their call times reduced (Salisbury *et al.*, 2013a).

The physiotherapists and physiotherapy managers defined that the specific skills needed were both good telephone communication and information technology skills. They also suggested that this way of working was suited to those who were more comfortable with making a decision about whether or not a patient should be managed on the telephone even if they were not 100% confident of the clinical diagnosis and patient response to treatment. As previously described in Chapter 3, section 4.3 the PhysioDirect service tested in the trial adopted the Huntingdon PhysioDirect service model and therefore included only more senior physiotherapists, working at Agenda for Change (AfC) Band 6 and above. The physiotherapists suggested that junior colleagues might not have assessed and treated a sufficient number of patients with differing musculoskeletal problems in

face-to-face care to be able to make a smooth transition to accurately assess and treat patients over the telephone. Their concern was that younger, less experienced physiotherapists, for example an AfC Band 5 physiotherapist, would not have the level of skill needed to be competent over the telephone. Findings from McKinstry *et al.* (2009) showed younger practitioners were less aware of the potential problems and dangers of making mistakes in clinical practice. McKinstry suggested that although clinicians constantly took clinical risks, less experienced GPs were more likely to take more clinical risks compared to their older colleagues.

As the PhysioDirect service only used physiotherapists at AfC Band 6 and above, it is not known whether more junior physiotherapists would have experienced any problems. There were, however, less experienced AfC Band 6 physiotherapists who delivered the PhysioDirect service in the trial, but none of those interviewed reported any problems. In addition, as previously described, an exploratory study by Turner (2009) compared the clinical decision making and management decisions made over the telephone by both experienced (more than 4 years' experience) and less experienced physiotherapists (2 years' experience): their results showed good agreement on the diagnoses reached, with no significant difference between the junior staff and the experienced staff. In addition, the results also showed that there was poor agreement between the management decisions reached by junior staff in telephone consultations compared to in face-to-face consultations (Turner, 2009).

However, restricting the provision of PhysioDirect to more experienced physiotherapists might limit the wider implementation of this type of service

beyond the trial, given that it essentially reduces the number of physiotherapists that can provide the service. There are other PhysioDirect services available in the UK which do not restrict this way of working to only more senior physiotherapists (Connect Physical Health, 2012). In addition, there was some evidence in this qualitative research (see section Chapter 5, section 4.2) that the younger physiotherapists adapted more quickly, felt more proficient and had the information technology (IT) skills they needed to provide the PhysioDirect service. The ability to organise and deliver the PhysioDirect service was a related implementation concern of the physiotherapists and physiotherapy managers. This was particularly relevant to the ability of the PhysioDirect service to offer patient choice, discussed in the next section.

7.4.2 Implementing patient choice

All stakeholders agreed that it would be helpful to provide more choice in terms of how patients accessed physiotherapy. They suggested that a PhysioDirect service could provide patients with the choice of face-to-face or telephone-based care. In addition, the PhysioDirect trial was designed so that patients could choose when they accessed the service (Salisbury, 2009). From the patients' perspective this was an acceptable feature of the new service, highlighting the consumerist aspect of healthcare (Ferlie and Wood, 2003). It allowed the patient to have some discretion about where and when they accessed physiotherapy care. However, as previously described in section 3.5 of this chapter, patients were dissatisfied with the PhysioDirect service when they expected to be offered the choice of a face-to-face consultation and were not. Physiotherapists and physiotherapy managers agreed that the PhysioDirect service provided choice as it offered another way to assess and treat patients. However, in practical terms, the qualitative study

revealed that the physiotherapists and physiotherapy managers felt that it was impractical to provide the PhysioDirect service, beyond the end of the trial period, in the way that was tested within the trial for a number of reasons.

Firstly, the study showed that in the PCTs that continued to implement the service after the trial, patients with more complex problems, for example those associated with the shoulder joint, were felt by physiotherapists to be less suitable for the PhysioDirect telephone assessment and therefore shoulder pain patients were not given the choice to use PhysioDirect but were booked in for face-to-face assessments with physiotherapists (this was despite the fact that the quantitative trial results provided no evidence of any difference in the effect of PhysioDirect versus usual care for patients with upper limb musculoskeletal problems) (Salisbury *et al.,* 2013a, Salisbury *et al.,* 2013b). Implementation of the PhysioDirect service in this way essentially removed the potential for patient choice for some patients.

Secondly, both the PCTs that continued to provide the service also decided to use it as a call-back system only, with administrative staff taking the calls and arranging a time for physiotherapists to phone patients, which meant that patients were no longer free to make direct contact with a physiotherapist at a time of their convenience. The fact that both the PCTs implemented the service in this way highlights the problems encountered with the delivery of the PhysioDirect service. As previously highlighted in Chapter 5, section 4.3, physiotherapy managers found it too difficult to accurately predict the volume of calls over the week, and thus opted for a call-back service only. The volume of calls to the PhysioDirect service varied widely, with the experience of the physiotherapists suggesting that they

were either very busy and thus required a lot of staff, or that the telephones were extremely quiet, creating a surplus of staff in the PhysioDirect clinic at any one time, which was detrimental to both efficient delivery of the service as well as staff morale. This situation seemed to be difficult to manage because physiotherapy managers could not plan correct staffing of the service because they did not have accurate information about when patients were likely to call. Although efforts were made to gather telephone process information it was clear more sophisticated methods were needed. Perhaps, such information could be gleaned from call-monitoring software. The analysis of call volumes and frequencies can predict future call patterns, thereby enabling the managers to efficiently staff the service. However, this method could be expensive and more suitable for large-scale call centres rather than smaller individual sites.

In addition, due to the costs involved, physiotherapy managers felt that it was unacceptable to have physiotherapists sitting waiting for patients to contact them. The physiotherapists in the trial often complained of being bored when the service was quiet. In terms of convenience, the patients found the PhysioDirect call-back service to be acceptable, as the administrator identified a mutually convenient time for the patient to be called back. However, this way of providing the service essentially served to reduce the level of patient choice that was envisioned and tested in the original trial. There is evidence that several other services have used similar solutions to combat these problems. NHS Scotland has controversially moved to the use of call handlers with basic training, rather than qualified physiotherapy staff, to take initial telephone calls from patients, and reserving qualified physiotherapy as a staff resource for patients who are screened by the call handlers as requiring it (NHS 24, 2012). Other stakeholders (GPs and

commissioners) agreed that the PhysioDirect service, in theory, facilitated patient choice. However, some commissioners questioned the need for the PhysioDirect service as an choice option for patients. They suggested that patients did not want choice, instead they wanted quick, efficient access to good face-to-face quality care. The commissioners believed that physiotherapy departments could deliver this without implementing the PhysioDirect service.

There are several government initiatives that encourage patient choice, such as the Qualified Provider (AQP) policy (Department of Health, 2006b, Department of Health, 2010, Department of Health, 2011b). This policy directive means that patients will have the choice of providers for a particular service they require, including non-NHS providers of care. The Chartered Society of Physiotherapy (CSP) has a concern regarding the government's AQP policy, suggesting that it will fragment physiotherapy services, as competition between providers will destroy integrated pathways of care (Chartered Society of Physiotherapy, 2012). There was evidence from the interviews that suggests that competition between NHS and private providers may mean that clinical services fail in their implementation. The commissioners provided an example of how commissioning a non-NHS provider created problems, as NHS providers sometimes refuse to work with private companies, which ultimately leads to the failure of newly created services. Although the reasons for this were not explicitly stated during the interviews, it was related to concerns over the fragmentation of NHS services, and the literature in this area suggests that such fragmentation could be detrimental to quality of care (Ham *et al.*, 2011, Shaw and Rosen, 2013, Goodwin *et al.*, 2012). Although it is the government's goal to encourage and facilitate patient choice, this research highlights the complexity of the reality of trying to deliver patient choice in

the PhysioDirect service. It was highlighted by the interviewees in this study that the choice of self-referral to physiotherapy was perceived as more attractive.

7.4.2.1 Self-referral to physiotherapy

In discussing increasing choice of access to physiotherapy in the interviews, there was evidence from all of the key stakeholders of a desire for self-referral to physiotherapy. The three stakeholder groups felt that PhysioDirect would be more acceptable if it formed part of a self-referral service. Thus, rather than requiring a referral from a GP for a patient to access physiotherapy, they would be able to refer themselves direct to the physiotherapy service (The Chartered Society of Physiotherapy, 2010, Department of Health, 2008b). Perhaps not surprisingly, this issue was particularly stressed by physiotherapists and physiotherapy managers, who strongly advocated patient self-referral to physiotherapy services. This view is supported by recent evidence, as there has been an increased call for inclusion of self-referral pathways to physiotherapy in the UK and a growing evidence base for it (The Chartered Society of Physiotherapy, 2010, Holdsworth and Webster, 2004, Holdsworth *et al.*, 2006a, Holdsworth *et al.*, 2006b). In relation to PhysioDirect, the physiotherapists and physiotherapy managers felt that a self-referral service would help in the triage of self-referring patients. A previous questionnaire study suggested strong support for physiotherapists working as first-point-of-contact practitioners, with 78% of physiotherapists surveyed reporting that physiotherapists could competently accept patient self-referrals (Holdsworth *et al.*, 2008). Self-referral to physiotherapy is also considered a priority by the physiotherapists' professional body, the CSP (The Chartered Society of Physiotherapy, 2010). In terms of national policy, the Department of Health (DoH)

has introduced a series of changes to encourage systems of self-referral to physiotherapy treatment services (Department of Health, 2008b).

The GPs and commissioners thought that self-referral to a physiotherapy service was, in principle, feasible. However, they did have some concerns, speculating that the service might be so popular with patients that it would not be able to meet demand and that some patients might be unsuitable for physiotherapy treatment. These concerns have been investigated, and recent evidence found that self-referral to physiotherapy services does not increase demand in services that have appropriate levels of physiotherapy capacity for the local population (Holdsworth and Webster, 2004, Holdsworth *et al.*, 2006a, Holdsworth *et al.*, 2006b). The qualitative data provided evidence that some patients wanted to self-refer to physiotherapy, and it was observed that these patients often had previous positive experiences of physiotherapy. There was also evidence that some patients may be reluctant to self-refer without first visiting their GP. In addition, there was very little discussion by patients about whether the PhysioDirect service should play a role in any future self-referral system. Patients who discussed self-referral still referred to physiotherapy in terms of face-to-face contact. However, if a self-referral pathway was to be considered by PCT service commissioners, with a telephone service as part of that pathway, data from this qualitative study suggested that patients would most probably view it as an acceptable ‘first step’ to physiotherapy.

7.4.3 The complexity of commissioning NHS healthcare services

There was evidence that the physiotherapists, GPs and commissioners felt that commissioning healthcare services is complex. While physiotherapists, because of

their professional position, related specifically to the commissioning of PhysioDirect, GPs and commissioners positioned their own experiences and perspectives within the commissioning of wider healthcare services, of which PhysioDirect was but one component. Wherever possible, direct examples of commissioning the PhysioDirect service explicitly are presented and explored. The commissioners described the different pressures that they felt whilst commissioning services, including top-down, government-driven policy and both public and financial pressures. They often referred to the commissioning cycle (Murray, 2009) as a framework to assist in commissioning services. When asked, most of the commissioners explained that they would consider commissioning future PhysioDirect services as long as they did not create controversy and assisted in reducing costs. In comparison, the physiotherapists and physiotherapy managers appeared to be less aware of commissioning pressures to reduce costs.

There was evidence from the interviews that there were also some tensions in the relationships between the NHS providers and the service commissioners. Two of the physiotherapy managers interviewed suggested that they had difficult working relationships with their commissioners. They were, however, reluctant to provide much detail about the way in which the relationship was strained and whether or not they felt it impeded the implementation of the PhysioDirect service after the trial was completed. In contrast, all four commissioners involved perceived that they had good working relationships with their respective physiotherapy managers and were unaware of how the physiotherapy service perceived their relationship with them. Although commissioners recognised that relationships with providers are an important component of the commissioning process, there was no evidence in the qualitative study which suggested that the relationships between the

commissioners and the physiotherapy managers influenced whether the PCT continued to provide the PhysioDirect service.

Of the two PCTs that continued the service, one had positive relationships with their commissioners and the other had a historically strained relationship. Reasons for such difficulties within the relationship centred upon the physiotherapy manager's perception that service commissioners lacked the clinical awareness needed to provide healthcare services. There were examples from the interviews of how commissioners and providers disagreed about what key information was needed to commission services. It appeared that the commissioners of physiotherapy services wanted service information data that providers would not feasibly be able to collect in routine clinical practice, for example a wide range of service process data and very specific patient outcome data. The physiotherapy managers felt that although their service was clinically driven, they were frustrated about not being performance managed according to clinical criteria; instead, their performance was evaluated by process targets. Interestingly, by their own admission, the commissioners acknowledged this, which indicates the lack of awareness and shared understanding of physiotherapy by these key stakeholders. An imminent opportunity to resolve some of these problems may perhaps be possible through the new Clinical Commissioning Groups (CCG) as they begin to organise and commission future healthcare services from 2013 onwards (Department of Health, 2010).

7.4.4 Decision making

It is important to consider what each perspective brings to an understanding of the implementation of the PhysioDirect service in the PCTs beyond the trial. The

qualitative study investigated what influence each perspective had upon how the PhysioDirect service was structured and accepted, exploring whose influence most informed whether or not the PhysioDirect service was implemented. The study uncovered that these influences were dynamic and appeared to have different effects at different times. The fact that two out of the four PCT services continued to provide a PhysioDirect service after the completion of the trial was useful in contributing to the understanding of what these different factors were. The following sections compare and contrast the different influences affecting the PCTs that led them to either continue or stop the PhysioDirect service after the completion of the trial.

7.4.4.1 Influences on the PCTs that discontinued the PhysioDirect service

The interviews with the physiotherapy managers of the two PCTs that did not implement the PhysioDirect service after the trial was completed suggest that the main reason for this was that their service commissioners had decided they would not continue to support it. This highlights the relative power of commissioners in determining whether or not the PhysioDirect service continued. The interviews with the commissioners suggest that the reason for this was that they felt it necessary to wait for the results of the trial before agreeing upon any commissioning decisions to fund the PhysioDirect service. The qualitative data provided evidence to show that despite service commissioners having the least amount of knowledge about physiotherapy services, they appeared to have a significant amount of power and influence to determine whether or not the PhysioDirect service would be implemented in the future. According to May (2009), the PhysioDirect service failed in the first stage of implementation due to the lack of support of the policy-level sponsor. This is because the sponsor supplies funding to the providers and

can stipulate what the service can and cannot provide. They do this in the form of a SLA, controlling the provision of services through funding (Murray, 2009). The physiotherapy manager who suggested the lack of support by the commissioners was the main reason as to why the service did not continue in his PCT. However, he also hinted in his interview that he lacked confidence in the PhysioDirect service. He reported that he was unsure that the PhysioDirect service would provide the same level of good quality care that patients receive face-to-face. So, although the PCT commissioner decided that they would not support the service, it appears that the desire of the physiotherapy manager in this instance was not enough to drive the future developments of the PhysioDirect service.

The other reason stipulated by one of the PCTs involved in the trial was the problem of lack of space and also lack of resources to fund PhysioDirect from their original budget. It appears that there was a lack of ‘organisational readiness’ to provide and deliver the service. This is similar to the results of Hendy (2012) which described how one site involved in the WSD did not have the capabilities to provide and deliver the service after the trial was completed. This is what May referred to as the adoption of the NPT. It appears that the implementation of the structural aspects of the PhysioDirect service did not fit within the capabilities of that particular PCT. Additionally, the physiotherapy manager from this PCT also suggested that although she could see the PhysioDirect service being used, she felt a ‘direct access’ service might be more appropriate. It is suggested that she could not visualise how this might work in practice and therefore did not put any strategies in place to continue to provide the PhysioDirect service. Accordingly, in order to understand how the service was normalised into routine practice, an examination of the PCTs that continued to provide the service is now presented.

7.4.4.2 Influences on the PCTs that continued the PhysioDirect service

It appeared that the continuation of the PhysioDirect service not only depended on the decisions of the commissioners but also on the professionals' desire to continue to provide the service. In the two PCTs that continued to provide the PhysioDirect service, it seemed that it was the decision of the physiotherapists and physiotherapy managers and not the commissioners as to whether they wanted to continue to provide the service. Both the physiotherapy managers had a clear vision of how they saw the PhysioDirect service working in their respective PCTs. The way in which the physiotherapists and physiotherapist managers changed the service to meet their operational needs has previously been discussed in section 7.4.2. According to May (2009) the physiotherapist and their managers would have translated PhysioDirect into their existing physiotherapy service, stabilising it by integrating their professional knowledge and practice to further develop the service. Therefore, all stages of the NPT model were achieved. As the interviews took place shortly after the completion of the trial, further processes involved in the NPT could not be investigated.[12] In addition, the commissioners revealed that it would be up to the provider of physiotherapy services to decide upon how it would meet the requirements of its SLA; they stated that it would be the physiotherapy services' future decision as to whether they would provide the PhysioDirect service with the funding allocated to them. This evidence suggests that the further development of the service was at the discretion of the physiotherapy teams rather than the decisions of the commissioners. However, the commissioners did highlight that due to the government's decision to disband PCTs and create CCGs

[12] Recent contact via e-mail with the PCTs involved reported that, as of March 2013, both the PCTs had continued to provide the PhysioDirect service.

(Department of Health, 2012b), there could be changes in how NHS physiotherapy services would be commissioned in the future.

These findings indicate that there are a number of pressures in terms of deciding whether or not to continue providing the service after the trial has finished. It has been shown that the implementation of the PhysioDirect service after the completion of the trial was varied and depended upon several key factors, such as the views of commissioners and the professionals' willingness to continue to provide the service. The NPT was a useful model to help understand the differences between how each PCT decided to continue or discontinue the PhysioDirect service. The final sections of thesis are a reflection upon the methods used in this research. The next section focuses upon the way in which the findings of this research may be applicable to other contexts.

7.5 Transferability

Findings from qualitative studies are not intended to be generalisable to larger populations. Finlay (2006) argued that qualitative research findings can be transferrable and have meaning if they are applied to other similar contexts and situations. The transferability of results is often determined by the relevance of the findings to other supporting literature (Daly *et al.*, 2007). Therefore only certain key themes are transferable. As such a large number of patients were interviewed, it was difficult to come to a definite conclusion about which findings could be transferred to other contexts. However, it is likely that patients would similarly evaluate other telehealth services in terms of acceptable and less acceptable features. This qualitative study has found that patient expectations influenced how they evaluated the PhysioDirect service. It is perhaps safe to suggest that when

patients have clear expectations about their treatment preference when using healthcare that incorporates new technologies, these will probably be informed by their own knowledge and previous experience.

In terms of transferability, the evidence shows that physiotherapists tried to visualise their patient whilst assessing them over the telephone, creating what Roberts (2012) called a 'virtual co-presence'. Other studies have explored the effect of having no visual cues in a nurse's assessment of patients (Edwards, 1998). Similarly, this study suggested that healthcare professionals use visualisation techniques when the usual means of visual input (face-to-face) is unavailable. This study adds to the growing body of literature that suggests that health professionals adapt and adopt different strategies whilst using telehealth technologies. Therefore, this may indicate that healthcare professionals in other settings may use similar techniques when telehealth services are implemented. The role of technology and the effect that it has upon professionals' identity is a relevant issue within this study, as physiotherapists felt that the service undermined their own professional identity, and this might be the case for other professionals who have to engage and provide telehealth services; this has also been discussed within the literature (Mair *et al.*, 2008).

7.6 Implications and recommendations for policy and practice

There are several recommendations that can be made for clinical practice and policy and research methods that can be drawn from the results of this qualitative investigation. These are focused on ways to improve the likelihood of the acceptability of future PhysioDirect services. It was found that patients' expectations of treatment were important. Some patients were dissatisfied, and

found the PhysioDirect service unacceptable if they had high expectations to be seen in a face-to-face consultation. Therefore, in order to ensure that the acceptability of any future PhysioDirect services is maximised for patients, physiotherapists could clearly explain the PhysioDirect service process, ensuring that patients understand its role and function well, before checking with patients to see whether they have high expectations to be seen face-to-face. Another solution to this problem could be to offer patients a choice of either face-to-face care or a telephone assessment at the beginning of each telephone call or once the diagnosis is given.

The availability of the PhysioDirect service in the evening was considered a priority for those who found it difficult to contact the service whilst they were working during office hours. One clear recommendation for the future is for services to offer some extended PhysioDirect opening hours to include evening sessions. Another future recommendation for the PhysioDirect service could be specifying a clear way in which the physiotherapist verifies the identification of a patient. Confidentiality in the PhysioDirect service could be maintained, for example by the physiotherapist checking the patient's date of birth or the first line of their address before assessing them over the telephone or giving patients a unique identity number. In order to maintain quality in future PhysioDirect services, a mechanism that enables the recording of the telephone call could be installed. This would enable the physiotherapy service to monitor the quality of each call and mark it against agreed criteria with or without prior knowledge of the assessing physiotherapists. In addition, the recorded calls could be self or peer reviewed. If the facilities to record calls were not available, then perhaps the PhysioDirect telephone calls could be listened into and monitored by their manager at the same

time as a patient was assessed over the telephone. All or some of these methods could help to maintain quality within future PhysioDirect services.

The expectations of PhysioDirect were important. The qualitative findings show that all the main stakeholders had lower expectations of the PhysioDirect service than of face-to-face care. It was clear that in the future it might be beneficial to provide really clear information to all stakeholders about the PhysioDirect service in ways that highlight its role, function, purpose and advantages. Despite the research team being involved in the trial meeting with leading GPs in the local area in some of the geographical areas of the participating PCTs and meeting with musculoskeletal service commissioners about the new service, and the physiotherapy service staff themselves talking to their local GPs about the service, it was clear that GPs and commissioners recalled very little of this information.

The physiotherapists found calling patients in order to practise the skills needed to provide the PhysioDirect service without patients having any prior knowledge of the telephone call unacceptable. A recommendation for any future training programme for PhysioDirect physiotherapists could be the identification by administrative staff of patients who are suitable for inclusion in the physiotherapist’s training. These patients could be identified when they contacted the physiotherapy department to make a face-to-face appointment. This method could also have the advantage of identifying patients with specific musculoskeletal problems for the specific training needs of physiotherapists. For example, if a physiotherapist felt less confident about assessing patients with shoulder pain over the telephone, a member of the administrative team could identify such patients for that physiotherapist to practise on using the PhysioDirect service. This way of

training would enable the physiotherapist to practice, which would increase their confidence in their ability to assess and treat patients with shoulder pain over the telephone.

The government's aim is to increase the use of technology within healthcare (Department of Health, 2012a). The qualitative study provided findings that the PhysioDirect service was broadly acceptable to all stakeholders. However, one recommendation for policy is that the PhysioDirect service should not be seen as a panacea or as a replacement of, or alternative to, face-to-face care. Reasons for this are that those patients who have strong preferences to be seen face-to-face are unlikely to find the PhysioDirect services acceptable if it were the only option to access physiotherapy care. In addition, it would be unlikely that there would be the professional drive to provide the PhysioDirect service if physiotherapists were expected to deliver it for the majority of their working week.

One methodological recommendation is that qualitative methods could have been used within the trial's run-in period (before the start of the main trial). This could have been beneficial in a number of ways – early patient interviews during the run-in period could have asked more trial-specific questions. Qualitative research could have investigated whether patients were able to access the service and whether the problem was isolated to only one PCT or whether it was across the four PCTs. This may have relieved some of the trial team's anxiety regarding the telephone lines being engaged or uncovered reasons why some PCTs had long call-back times compared to others.

7.7 Reflection on the methods

The ontological position of subtle realism was appropriate in the investigation of the acceptability of the PhysioDirect service (as described in Chapter 3, section 2). Subtle realism accepts that the social world exists independently of an individual understanding, but argues that it is only accessible through a respondent's interpretations (Mays and Pope, 2000; Ritchie and Lewis, 2003, Hammersley, 1992). This approach informed the methods that were used, as it assumed that reality does exist and is not socially constructed. Therefore, in terms of PhysioDirect, it is assumed that there is truth or independent reality that underpins the acceptability and implementation of the service. This concept shaped the thesis as it helped to underpin the use of a perspective approach of interviewing a number of different stakeholders regarding their beliefs about issues of acceptability and implementation. So the decision to combine the perspectives enabled a rich, in-depth understanding of the PhysioDirect service. This approach allowed the individual experience to be understood alongside a common group experience.

The Framework method was a useful way to organise and manage the large amounts of data generated, as all three data sets were organised and stored on one database. The sampling frame was designed to include a maximum variation sample (Sandelowski, 1995). However, at times, due to its size, the patient sample was difficult to manage. The Framework method and the accompanying software, however, aided the management of this data set by tagging each case with important identifiable data, for example, age, gender and both site and trial arms. This enabled quick and successful comparative analysis of the patient data. The method was also helpful when analysing the physiotherapists longitudinal data, as

it was possible to attach two transcripts to each case and then instantly compare them. One of the main benefits of the Framework method was that it allowed the cases and themes to be explored simultaneously.

Due to the range of data collected across the three data sets, the analysis was specifically focused upon the study's aims of exploring the acceptability and implementation of the PhysioDirect service. The Framework method also assisted in this analysis due to the method of indexing and summarising raw data under specific data headings. The indexing headings specifically related to the focus of the analysis: the acceptability and implementation of PhysioDirect. The disadvantage of using the data in this way was that a large amount of data generated from the qualitative study was not analysed in detail, for example the wider use of telephone and healthcare systems, GPs' and commissioners' views of evidence-based practice and which sources of evidence they used to make decisions and all the stakeholders' contextual information and their collective experience of the process issues in the trial. Although index headings were created for these and data were coded, further in-depth analysis did not occur, and they were not fully explored as themes specifically related to the acceptability and implementation of the PhysioDirect service were considered a priority.

7.8 Strengths and limitations

This research has several strengths and limitations. One strength of the qualitative study was that the patient sample reflected the wide range of patients who used physiotherapy services across the four PCTs involved in the trial. This provided the qualitative study with a rich dataset to explore the acceptability of the PhysioDirect service. The strength of the longitudinal approach of interviewing the

physiotherapists was that the second set of interviews with the physiotherapists explored whether their views and opinions had changed following their experience of delivering the PhysioDirect service in the trial, and in particular whether their prior concerns about it were unfounded. An additional strength of this qualitative study is that it used a multiple perspective approach. In particular, the inclusion of the physiotherapy managers and commissioners helped to understand how decisions are made about the implementation of the PhysioDirect service.

A limitation of the qualitative study was that although patients whose first language was not English were specifically sought and interviewed, none of the interviewees had a language barrier that caused problems with their access to or understanding of the PhysioDirect service. It is likely that patients with significant language barriers did not participate in the trial or a family member phoned on their behalf. In addition, only two patients who were randomised to usual physiotherapy care, who DNA their physiotherapy appointments, were interviewed. This made it difficult to make any conclusions about the reasons why some patients randomised to the PhysioDirect service did not ring for their telephone assessment. The reasons may have had nothing to do with the PhysioDirect service, as often patients fail to attend traditional face-to-face physiotherapy appointments.

7.9 Implications for future research

There are a number of different ways in which the findings of this study could be developed in the future. Firstly, the qualitative study uncovered the fact that patients traded the less acceptable features for the more acceptable features of the service. For example, patients were positive about the improved access to

physiotherapy advice even though personal face-to-face contact with the physiotherapist was reduced through a telephone assessment. Future studies could explore which of these patient preferences and priorities is the most important for physiotherapy care. Similar studies have been conducted in primary care, exploring which aspects of care were most valued by patients, for example access to or continuity of care (Rubin *et al.*, 2006, Gerard *et al.*, 2008). A greater understanding of what patients want out of physiotherapy care may help to improve both patient satisfaction and outcomes. These types of investigations may lead to a greater understanding of certain types of physiotherapy patients who will perhaps benefit from different types of physiotherapy treatment services. Understanding such issues will enable services to be designed for the population that they are serving, which in turn may help to improve the patient experience of physiotherapy.

The nested qualitative study produced a large amount of data which could be subjected to further secondary qualitative analysis. Future studies could include a general exploration of how patients perceive physiotherapy; a GP and commissioner study relating to the introduction of musculoskeletal services that focus upon prevention, including how to make such services attractive to commissioners; and how GPs and commissioners evaluate and use research evidence to make decisions about care could also be explored. In addition, the patients', physiotherapists' and managers' data also included specific data regarding the trial that was not included in the analysis, but it could be used to inform issues relating to future qualitative studies linked to randomised trials. Examples could include the complexity of postal consent to participate in RCTs, as

many participants seemed to be unaware that they were participating in a trial despite the detailed information sent to them indicating this.

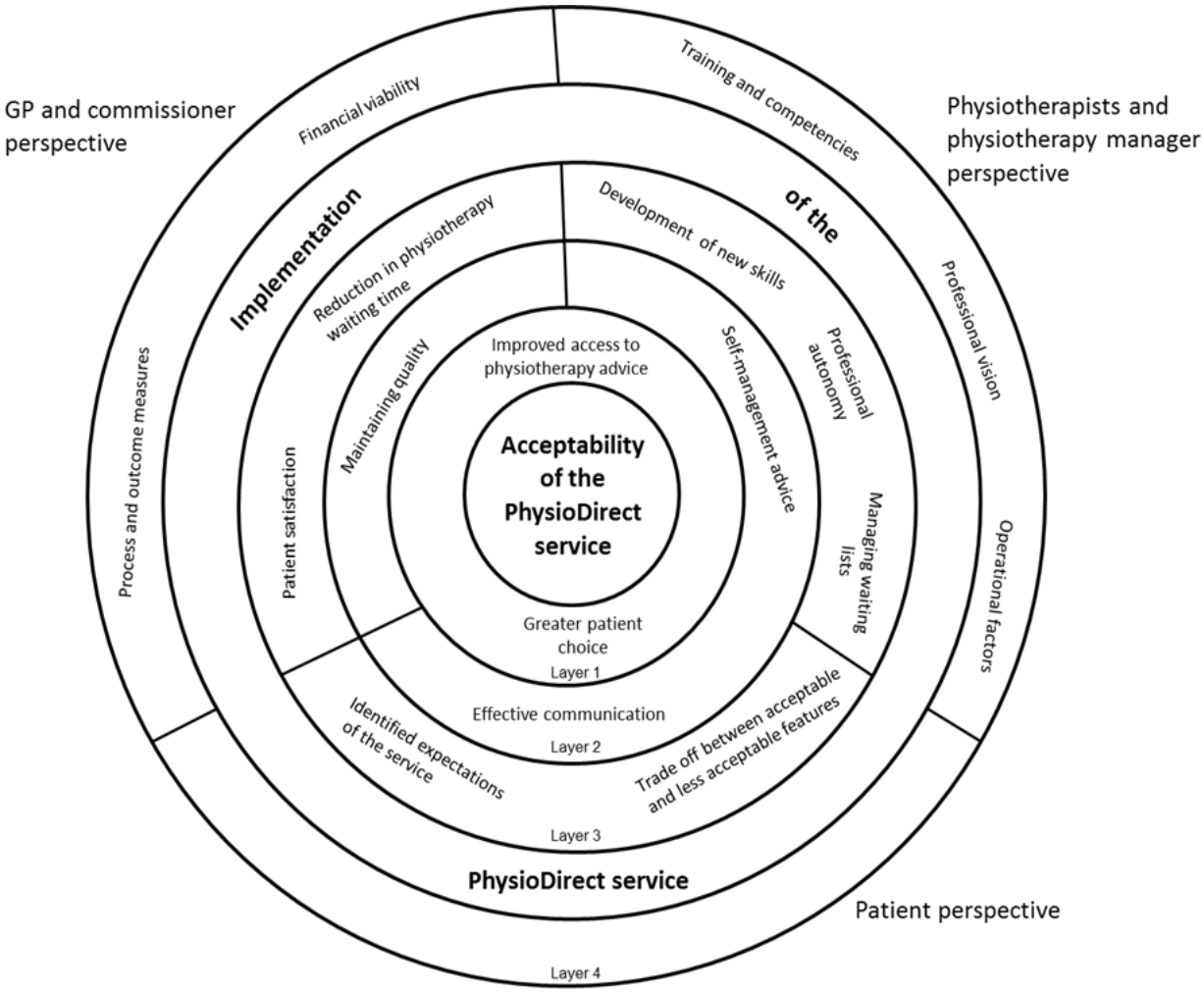
Chapter 8: Conclusion

In order to investigate whether a PhysioDirect service is acceptable and implementable within the context of the National Health Service (NHS), this qualitative study explored the views and experiences of patients, physiotherapists, physiotherapy managers, GPs and commissioners. The findings show that the PhysioDirect service was broadly acceptable to these key stakeholders as it provided faster access to physiotherapists for advice about musculoskeletal problems. Whilst not perceiving PhysioDirect as a panacea in the assessment and treatment of musculoskeletal pain patients these key stakeholders clearly viewed it as a means of offering patients greater choice. There were some operational difficulties in terms of ease of implementation of the PhysioDirect service due to, for example, adequate physiotherapist staffing of the service and administrative support.

Figure 7, page 322 illustrates the relationship between the key stakeholders' perspectives of the PhysioDirect service, specifically highlighting under which circumstances the PhysioDirect service was acceptable and implementable. The first layer of the concentric circles shows the aspects of the PhysioDirect service that were acceptable to all stakeholders, faster access to physiotherapy advice and improved choice of the method to access treatment. The second concentric layer shows the acceptable features of the PhysioDirect service as perceived by patients, physiotherapists and physiotherapy managers, juxtaposed with the differing perspectives of GPs and commissioners. Patients and physiotherapists perceived the following key features of the PhysioDirect service as acceptable; the clear and effective communication between patients and physiotherapists within

the telephone consultations and the provision of early self-management advice to patients via the telephone.

Figure 7: The acceptability and implementation of the PhysioDirect service from the perspectives of all key stakeholders



GPs and service commissioners on the other hand were less concerned about the issue of communication and patient self-management. For them, acceptability of PhysioDirect service centred upon its ability to maintain what they perceived to be a key quality indicator of the physiotherapy service, short waiting times between

referral and physiotherapy care. The third concentric layer illustrates key aspects of acceptability expressed from each separate group of stakeholders. From the patients' perspective it was particularly important that their expectations of the PhysioDirect service were met (for example, if they had strong expectations to be seen face to face by a physiotherapist and this did not happen, they were more likely, subsequently, to judge the service as unacceptable). Another key finding of this study is the way in which patients made clear trade-offs between the most and least acceptable features of the service. This is the first study to recognise that patients 'trade off' the least acceptable features of a physiotherapy service with its more acceptable attributes. Much of the previous literature has focused on access to general practice, and these findings therefore add to the growing body of literature centred on access to healthcare. Overall the qualitative findings show that those patients who found PhysioDirect acceptable would choose to use the service again for future musculoskeletal health problems. From the perspectives of physiotherapists and their managers, the PhysioDirect service was viewed as an acceptable way to help manage physiotherapy service waiting lists. One of the more significant findings to emerge from this research is that in order for PhysioDirect to be acceptable to physiotherapists, they had to both adapt existing skills and adopt new ones in order to effectively deliver the service. This finding confirms those from previous studies that healthcare professionals need to develop new skills for the successful delivery of telehealth services and that professional identify and autonomy are particularly important to physiotherapists in their judgement about the acceptability of the PhysioDirect service. In particular, the physiotherapists found PhysioDirect acceptable if they perceived it as an additional way for them to assess and treat patients, and did not negatively impact upon their professional identity, thus enabling them to feel that their professional

autonomy was retained. Therefore, issues seen as unacceptable to physiotherapists in their professional capacity also constituted a challenge to implementing the PhysioDirect service. This thesis adds to the literature on professional barriers to the implementation and delivery of telehealth services, notably by furthering an understanding of how physiotherapists deliver a telehealth service. GPs and commissioners perceived the PhysioDirect service as acceptable if it reduced patient waiting times, maintained a quality physiotherapy service and was acceptable to patients.

The final concentric circle, in figure 7 (page 322), draws attention to the pivotal factors explaining the implementation of the PhysioDirect service within the NHS. The patient stakeholders did not specifically highlight any issues about the implementation of the new service. From the physiotherapists' and their managers' perspective, important aspects of implementation centred upon the training of physiotherapists and their competence in the delivery of PhysioDirect service. Senior physiotherapists and their managers visualised how the PhysioDirect service could fit within, and complement, their existing service. In contrast, GPs and commissioners focused upon the information they needed to make decisions about whether to commission the PhysioDirect service in future. They wanted to know specific information regarding the service data, patient outcomes and financial viability of the PhysioDirect service. Therefore, in order for future PhysioDirect services to be acceptable to NHS commissioners, is it clear that physiotherapy managers will need to provide this type of information.

In conclusion this in-depth, qualitative study has shown that the PhysioDirect service is broadly acceptable to the key stakeholders (patients, physiotherapists,

physiotherapy managers, GPs and commissioners). The findings suggest that PhysioDirect was viewed as an acceptable and implementable way of providing faster access to physiotherapy for adults with musculoskeletal pain problems, but that it should not replace more traditional face-to-face physiotherapy care. It is best placed for the future as one method of accessing physiotherapy services, in addition to, rather than as a replacement for, the more traditional methods of access. In addition, the PhysioDirect randomised controlled trial concluded that the PhysioDirect service was safe, resulted in equivalent clinical outcomes (patients' physical function) and is cost-effective in comparison to usual physiotherapy care (Salisbury, 2013a, Salisbury 2013b) which supports the key conclusions of this qualitative study. It appears that the main barrier to the implementation of PhysioDirect is physiotherapists' and physiotherapy managers' willingness to provide it and openness to develop new skills. They clearly have the opportunity to engage with, help shape and take ownership of future PhysioDirect services. The results of this thesis will help to inform future clinical teams and service commissioners about how to optimise the acceptability and implementation of future PhysioDirect services for musculoskeletal patients.

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Appendices

Appendix A: PhysioDirect trial patient information leaflet

Appendix B: Patient PhysioDirect trial consent form

Appendix C: Patient sample matrix for each PCT

	Usual Care		**PD Call**		**PD Call + Face-to-Face**		**PD but did not ring**		
Age	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**Complaint**
<64 (young/working age)	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	Cervical 1-2 Thoracic 1-2 Lumbar 1-2 Upper limb 1-2 Lower limb 1-2
>65 (old/non working age)	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	Multiple 1-2 Other 1-2
Second Criteria									
Socio-economic Group English not as main language									

PD: PhysioDirect

Appendix D: Patient invite letter

Appendix E: Response rates to invites to the qualitative study

Table 1: Information about invites sent to trial participants

	Cheshire	Stoke	Bristol	Somerset	Total
RDR	19	34	35	14	**102**
Telecare only	16	23	33	24	**96**
Telecare + face to Face	19	22	23	24	**88**
Usual Care	25	23	41	13	**102**
	79	**102**	**132**	**75**	**388**

Table 2: Information about who agreed to take part in the interview and final number interviewed

	Invited	Agreed	Interviewed
Randomised and did not ring	102	13	10
Telecare only	96	35	25
Telecare + face to Face	88	19	13
Usual Care	102	15	9
Total	**388**	**82**	**57**

Table 3: Information about who agreed to take part in the PhysioDirect qualitative study across each PCT

	Cheshire			Stoke			Bristol			Somerset		
	Invited	Agreed	Interviewed	Invited	Agreed	Interviewed	Invited	Agreed	Interviewed	Invited	Agreed	Interviewed
Randomised and did not ring	19	4	2	34	3	2	35	3	3	14	3	3
Telecare only	16	6	5	23	6	4	33	13	8	24	10	8
Telecare + face to Face	19	4	4	22	6	3	23	6	4	24	3	2
Usual Care	25	3	2	23	5	3	41	4	2	13	3	2
Total	**79**	**17**	**13**	**102**	**20**	**12**	**132**	**26**	**17**	**75**	**19**	**15**

Appendix F: Topic Guide PD Call only: Version 1

Aim and Objectives:
The overall aim of this study is to explore the acceptability of a new way of delivering physiotherapy services. Experiences of and views about how patients' experience physiotherapy are of particular interest and will explore. Musculoskeletal complaint, Physiotherapy referral, Decisions-making to consult,
Attitudes, beliefs and expectations of physiotherapy

Background information:
For the context of the interview it would be helpful to know some brief information about you. Can you give me some background information about yourself? For example, what you do for a living? What do you enjoy doing in your spare time?

Problem:
Can you tell me about the problem you were referred to physiotherapy for? For example, how long have you had the problem? How has it affected you in your day-to-day life?

Process to physiotherapy:
Can you tell me how you were referred to physiotherapy?

Physiotherapy expectations:
I would like to know if you have ever had physiotherapy before? Can you tell me if your experience of it?

Physiotherapy attitudes, beliefs:
I would like to know what you think about physiotherapy? How you think physiotherapy would help your problem?

Point of contact:
Can you tell me how you contacted the service?
For example, opening times, ease of access

Overall experience:
I would like to know what your experience of talking to someone over the telephone was?
For example, consultation, Physiotherapist, Information and Advice, Call length

Outcomes:
I would like to know if the physiotherapy you received has helped your problem?

View of the service:
I would like to know what you thought of the service and what you liked and disliked about it? Is there anything you would change about the service you received? Would you use it again? What impact has the service had the service had on your problem if any?

Future suggestions:
I would also like to get your views on accessing other services via the telephone. Do you telephone bank? Have you ever used NHS Direct or the GP OOH services?

Closing:
Thanking re information given, reflection on what was said, and other questions?
Consent:
Reiterate confidentiality and thank

Appendix G: Topic Guide PD + face to face contact: Version 1

Aim and Objectives:
The overall aim of this study is to explore the acceptability of a new way of delivering physiotherapy services. Experiences of and views about how patients' experience physiotherapy are of particular interest and will explore. Musculoskeletal complaint, Physiotherapy referral, Decisions-making to consult, Attitudes, beliefs and expectations of physiotherapy

Background information:
For the context of the interview it would be helpful to know some brief information about you. Can you give me some background information about yourself? *Prompts*: Employment, Spare time activities?

Problem:
Can you tell me about the problem you were referred to physiotherapy for? How has it affected you in your day-to-day life? *Prompts:* Length of time the problem

Process to physiotherapy:
Can you tell me how you were referred to physiotherapy? What involvement did the GP have? Did the GP give you a diagnosis?

Physiotherapy expectations attitudes and beliefs:
I would like to know what you think about physiotherapy? How you think physiotherapy would help your problem? I would like to know if you have ever had physiotherapy before? Can you tell me if your experience of it?

Point of contact of PD:
Can you tell me how you contacted the service? How many times did you contact the service? *Prompts:* Opening time, Ease of access

Telephone call experience:
I would like to know what your experience of talking to someone over the telephone was? How were you invited to be seen face –to-face? *Prompts:* Consultation, Physiotherapist, Information and Advice, Call length

Face-to-Face Consultation:
Can you tell me about the consultation? How long did you wait for an appointment? What did the physiotherapist do? Can you tell me about the treatment you received? Can you tell me about the exercises and advice you were given? How many physiotherapy sessions did you have? *Prompts:* Consultation, Information and exercises advice, Treatment, Physiotherapist,

Outcomes:
I would like to know if the physiotherapy you received has helped your problem?

View of the service:
I would like to know what you thought of the service and what you liked and disliked about it? Is there anything you would change about the service you received? Would you use it again? What impact has the service had the service had on your problem if any?

Future suggestions:
I would also like to get your views on accessing other services via the telephone. *Prompts:* Do you telephone bank? Have you ever used NHS Direct or the GP OOH services?

Closing:
Thanking re information given, reflection on what was said, and other questions?

Consent:
Reiterate confidentiality and thank

Appendix H: Randomised to PhysioDirect but did not ring: Version 1

Aim and Objectives:
The overall aim of this study is to explore the acceptability of a new way of delivering physiotherapy services. Experiences of and views about how patients experience physiotherapy are of particular interest and the interviews will explore the nature of the musculoskeletal complaint, physiotherapy referral, decision-making to consult, attitudes, beliefs and expectations of physiotherapy and PhysioDirect, reasons for not contacting the service, outcome of the problem and future suggestions.

Background information:
For the context of the interview it would be helpful to know some brief information about you. Can you give me some background information about yourself? *Prompts:* For example, what you do for a living? What do you enjoy doing in your spare time?

Problem:
Can you tell me about the problem you were referred to physiotherapy for?
Prompts: How long have you had the problem? How has it affected you in your day-to-day life?

Process to physiotherapy:
Can you tell me how you were referred to physiotherapy?
Prompts: What involvement did the GP have? Did the GP give you a diagnosis?

Physiotherapy expectations:
I would like to know if you have ever had physiotherapy before? Can you tell me a little about your experience of it?

Physiotherapy attitudes, beliefs:
I would like to know what you think about physiotherapy? Do you think physiotherapy might help your problem? In what ways?

Awareness of PhysioDirect:
Can you tell me about the information sent from the trial team? *Prompts:* Did you know you needed to ring? Were the instructions clear from the trial team? Did you understand what you had to do?

Expectations of the service:
What did you think when you agreed to take part in the trial? Were you hoping to get put into one particular group?

Reasons for not contacting:
Our records suggest that you didn't ring in to the PhysioDirect service. Is that correct? Can you tell me why you didn't contact the service? Did you intend to use the service? If yes why did not you call? *Prompts:* Did you try contacting the service? Did something else intervene? Did you have any problems getting through? Were the times of the clinics suitable for you? Did you have access to a telephone? Did you feel that a telephone call was appropriate? Was your problem already better?

Outcomes: I would like to ask about your problem now and to see what's happened? Did the problem get better by itself? How have you managed your problem? Did you seek other care, for example, other NHS care or private healthcare? Have you been back to your Doctor?

Future suggestions:
I would also like to get your views on accessing other services via the telephone. Do you telephone bank? Have you ever used NHS Direct or the GP OOH services?

Closing:
Thanking re information given, reflection on what was said, and other questions?

Consent:
Reiterate confidentiality and thank

Appendix I: Topic Guide Usual Care: Version 1

Aim and Objectives:
The overall aim of this study is to explore the acceptability of a new way of delivering physiotherapy services. Experiences of and views about how patients' experience physiotherapy are of particular interest and will explore. Musculoskeletal complaint, Physiotherapy referral, Decisions-making to consult, Attitudes, beliefs and expectations of physiotherapy

Background information:
For the context of the interview it would be helpful to know some brief information about you. Can you give me some background information about yourself? *Prompts:* Employment, Spare time activities?

Problem:
Can you tell me about the problem you were referred to physiotherapy for? How has it affected you in your day-to-day life? *Prompts:* Length of time the problem

Process to physiotherapy:
Can you tell me how you were referred to physiotherapy? What involvement did the GP have? Did the GP give you a diagnosis?

Physiotherapy expectations attitudes and beliefs:
I would like to know what you think about physiotherapy? How you think physiotherapy would help your problem? I would like to know if you have ever had physiotherapy before? Can you tell me your experience of it?

Face-to-Face Consultation and treatment experience:
Can you tell me about the consultation? How long did you wait for an appointment? What did the physiotherapist do? Can you tell me about the treatment you received? How many physiotherapy sessions did you have? What was your overall view of the physiotherapy that you received?
Prompts: Consultation, Information and exercises advice, Treatment, Physiotherapist,

Outcomes:
I would like to know if the physiotherapy you received has helped your problem?

View of the service:
I would like to know what you thought of the overall service and what you liked and disliked about it? Is there anything you would change about any aspects of the service you received? Would you use it again? What impact has the service had on your problem?

Future suggestions:
As part of this research trial, you might have been allocated to the group receiving their physiotherapy care via telephone services. Could you tell me what you think about the idea of having your problem assessed over the telephone by a physiotherapist and receiving advice about it over the telephone? What are your opinions of telemedicine services in general?

Closing:
Thanking re information given, reflection on what was said, and other questions?
Consent:
Reiterate confidentiality and thank

Appendix J: Physiotherapist Topic Guide: Version 1

Consent
Previous experience of research
Information Leaflet

Opening - Background information
Can you tell me bit about your role in the department and how long you have been here?

Current practice and examples
Can you tell me a little about how you currently work with musculoskeletal patients?
Place of work, type of patients seen, how long with each patient,
What things work well currently? Are there things that you would like to change?
Can you give an example of the work do you find particularly enjoyable and less enjoyable?

Focus – PhysioDirect

Involvement:
How did you first learn about PD as a way of providing services to patients? What were your initial views when you first heard about it? How did you become involved in PD?

Knowledge of PD:
Have you had any previous experience of PhysioDirect or any telephone based assessments? Examples of If no previous experience then ask what they understand the process will be for PD?

Practical Issues and examples:
How do you feel PD will work for?
a) you, b) other physios, c) patients, d) service, e) managers, f) PCT
Elicit advantages and disadvantages for each
Can you think of examples where PhysioDirect might work well/ not work so well?

Benefits and concerns
What do you see as the main differences from your existing practice?
If only answer generally e.g. less face to face contact with patients, more time spent in office, then try to drill down by asking, for example, what they envisage using the telephone call system will be like?
Do you have any (other) concerns?

Barriers and facilitators to implementing PD:
What do you think will help/inhibit PD to get off the ground?
What do you think/feel the outcomes of the trial might be?

Closing
Thanking re information given
Reflection on what was said
Any other questions?
Future to this information
Follow up interviews

Closing:
Thanking re information given, reflection on what was said, and other questions?
Consent: Reiterate confidentiality and thank

Appendix K: Physiotherapy follow up interviews Topic Guide: Version 3.1

Physiotherapist 09

Consent and information leaflet
Background information on second interviews

Opening:
Confirm background information with physiotherapist, i.e. where they predominantly work, how many hours they do, ask if anything has changed? How have you generally felt the PD service in the trial has gone? Can you describe to me how PhysioDirect worked, for example, what happened when a patient phoned?

Focus – PhysioDirect

The experience of providing the PhysioDirect service
Clinical assessment:
In general, what are your views about how easy or difficult it is to assess a patient's problem and provide them with advice, in the PD service? What about the length of time it takes to do this on the telephone? Were there any calls that took longer? How did you decide to refer patients to have face-to-face contact? Did you have many second calls to PD and what was it like managing them? What was it like managing the face-to-face referrals generated from PD? What did you think of the treatment you were providing over the telephone? Were there many patients you saw face-to-face misdiagnosed over the telephone? What do you think about the model of care PD provided compared to that of usual care, for example, having one telephone contact compared to having potentially multiple contacts?

Physiotherapist clinical concerns
You mentioned because you only have you voice in assessing patients when you practised quite hard. How do you feel now? You mentioned your concern that you have an ear problem and you were getting a specialised headset. Did it cause any problems at all? You also mentioned that it might be difficult to concentrate if there was someone else in the room? Did you find that at all? You mentioned that when you practised you had a difficult call with someone who had an accent. Did you have any other examples of calls like that? You said that PD would be providing a more general service rather than a specific in regards to treatment. Do you still think that? You mentioned your concern about getting all the information from the patient via PD and you making sure your clinical judgement was not comprised. How do you feel now after using it? Were you able to get all the information? You mentioned that one of the potential benefits of PD might help with the admin of patients and that you would not be doing so much administration. Did you find that?

Other comments
You mentioned that the experience might make you more marketable as an employee. Do you still think that?

Positive/negative experiences:
Were there any particularly good experiences of the PD service that you remember? Why?
Were there any particularly bad experiences of the PD service that you remember? What were the difficult calls? Why?
What from your experience are the key benefits of the PD service?

Physiotherapists' views of PD:

What do you like/dislike about it? Has your practice or ways of working changed after being involved in this trial in PD or UC? On balance, which type of physiotherapy would you prefer to provide; the usual approach or the PhysioDirect service or a mixture? Why?

Views on how patients found the PD service:
Were patients awareness of the research? How do you feel the patients responded to the service? Do you think the patients understood what the PD service was for? Do you think the patients knew that they were involved in research? Did any of them they ask you for further information?

Patients' views:
Do you feel that, in general, patients found it easy or difficult to receive care in the PD service? Do you think they generally liked it or disliked it? Why?

Types of patients:
You previously said that the PD service might be good for patients with;
Patients with simple problems, patients who are reasonably intelligent, academic and articulate, patients who are happy to get on with it, patients who have a busy lifestyle
Given your experience, what would you say now?:

You previously said that the PD service might not be so good for patients with:
Patients with complex problems, patients with chronic pain, patients with social issues, patients with complex pathologies
Given your experience, what would you say now?

Obstacles and enabling factors to providing PhysioDirect

Impact:
What do you feel was the impact of providing the PD service as a whole?
What were the things you think went well?
What were the things you think did not go well?
Challenges:
What were the main challenges of offering the service in your particular area?
Did the introduction of the service require much change? Why?
What do you think are the barriers to offering this type of PD service more widely?
Improvement:
In an ideal world, how do you see a PhysioDirect service working? Is there anything else that you would like to say about the PD service and how it might be improved? Would you like to continue offering this service or something similar? Why? Are there any incentives for you to provide a PD service?

Physiotherapist operational concerns:
You mentioned that some physiotherapists like doing their own assessment and might still repeat the subjective in clinic, doubling up on the work. Did you fins that happened in practice? You mentioned that PD had the potential to target resources better. Do you still think that? You mentioned your concern about PD patient slots and how that would work. How did it work? You also mentioned your concern about staffing the telephone with annual leave and sickness. Did you experience nay problems?

Closing:
Thanking re information given, Reflection on what was said, other questions?
Consent:
Reiterate confidentiality and thank

Appendix L: Topic guides for Physiotherapist managers: Version 1

Consent and information leaflet
Background information on interview

Opening:
Confirm background information with physiotherapist manager, identify what their role is?

Physiotherapy service structure
What can you tell me about the population that your PCT serves?
Can you describe briefly the structure of the musculoskeletal physiotherapy service in your PCT?
Prompt: How many physiotherapy outpatient clinics are there across the PCT? How do musculoskeletal patients access your physiotherapy services?

PhysioDirect trial
Can I ask you why you, as a physiotherapy manager, wanted to get involved in this trial of PhysioDirect services at this time? Have you been involved in any other PhysioDirect or similar service in your PCT? How have you generally felt the PhysioDirect trial has gone? Were there any specific trial related problems that you were concerned about?

Operational factors of the new PhysioDirect service

Implementation
How easy or difficult was it to set up the PhysioDirect service? How easy or difficult was it to implement the PhysioDirect service? Did you have to change your service? Can you describe any changes that you had to make? What were the operational difficulties to delivering this PhysioDirect service from a manager's perspective? What went well? What did not go so well?

Impact:
Did the PhysioDirect service have an impact on the physiotherapy service as a whole?
Prompts: waiting lists, job roles, how physiotherapy services operate
What do you think your physiotherapy service has learnt from implementing the PhysioDirect service?

Personal Views:
What did you like and dislike about providing the PhysioDirect service?
What do you think might be the advantages and disadvantages of providing this type of service?

Improvement:
In an ideal world, how do you see a PhysioDirect service working in your PCT?
Is there anything else that you would like to say about the PhysioDirect service and how it might be improved?
Would you like to continue offering this service or something similar? Why?
Are there any incentives as a physiotherapy manager to provide a PhysioDirect service in the future?

What do you think are the barriers to offering this type of PhysioDirect service more widely?

Closing:
Thanking re information given, Reflection on what was said, other questions?
Consent:
Reiterate confidentiality and thank

Appendix M: GP Topic guide: Version 1

Consent and information leaflet
Background information on interview

Opening:
Confirm background information with the GP, identify what their role is?
Do you have any special interests at all?
Prompts: Full/part time worker

Physiotherapy and its services:
How is the current musculoskeletal physiotherapy service set up in your area?
What are your views and opinions, of the current physiotherapy service, in your area?
Can I ask what your opinions are regarding physiotherapy treatment for musculoskeletal conditions? How do you manage a patient with a musculoskeletal problem? How do your patients access other musculoskeletal services? *Prompts:* normal referral, proportion of patients referred to physiotherapy, access to physiotherapy, location of physiotherapy, waiting times, interface services, pain services, secondary care etc.

Telehealth
How do you feel about the use of telephone based assessment and treatment for your patients, do you use this type of service with patients yourself? Why?
What are your views about the growing move for increased use of telemedicine and e-health?

PhysioDirect service
How familiar are you with the recent PhysioDirect service tested within the funded randomised trial? How have you generally felt the new PD service has been received?
In your opinion, are there patients that PhysioDirect might work well for and patients for whom it might not work so well for? To your knowledge, were there any barriers for patients accessing the PhysioDirect service in your area? If yes what were they? Did you get any feedback about the PhysioDirect service from patients who used it? If yes, can you explain in more detail? *Prompt:* Challenges as a GP

Future physiotherapy services

What kind of physiotherapy service would you like to see provided for your patients?
In an ideal world how would you like your patients to access physiotherapy in the future and what, if any, role would PhysioDirect play?

GP roles in commissioning service
How do you feel about the new role GPs will have in commissioning services?
What type of information is important to you, as a GP, in making decisions about whether to offer a particular service? How do you feel about the role of evidence from research, like randomised trials, in making decisions about commissioning? Do you think evidence matters in commissioning physiotherapy services? (If yes what kind of evidence is needed?) Would you currently commission a PhysioDirect type service? *Prompts:* If, when, how and why you might use research evidence? Why research evidence is or is not important? Self-referral physiotherapy service?

Closing:
Thanking re information given, reflection on what was said, and other questions?
Consent:
Reiterate confidentiality and thank

Appendix N: Topic guide Commissioners: Version 1

Consent and information leaflet
Background information on interview

Opening:
Confirm background information with the commissioner, identify what their role is?

The commissioning process:
What can you tell me about the population that your PCT serves? Can you describe briefly your role in the commissioning process? How does the commissioning of musculoskeletal services fit with other roles/services? Can you describe how musculoskeletal commissioning works at the present time? What are the issues that you have to think about when commissioning new services? What are the key influences and obstacles in the implementation and adoption of new services? As a musculoskeletal commissioner what is your vision for musculoskeletal services in your PCT? *Prompts:* Current government changes, new GP commissioning consortia plans, relationships with providers, budgets

Physiotherapy services:
How familiar are you with the physiotherapy service in your PCT and what it has to offer musculoskeletal patients? What are your views and opinions of the current physiotherapy services in your PCT?

Evidence for the implementation of new services:
What type of evidence is important to you as a commissioner in making decisions about new services? ***Prompts:*** Why it is or is not important? How do you feel about the role of evidence from research in making decisions about commissioning new services? ***Prompts:*** If, when, how and why you might use research evidence Do you think evidence matters in implementation of physiotherapy services? (If yes what kind of evidence is needed when implementing new Physiotherapy services?) What evidence do you feel would be needed to support running a PhysioDirect service in your PCT?

PhysioDirect service:
Can I ask if you had any involvement in the set up or running of the PhysioDirect service in your local PCT?
If yes: How did you get involved in this trial of PhysioDirect services?
How familiar are you with the details of the PhysioDirect service being tested? Were there any specific trial related issues that caused you any difficulties?
If no: What are your personal opinions about PhysioDirect services? As a musculoskeletal commissioner do you see PhysioDirect services fitting with the current physiotherapy service? (If yes, how do you see it working? If not, why)

Are there any incentives as a musculoskeletal commissioner to provide a PhysioDirect service in the future What do you think might be the advantages and disadvantages of providing a PhysioDirect service? Is there anything else that you would like to say about MSK commissioning and PhysioDirect or Physiotherapy services?

Closing:
Thanking re information given, reflection on what was said, and other questions?
Consent:
Reiterate confidentiality and thank

Appendix O: Ethics approval letter

Appendix P: PhysioDirect qualitative patient consent form

Appendix Q: PhysioDirect qualitative professional consent form

Appendix R: PhysioDirect qualitative patient information leaflet

Appendix S: Transcripts used to develop the patient index

	Area 1	Area 2	Area 3	Area 4
Telecare only	11517	20353	34102	41335
Randomised and didn't ring	10556	20469	30246	40873
Telecare + face-to-face	11276	21548	31575	40056
Usual care	12038	21697	31562	41513

Appendix T: Patient index

1. Contextual information

1.1 History of present condition

1.2 Past medical history

1.3 Decision to consult GP

1.4 Current management of problem

1.5 Personal health beliefs/health knowledge

1.6 Occupation of participant

1.7 Social information

1.8 Social activities

1.9 Stressful events

1.10 Other

2. Trial issues

2.1 Information from the trial team

2.2 Awareness of the PhysioDirect trial

2.3 Other

3. GP related issues

3.1 GP Consultation

3.2 GP Diagnosis

3.3 GP's role in the management of problem

3.4 Views about GPs

3.5 Other

4. Views about Physiotherapy

4.1 Awareness and understanding of physiotherapy

4.2 Previous experience of physiotherapy

4.3 Other

5. Telephone service

5.1 Expectation and views of the PhysioDirect service

5.2 Expectations of 2nd telephone phone call

5.3 Accessing the PhysioDirect service

5.4 Logistics of the PhysioDirect telephone call

5.5 PhysioDirect telephone assessment

5.6 Views on explaining problem to the physiotherapist

5.7 PhysioDirect diagnosis

5.8 Physiotherapist recommendation

5.9 Non –verbal communication

5.10 Personal issues effecting communication (language, hearing)

5.11 Views of PhysioDirect treatment received

5.12 Views about the PhysioDirect physiotherapist

5.13 Overall views about PhysioDirect telephone service

5.14 Outcome of PhysioDirect telephone service on problem

5.15 Future role and use of PhysioDirect

5.16 Difference between PD and other telemedicine services

5.17 Comparing PhysioDirect telephone care to face-to-face contact

5.18 Reasons for not contacting PhysioDirect

5.19 Reasons for not re-contacting the PhysioDirect service

5.20 Other

6. Face-to-face care

6.1 Expectation of physiotherapy face-to-face care

6.2 Access to physiotherapy face-to-face service

6.3 Waiting times for face-to-face care

6.4 Face-to-face physiotherapy assessment/examination

6.5 Face-to-face diagnosis

6.6 Views of face-to-face physiotherapy treatment

6.7 Overall views about face-to-face service

6.8 Outcome of face-to-face contact on problem

6.9 Views about the physiotherapists providing face-to-face treatment

6.10 Future of physiotherapy care

6.11 Other

7. Personal health and patient knowledge

7.1 Self management

7.2 Continuity of care

7.3 Outcome of their problem overall

7.4 Health knowledge

7.5 Other

8. Other Health services

8.1 Views on NHS health services

8.2 Other health care professional contact

8.3 Other

9. Other telephone and internet use

9.1 Experience of other health telephone service

9.2 Experience of non- health telephone services

9.3 Views of HCP telemedicine

9.4 Telephone use

9.5 Computer /internet use

9.6 Other

10. Other

10.1 Wider sociological impact – recession

10.2 Other

Appendix U: Descriptive analysis: Patient expectations of PhysioDirect

5.1 Expectations of PhysioDirect

Peter (30142)

- Initially sceptical
- Expected treatment to relieve his knee pain

Robert (30196)

- Didn't know what to expect

Walter (10023)

- Wanted to be seen
- Concerned about the length of time to be seen

James (10104)

- No expectation of the service

William (10168)

- Expected to be seen

Mark (10227)

- Wanted to be seen in the physiotherapy department
- Wanted to have prescribed exercises

Jenny (10253)

- Was not sure what would happen
- Wanted to have someone to show her the exercises

Bronya (11517)

- Thought PD would fit into her lifestyle
- Expected not to be seen

Faith (30282)

- No expectation

Giro (31402)

- Initially thought PD was second best

Key findings

Unsure what to expect (30196, 10253)
No expectation (10104, 30285)
Expected to be seen (30142, 10023, 10168, 10223)
Expected not to be seen (11517)
PD initially perceived as second best (31402)

Appendix V: PhysioDirect trial finding paper (BMJ)

Appendix W: List of publication from the PhysioDirect qualitative study

Publications

Salisbury, C., Foster, N., Hopper, C., Bishop, A., Hollinghurst, S., Coast, J., Kaur, S., Pearson, J., Franchini, A., Bishop, A., Hall, J., Grove, S., Calnan, M., Busby, J. and Montgomery, A. (2013). A pragmatic randomised controlled trial of the effectiveness and cost-effectiveness of 'PhysioDirect' telephone assessment and advice services for physiotherapy. *Health Technology Assessment.* vol. 17 (2), 1-157.

Published Abstracts

Pearson, J., Richardson, J., Calnan, M., Salisbury, C. and Foster, N. (2013). Acceptability to Patients of PhysioDirect Telephone Advice and Treatment Services: A Qualitative Investigation. *Physiotherapy Research International: The Journal for Researchers and Clinicians in Physical Therapy.* vol. 18 (1), 63.

Conference presentations

Pearson, J., Richardson, J., Calnan, M., Salisbury, C. and Foster, N. Acceptability and implementation of PhysioDirect telephone advice and treatment services: A multi-perspective qualitative investigation. The Kings Fund Telehealth and Telemedicine Conference, London (March, 2012)

Pearson, J., Richardson, J., Calnan, M., Salisbury, C. and Foster, N. Acceptability to patients of PhysioDirect telephone advice and treatment services: a qualitative investigation. Physiotherapy Research Society (PRS), Keele (April 2011)

Pearson, J., Richardson, J., Calnan, M., Salisbury, C. and Foster, N. Acceptability to patients of PhysioDirect telephone advice and treatment services: a qualitative investigation. Society of Primary Care (SAPC), Bristol (May, 2011)

Conference Posters

Pearson, J., Richardson, J., Calnan, M., Salisbury, C. and Foster, N. Acceptability and implementation of PhysioDirect telephone advice and treatment services: A multi-perspective qualitative investigation. Chartered Society of Physiotherapy (CSP) Congress, Liverpool (October, 2011)