THE VIEWS AND EXPERIENCES OF PHYSIOTHERAPISTS ON PHYSIOTHERAPY SERVICE PROVISION FOR PEOPLE WITH NEUROLOGICAL CONDITIONS IN PRIMARY CARE: A QUALITATIVE STUDY

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A thesis submitted in partial fulfillment of the requirements for the degree of Masters of Science in Neurology & Gerontology

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Supervisor: Dr. Helen French
DECLARATION

I declare that this thesis, which I submit to RCSI for examination in consideration of the award of a Master of Science Neurology & Gerontology is my own personal effort. Where any of the content presented is the result of input or data from a related collaborative research programme this is duly acknowledged in the text such that it is possible to ascertain how much of the work is my own. I have not already obtained a degree in RCSI or elsewhere on the basis of this work. Furthermore, I took reasonable care to ensure that the work is original, and, to the best of my knowledge, does not breach copyright law, and has not been taken from other sources except where such work has been cited and acknowledged within the text.

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SUMMARY

Introduction
Physiotherapy is associated with positive health outcomes and is highly valued among community dwelling neurological patients. However, research highlights a deficiency in the quality of physiotherapy services for neurological patients in the community setting in Ireland. Given the significant burden of neurological conditions and the potential of a quality physiotherapy service to alleviate some of this burden, this study explored physiotherapy service provision for neurological patients in primary care with a view to providing a platform of knowledge from which physiotherapy service provision can be optimised.

Aim and objectives
Aim: To explore physiotherapists’ views and experiences of physiotherapy service provision for people with neurological conditions in primary care in Ireland.
Objectives: To identify quality standards, existing services and barriers and facilitators to providing a quality service.

Methods
A qualitative strategy employing semi-structured interviews was chosen as this study’s design. Ten primary care physiotherapists were interviewed across four primary care sites. A thematic data analysis was conducted to enable key themes to emerge from the data.

Results
Neurological patients were identified as having distinct needs from the general primary care patient population and physiotherapists reported challenges meeting these needs due to a lack of organisational support. This impacted on patient outcomes and on the physiotherapists in terms of occupational stress. Physiotherapy team work and support from line management were highlighted as support structures which facilitated quality service provision.
Conclusion
Physiotherapists identified a mismatch between the quality ideal and the practice reality of physiotherapy service provision for people with neurological conditions in primary care in Ireland.

Implications
Physiotherapists require increased organisational support. There is a need for specialist neurological services to work alongside primary care and primary care physiotherapists require specialised neurological training. Finally, physiotherapy team work and line management support needs to be facilitated as part of physiotherapy services.
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LIST OF ABBREVIATIONS

ABN: Association of British Neurologists
AHP: Allied Health Professional
COREQ: Consolidated Criteria for Reporting Qualitative Research
CPD: Continual Professional Development
CSP: Chartered Society of Physiotherapists
DOH: Department of Health
GP: General Practitioner
HSE: Health Service Executive
IDT: Inter-Disciplinary Training
ISCP: Irish Society of Chartered Physiotherapists
MA: Master of Art
MDT: Multi-Disciplinary Team
MND: Motor Neurone Disease
MS: Multiple Sclerosis
MSc: Master of Science
MSK: Musculoskeletal
NAI: Neurological Alliance of Ireland
Neuro: Neurology
NICE: National Institute for Health Care Excellence
OT: Occupational Therapist
PA: Personal Assistant
PC: Primary Care
PCCC: Primary Community and Continuing Care
PHN: Public Health Nurse
RCSI: Royal College of Surgeons in Ireland

UK: United Kingdom

WHO: World Health Organisation
INTRODUCTION

Neurological conditions are a significant burden for the individual, their families and society and are a global public health concern (World Health Organisation (WHO), 2006). It is estimated that 17% of the total population of Ireland have a neurological condition and the prevalence of age-related neurological disease is expected to rise at a higher rate than other European countries due to our rapidly ageing population (Neurological Alliance of Ireland (NAI), 2010). This presents a substantial challenge for Irish health services. Existing research highlights the complexities and challenges associated with the provision of health care services for neurological patients (WHO, 2006) and research examining service provision in Ireland highlights substantial deficiencies in these services, particularly in the community setting (Department of Health (DOH), 2011).

Physiotherapy is a health care profession that works with neurological patients in the community to maximise their potential to move, function and participate in society (Chartered Society of Physiotherapists (CSP), 2010). Physiotherapy interventions have demonstrated positive health outcomes for neurological patients in the acute and chronic phase of their condition (Taub et al. 1993; Merholz et al. 2010; Khan et al. 2011). Thus, physiotherapy is highly valued among community dwelling neurological patients in Ireland (National Physical and Sensory Disability Database Committee, 2010). However, Irish literature in this field reports that physiotherapy services in the community are disjointed and under resourced (Horgan et al. 2008; Scott and Keating, 2011). Recent national policy has recognised the need for specialised neurological services for community dwelling neurological patients (DOH, 2011), however until these services are fully implemented physiotherapy services for community dwelling neurological patients remain in primary care (PC) without access to specialised services or resources.

There is a gap in the literature examining physiotherapy service provision for neurological patients in PC in Ireland. However the limited research available indicates that Allied Health Professionals (AHPs) experience substantial challenges to delivering a quality service for stroke patients in PC (Scott and Keating, 2011). Given the
significant burden of neurological conditions for community dwelling neurological patients and the potential of a quality physiotherapy PC service to alleviate some of this burden, there is a need to ensure that physiotherapy PC services are delivered at an optimal level. This is of particular significance in the Irish context given our ageing population. Consequently, this study will explore physiotherapy service provision for neurological patients in PC with a view to providing a platform of knowledge to assist the development and provision of a high quality physiotherapy service.

This study is pertinent in the current context of health professional research in Ireland as it addresses many of the themes identified by the report entitled ‘The identification of Research Priorities for Therapy Professions in Ireland’ (DOH, 2010). This study focuses on and recognises the value of the physiotherapists’ broad perspective on the quality of their service (Mc Glynn, 1997), enabling the barriers and facilitators of quality service provision to be fully explored (Brown et al. 1992). However, there is also an acknowledgement of the limitation of not incorporating all stakeholders’ views in this study.

This study will present a critical review of the literature in this field in chapter one, followed by a presentation of the methodology used in chapter two and chapter three will present the results of the study. Finally, chapter four will discuss the results of the study in the context of relevant literature, highlight the implications of the results and make recommendations based upon these implications whilst acknowledging the limitations of this study.
CHAPTER 1:
LITERATURE REVIEW

This chapter presents a critical review of the literature relevant to physiotherapists’ views and experiences of physiotherapy service provision for neurological patients in PC. Several electronic databases were searched to inform this literature review using selected key terms to maximise the yield of relevant articles. Two critical appraisal tools were used in this literature review, the consolidated criteria for reporting qualitative research (COREQ) (Tong et al. 2007) and the PEDro scale (www.pedro.org.au).

This literature review begins by examining the health care needs of neurological patients and quality standards for service provision. Section 1.2 will review the current health service structure for neurological patients in the community in Ireland. Section 1.3 will review the national literature regarding current physiotherapy and allied health service provision for neurological patients in PC and the perspectives of physiotherapists on physiotherapy service provision for neurological patients will be examined in section 1.4.

1.1 Neurological Conditions

Neurological conditions are defined as conditions that affect the brain, spinal cord and peripheral nerves and include conditions such as Stroke, Multiple Sclerosis, Parkinson’s disease and Acquired brain injury (NAI, 2010). According to Bodenheimer (2008) and the WHO (2006) these conditions are inherently complex due to the involvement of a diverse range of impairments, thus the consequences for these patients can permeate all aspects of their life and impose significant limitations on their participation in everyday activities (DOH, 2011), thereby reducing their independence and quality of life (Anderson et al. 2002). Moreover, neurological conditions often result in life long impairments and may be progressive in nature (WHO, 2006).

Consequently, neurological conditions are a significant burden for the individual and society and present a substantial public health challenge (WHO, 2006). Neurological
patients have particular health service requirements which need to be addressed by health services including access to continuity of care, integrated health service delivery, effective multi-disciplinary team (MDT) work, accessibility, equity, effectiveness (WHO, 2006), patient-centred care and the provision of clear and current health information (Association of British Neurologists (ABN), 2007). Moreover, research demonstrates that access to an effective MDT (Suddick and De Souza, 2006); health promotion (World Confederation for Physical Therapy 2007; Best et al. 2010); continuity of care (Demain et al. 2006) and specialist neurological services in the community (DOH, 2005) for neurological patients produce positive health outcomes.

Physiotherapy is an integral part of health service provision for people with neurological conditions (Council for Stroke, 2009; NAI, 2010). It has proven to produce positive health outcomes for this patient population group (Taub et al. 1993; Merholz et al. 2010; Khan et al. 2011). Consequently, physiotherapy is a highly valued and demanded service by neurological patients living in Ireland (National Physical and Sensory Disability Database Committee, 2010). In addition, physiotherapy has a significant role to play in promoting health for neurological patients (World Confederation for Physical Therapy, 2007; Donoghue et al. 2014) and in secondary prevention of stroke (Best et al. 2010). Ultimately, physiotherapy has an important role to play in addressing the health needs of neurological patients.

It is acknowledged that the task of providing a health service which meets these neurological patients’ health requirements is substantial (WHO, 2006, NAI, 2010). However, a failure to meet this challenge has significant public health and individual level consequences, particularly in an Irish context due to our rapidly ageing population (DOH, 2011). The next section will discuss the current structure of health services for neurological patients in the community in Ireland and the role this structure has in providing a quality service for patients.
1.2 The Irish Health Care Structure for Community Dwelling Neurological Patients

The publication of the National Policy and Strategy for Neurorehabilitation 2011-2015 (DOH, 2011) and the Health Service Executives (HSE) Transformation Programme (HSE, 2006) demonstrated a commitment to meet the requirements of neurological patients by addressing the health care service structure and care pathways for neurological patients living in the community in Ireland. Health care service structure has an integral role to play in optimising neurological patient outcomes as demonstrated by the effectiveness of the stroke unit (Govan et al. 2008; Hickey et al. 2012) and the early supported discharge model (Langhorne et al. 2005). The publications of these policies (HSE, 2006; DOH, 2011) outlined the need for specialist neurological services for people with complex neurological conditions to work alongside PC services in the community. This service structure is strongly supported in the literature (Mc Coll et al. 2009; NAI, 2010; Gridley et al. 2011; Intercollegiate Stroke Working Party, 2012).

However, research suggests that implementation of these specialised neurological services in the community is limited (Horgan et al. 2008; DOH, 2011; Scott and Keating, 2011). This indicates that many community-dwelling neurological patients are being managed in PC without access to specialist services. It is therefore of particular interest to review the ability of Irish PC services to meet the health requirements of neurological patients.

It is evident that the PC model in Ireland was never intended nor designed to manage complex conditions, as the PC strategy sees “primary care as the first point of contact with the health and personal social services. This means dealing with health problems at the lowest level of complexity” (DOH, 2001, p.3). PC is largely endorsed as an effective setting to address the basic care needs of neurological patients (WHO, 2006). However, given the established complexity of health service provision for neurological patients, a reliance on PC services to manage neurological patients in the community in Ireland implies that many neurological patients are not having their health needs adequately addressed. This is substantiated by evidence which states that health services for neurological patients in the community in Ireland are inadequate, under resourced.
and disjointed (Horgan et al. 2008; Whitford et al. 2009; NAI, 2010; DOH, 2011). The review of this literature indicates that existing health care service structures for neurological patients in the community in Ireland are over reliant on PC services and are not providing a high quality service to these patients.

1.3 Current Physiotherapy and Allied Health Service Provision for Neurological Patients in PC in Ireland

This section will provide a critical review of the limited national literature examining physiotherapy and allied health service provision for neurological patients in PC in Ireland. The national audit of stroke care in Ireland (Horgan et al. 2008) reported community services for people with a stroke are inequitable, inadequate and that physiotherapy service provision is not in line with best practice. The National Institute for Health Care Excellence (NICE), (2013) guidelines recommend annual follow up of all stroke patients in the community. However, Horgan et al. (2008) reported that the average duration of physiotherapy input for people with a stroke in the community was between six and twelve weeks and long-term reviews were infrequent or absent. Poor communication between acute and community settings, lack of an electronic patient database, scarcity of specialist services, limited resources and busy workloads were identified by Allied Health Professionals (AHPs) in this study as limitations of the service and barriers to effective management of people with stroke in the community.

Following on from the national audit of stroke care (Horgan et al. 2008); Scott and Keating (2011) conducted a national survey of AHPs’ stroke services in PC in Ireland. The study achieved a 57% response rate to a national postal survey with 31 valid responses received from AHP’s. Findings highlighted disparities between existing service provision for neurological patients in Ireland and the recommended national (Council for Stroke, 2010) and international guidelines (NICE, 2013). Consistent with the literature base (WHO, 2006; Bodenheimer, 2008), the respondents identified stroke as a complex condition. However, despite the complexity of stroke, the therapists reported short treatment times for stroke patients. Some physiotherapists reported spending less than twenty minutes with stroke patients per session and they
acknowledged the need for longer sessions in line with the national guidelines (Council for Stroke, 2010), which recommends 45 minutes of physiotherapy daily with stroke patients.

The participants also reported inadequate facilities and infrastructure for stroke patients and poor administrative support. The WHO (2006) states that inadequate resourcing of services has substantial potential to negatively impact on the quality of service provision for neurological conditions. Scott and Keating (2011) also documented inadequate functioning of PC teams. Only 59% of the respondents reported that their PC team met monthly. AHPs in this study reported that support for training and continual professional development (CPD) was required. Specialist training for physiotherapists working with neurological patients in PC is strongly advocated (WHO, 2006). Along with the professional responsibility on physiotherapists for training and CPD (Cooney and Blake 2000), there is also an onus on organisational support to facilitate specialist training (Davidson and Waters, 2000; French, 2006). In addition, the AHPs highlighted the need for the development of specialist posts; improved infrastructure, resources, access and the need for an increased focus on health promotion in PC. This survey, the first national study of neurological services in PC in Ireland, had an adequate sample size of 31 AHPs from 51 PC teams with wide geographical representation throughout Ireland.

Overall the current literature reveals that community and PC based physiotherapy and allied health services in Ireland for neurological patients are limited and there are many barriers to quality service provision for this patient population and the health service providers. The next section will explore the international research examining the perspectives of physiotherapists on physiotherapy service provision for neurological patients in a variety of community and acute settings.

1.4 Physiotherapy Perspectives on Service Provision

This section aims to critically evaluate research which explores physiotherapists’ perspectives of service provision for neurological patients. Beeston and Simmons
(1996) explored physiotherapists’ perspectives of neurological care using in-depth interviews with ten physiotherapists working in the field of neurological rehabilitation in the United Kingdom (UK). These physiotherapists demonstrated a strong commitment to patient-centred care and highlighted the importance of building strong relationships with the patient and their families. They emphasised that a high level of clinical knowledge was required to deal with the complexity of these patients and that neurological physiotherapy training needs to address the complexity of these conditions and not merely focus on physical rehabilitation. In addition, they expressed difficulties with goal setting with this population group. This was a rigorous study design and in congruence with literature in this field (Scott and Keating, 2011). The credibility and dependability of the findings were enhanced through the provision of comprehensive details of the researcher and the participants, thus enabling the reader to be aware of any potential bias. Responder validation was sought and a pilot interview was conducted demonstrating a commitment to the refinement of the study’s data collection process. However a notable limitation of this study was the absence of a second researcher to analyse the data.

Sackley and Lincoln (1996) conducted a standardised questionnaire with 91 senior physiotherapists in the UK, working with stroke patients and conducted nine in-depth interviews with physiotherapists working with stroke patients in both the acute and community settings. The findings from the interviews revealed significant occupational issues among these therapists such as a demanding caseload and time constraints. As a result, they reported conflict within themselves as they felt they had to discharge stroke patients earlier than they would professionally choose. They also reported dissatisfaction with managerial audit tools used to assess the quality of their service which recorded information on waiting lists and length of stay and did not capture information regarding the patient’s progress or functional measures. This study clearly presents the occupational issues these physiotherapists experience between meeting managerial targets, patient-centred needs and their own professional demands. This study provided detailed information regarding the recruitment process and the participants. However, details of the data collection process, for example, if data saturation was reached, and insights into the data analysis process were not well
documented. Although this is a moderate quality paper, its findings are triangulated with other similar literature enhancing its credibility and dependability.

Davidson and Waters (2000) conducted a national, UK survey, involving 973 physiotherapists who worked with stroke patients. The study found that only eight percent had post-graduate training in this area and that the respondents highlighted the recurring theme of a need for specialist neurological training. In this instance, the identified need for training may be based on the finding that 46% of the physiotherapists surveyed believed that the competency levels of the physiotherapist were a determining factor in the stroke patient’s outcome. However, they stated that the cost of courses in this area was a barrier to training. These findings highlight the need for physiotherapists to be supported by organisational structures to engage in CPD in neurology. This study provides valuable information, however the response rate was generally low at 58% and the sampling method used limited the generalisability of the study’s findings.

A mixed-method study by Bourne et al. (2007) explored the perceived needs of physiotherapists in PC and community settings in the UK and once more found that physiotherapists reported challenges with access to specialist training. Four focus groups involving 21 physiotherapists were used to develop themes for the questionnaire employed in the study which obtained a response rate of 67%. The study found that only 11% of those surveyed had post-graduate training. Of note they reported that 35% of their time was dedicated to working with neurological patients, however only eight percent reported that neurology was their primary speciality, indicating a lack of specialisation in the field of neurology among these physiotherapists to adequately meet the complex demands of these patients.

Similar to the study by Sackley and Lincoln (1996) this study revealed occupational stress and the primary factors contributing to this stress included anxiety due to lengthy waiting lists and the extent of their patient caseload. In conjunction with the study by Scott and Keating (2011), this study identified a lack of sufficient resources such as physiotherapy staff, administration support, inadequate facilities and challenges engaging in CPD due to time constraints. This study scored high on the COREQ 32-
item checklist. The use of triangulation, pilot testing, random selection and a second researcher for data analysis of qualitative results increase the trustworthiness of these findings. However, the findings in this study are not easily generalisable as the survey was conducted in a small area of the UK and there are widespread variances in resources and service provision in the community throughout the UK (Sackley and Lincoln, 1996).

There is a limitation in applying international literature in an Irish context due to the wide variations in health service structure and provision. However, from the limited studies available on physiotherapists’ perspectives of physiotherapy service provision for neurological patients, it is evident that current service provision falls short of delivering on the needs of neurological patients. In addition barriers such as inadequate resources and a lack of support for training, makes the job of meeting the needs of neurological patients challenging and stressful. The evidence base clearly highlights the importance of physiotherapists’ perspectives on health care service provision, quality standards and their perceived challenges in their contribution to a platform of knowledge from which service augmentation can occur. This study aims to address the gap in the evidence by conducting a qualitative study of physiotherapists’ perspectives of physiotherapy service provision for neurological patients in PC in Ireland.
CHAPTER 2: METHODOLOGY

2.1 Aim

This study aims to explore physiotherapists’ views and experiences of physiotherapy service provision for people with neurological conditions in PC in Ireland.

2.2 Objectives

1) To explore physiotherapists’ views on what constitutes a quality physiotherapy service for people with neurological conditions in PC.
2) To explore physiotherapists’ experiences of their management of people with neurological conditions in PC.
3) To explore physiotherapists’ experiences of the barriers and facilitators to providing a quality physiotherapy service provision for neurological patients in PC.

2.3 Research Design

The COREQ appraisal tool (Tong et al. 2007) was followed when designing the methodology for this study. A qualitative strategy employing semi-structured interviews was chosen ensuring that an in-depth understanding and insight into the views and experiences of the participants was achieved. Its application for evaluating health services from the perspective of those involved in the service is valued for its strength in exploring and understanding human’s attitudes, experiences and behaviour (Ohman, 2005). Hence, the qualitative paradigm is ideally equipped to deal with the aim and objectives of this study.

Data were gathered though semi-structured interviews which were employed as a method of exploring subjective experiences and views (Guba and Lincoln, 1989) and
elucidating thoughts and feelings about the service from the physiotherapists’ perspective (Patton, 1980). Simultaneous data collection and data analysis were conducted throughout the study enabling constant refinement of pre-set themes.

2.4 Participants

Sample size calculation in qualitative research depends on the aims, depth and scope of the study (Morse, 1991; Marshall, 1996; Patton, 2002). The number of subjects interviewed in this study was guided by these elements and previous similar qualitative research in this field (Pullon et al. 2011). Ten physiotherapists who were working in PC were recruited and this sample size was considered sufficient to achieve the aims and objectives of the study. In addition no new information emerged from the data during the tenth interview, at which point data saturation was reached (Carpenter and Suto, 2008).

2.5 Inclusion and Exclusion Criteria

The inclusion criteria were physiotherapists currently working in PC in Ireland with at least one years’ experience working in PC and who treat people with neurological conditions. Subsequently, the exclusion criteria were physiotherapists who work outside of PC in Ireland, who do not treat neurological patients and have less than one years’ experience of working in a PC setting.

2.6 Recruitment

Recruitment took place via purposive sampling which involves the intentional selection of specific participants (Luborsky and Rubenstein, 1995). Purposive sampling enabled access to participants who would fit the inclusion criteria and a geographical spread of participants from various locations in Ireland. Snowball sampling, a common form of sampling in qualitative research, was employed, whereby the researcher identified one
physiotherapist who fit the inclusion criteria and they provided contact details for other physiotherapists who also agreed to participate (Marshall, 1996). In total ten participants were recruited via snowballing with no refusals received.

2.7 Procedure

The interview schedule (Appendix no. 1) was devised according to the aims and objectives of the study and was informed by the literature in the area (Mc Coll et al. 2008 and Scott and Keating, 2011). The interview schedule was then used in a pilot interview.

2.8 Pilot Study

The pilot interview was conducted with one physiotherapist who fit the inclusion criteria. This physiotherapist was interviewed for the pilot interview only and did not participate in the main interviews. The pilot interview enabled an estimation of the duration of the interview, ensured the clarity and coherence of the questions asked and informed pre-set themes for the main study. This aided the refinement of the interview schedule in advance of the main study and improved the credibility and trustworthiness of this study’s findings. In addition, an analysis of the pilot study enabled the researcher to refine and focus the data analysis process.

2.9 Data Collection

The semi-structured interview schedule for the main study consisted of five pre-set themes which formed open-ended questions. Within each pre-set theme the researcher had a list of prompts to ensure that issues were explored fully. However, these prompts were ever evolving as emerging themes developed throughout the data collection process ensuring that new themes and approaches were being fully explored, while maintaining a focus on important previous themes. Data collection was conducted in a
quiet private space in the PC centre in which the participants worked. All interviews were subject to audio-recording with prior consent from the participants. Demographic details of the participants were recorded during the interview including the participants’ gender, age, location, years qualified, specialty, estimated caseload of neurological patients and postgraduate qualifications. The interviews were transcribed verbatim and, as agreed with the participants at the recruitment stage, respondent validation was sought (Barbour, 2001), whereby the participant was asked to verify if the data accurately portrayed what they were trying to say.

2.10 Data Analysis

A thematic analysis is defined as “a method for identifying, analysing and reporting patterns within data.” (Braun and Clarke, 2006, p. 79). Transcripts were systematically coded involving a line by line analysis of the research transcripts. Codes were then sorted into categories and redefined into further focused categories according to their fit (Strauss and Corbin, 1990). The categories are said to be saturated when no additional information can be found to develop them further. Category development involved two core criteria; categories were independent of each other and exhaustive (Braun and Clarke, 2006).

Themes emerged from these categories and all transcripts were then compared and contrasted to aid thematic exploration and the development of theories. Themes were reviewed and refined and a map of themes and sub themes was generated. In this way links were identified among the complex subjective views and experiences of the participants.

2.11 Research Instrument

As this is qualitative research, the researcher is the main research tool. The researcher is a Chartered Physiotherapist and is currently employed as a physiotherapist at Brain Injury Matters, Belfast. The researcher has previous experience of qualitative research.
through the completion of a MA in Health Promotion in 2001 and an MSc in Rehabilitation Science in 2006. Of particular relevance to this study is the researcher’s background employment for three years with the HSE as a PC physiotherapist in Ireland.

2.12 Ethical Considerations

An application for Ethical approval from the Royal College of Surgeons in Ireland’s (RCSI) Research Ethics Committee (Appendix no.2) was made and was granted on the 16th of October, 2013 (Appendix no.3) prior to initiation of the study. The purpose of the study was clearly explained to each participant in the form of a participant information sheet (Appendix no.4) and written informed consent (Appendix no.5) was obtained from all participants in advance of carrying out interviews. Participants were advised that all information obtained throughout the study was confidential and they were free to refuse to participate or to withdraw from the study at any time without any adverse effects. The contact details of the study supervisor, Dr. Helen French and the researcher, Mairéad Mc Daid, were also made available for participants should they have required further information.

Participants were also advised of the steps taken to ensure confidentially and anonymity. All data and tapes were stored in a locked filing cabinet in the researcher’s workplace, Brain Injury Matters, Belfast. Additionally, computer files were encrypted and password protected. The data will be retained for five years only. In addition, participants were informed that they have a right to review, edit, or erase any audio recording or transcript recording to which they have contributed. All participants were provided with the opportunity for respondent validation, whereby participants were asked if they would like to review their interview in advance of data analysis, however all participants declined.
2.13 Methodological Strengths and Limitations

The credibility of the findings in this study was strengthened by the independent thematic analysis of all of the transcripts by a second researcher, Dr. Olga Cleary. Disagreements were resolved in a conflict resolution meeting in which both the primary and secondary researcher discussed any conflicting data and decided upon a common code and category system for the information (Gibson and Martin, 2003). In addition, the primary researcher completed an initial line by line coding process of each transcript and several days later completed the process again on an uncoded copy of the transcripts enhancing the dependability of the analyses.

The use of a pilot study and simultaneous data collection and analysis demonstrated flexibility and refinement of the research process. The researcher engaged in self-reflection throughout the study and made entries into a personal diary after each interview enabling her to be aware of her own assumptions and biases due to her background as a physiotherapist. This enhanced the neutrality of the study’s findings by taking measures to address potential bias of preconceived perceptions of the participants’ reality. In addition, an audit trail, as proposed by Lincoln and Guba (1985) involving details of the entire research process, was maintained. Triangulation in this study is demonstrated by the fact that the findings are supported by quantitative studies in this area, thus confirming the findings by two independent methodologies (Moran-Eilis et al. 2006).

In qualitative research, generalisability of the study’s findings are not possible or required (Ohman, 2005), however within similar contexts the theory that is derived from the research should be transferable (Kvale, 1996). It is acknowledged that there is a wide variety of social contexts in which physiotherapists in PC work, including significant differences in infrastructure, resources, managerial support and training (Sackley and Lincoln, 1996). Therefore, there is no proposal that the findings of this study are transferable or applicable to all physiotherapists working in PC in Ireland. Nonetheless, this study is of good methodological quality and reveals in-depth, credible views and experiences of the participants working with neurological patients across four PC settings in Ireland.
CHAPTER 3:
RESULTS

3.1 Introduction

The following chapter presents the results of the analyses described in the data analysis section of chapter two. This includes demographic information about the study participants and a detailed account of the findings, whereby sub themes and overarching themes are presented in relation to the following research question: What are the views and experiences of physiotherapists in relation to physiotherapy service provision for people with neurological conditions in PC?

3.2 Demographic Information

Ten physiotherapists participated in the study, nine females and one male. The majority of the participants were located in Cork (n=7) while other locations include Dublin (n=1) and Tipperary (n=2). The mean age of the participants was 37 years. The mean years since qualification were 14 years. The mean estimated percentage caseload involving neurological patients was 27 %. One participant had completed a postgraduate course in neurology and three participants had completed post graduate courses in musculoskeletal (MSK) physiotherapy.
Table 1. Participant Demographics

<table>
<thead>
<tr>
<th>Gender</th>
<th>Location</th>
<th>Years Qualified</th>
<th>Speciality/Area of Interest</th>
<th>Est % of Caseload is Neuro</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>Dublin</td>
<td>&gt;10</td>
<td>Neurology, Gerontology</td>
<td>30%</td>
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<tr>
<td>F</td>
<td>Cork</td>
<td>&gt;20</td>
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<td>100%</td>
</tr>
<tr>
<td>F</td>
<td>Cork</td>
<td>&gt;20</td>
<td>MSK</td>
<td>35%</td>
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<td>&lt;10</td>
<td>MSK</td>
<td>15-20%</td>
</tr>
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<td>M</td>
<td>Tipperary</td>
<td>&gt;20</td>
<td>Community, Geriatrics Neurology</td>
<td>15%</td>
</tr>
<tr>
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<td>Cork</td>
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<td>MSK</td>
<td>5%</td>
</tr>
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<td>50%</td>
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<td>MSK</td>
<td>8%</td>
</tr>
<tr>
<td>F</td>
<td>Cork</td>
<td>&gt;10</td>
<td>PCCC</td>
<td>10%</td>
</tr>
<tr>
<td>F</td>
<td>Tipperary</td>
<td>&lt;10</td>
<td>Neurology, Vestibular, Rehab, MSK</td>
<td>2%</td>
</tr>
</tbody>
</table>

Abbreviations
M = Male, F = Female, MSK = Musculoskeletal, PCCC = Primary, Community and Continuing Care
Table 2. Over-Arching Themes and Sub Themes

The following table illustrates the themes and sub-themes of the study.

3.3 Theme A
The Neurological Patient Population

The results of this study reveal that the majority of participants (n=8) view neurological patients as distinct from the general patient population who attend physiotherapy in PC. The unique characteristics of neurological patients include the complexity of their condition, the impact of their condition on their life, the duration of their condition and associated multimorbidities. This sentiment was illustrated by the following statements:

P6: ‘I think they are battling a more of a long term uphill, em, life really’.
In addition, three participants expressed that neurological patients contrasted to other patients in that ‘they are a very determined client group’ (P10) and they are ‘more driven’ (P6) than most in their attitude and commitment to physiotherapy.

Contrary to the general consensus, two participants reported that neurological patients are similar to other patients such as chronic MSK patients and each individual presents differently.

**P6:** ‘There is such a spectrum as well, I mean, I see some MS (Multiple Sclerosis) patients at the moment who are, I pretty much would treat them like, say, my musculoskeletal patients’.

**P5:** ‘It depends I think the degree to which they have a disability arising from their neuro condition’.

Participants reported that neurological patients had specific service needs which reflect the unique characteristics of the neurological patient population. Three participants stated that this population group requires specific equipment and infrastructure while eight of the physiotherapists reported that they require additional time and continuity of care.

**P6:** ‘People with neuro definitely have more long term needs’.

The majority of participants revealed that long-term management of neurological patients often fosters a close relationship whereby the physiotherapist will ‘get to know them a lot more’ (P10) and become ‘nearly personally involved with them’ (P10).

As a result of this emotional investment they reported difficulties dealing with the impact of a neurological condition on a patient, especially if they can relate to them personally.

**P6:** ‘I probably do think about them a little bit more, especially if it’s a younger person or if I relate to them on any personal level. I think you are more inclined to, kind of, maybe think about them when you do go home’.

**P7:** ‘There is a lot more, kind of, emotionally with those patients and you can’t help but being affected by it I think’.

One participant identified the importance of empowerment of this patient population and reported that at times the relationship built between the physiotherapist and the
patient can make it difficult for the physiotherapist to discharge the patient from the service when the patient wants further input.

P4: ‘It’s soul destroying to be treating somebody that you know you’re not doing them any favours, you’re continuing and you’re not empowering them to get on with their life…You’re a crutch and you need for yourself so you’re not soul destroyed and I mean, they are taking, they are sapping the life out of you and it’s not fair to you and it’s not fair to them’.

In addition, conditions such as motor neurone disease and multiple sclerosis were reported as being particularly emotionally provocative.

P1: ‘The other one as I say that is quite emotive is the likes of Motor Neurone, so that can be difficult dealing with people you know and you’re involved with from the beginning’.

P4: ‘It can be a hard caseload and you would see so many young people getting a diagnosis like a young diagnosis of MS and stuff it is you would be kind of erra it’s just a pity’.

The data analysis revealed that the majority of participants expressed a professional interest in working with neurological patients.

P2: ‘It’s something I personally really enjoy and they are clientele that I really enjoy working with as well’.

However two participants stated that neurology is not an area that they are professionally interested in.

In summary of theme A, neurological patients are viewed as a unique but diverse patient sub-group with distinct service needs from the general patient population in PC. In addition, physiotherapy for neurological patients is an area of special interest for some of the participants and finally they expressed an emotional engagement with the neurological patient population.

3.4 Theme B
Models of Service Provision

Physiotherapists displayed a positive attitude towards PC as a model of service provision for people with neurological conditions. The specific characteristics of PC which participants highlight as beneficial included the locality of PC services, a de-
emphasis on acute care, the potential for health promotion, the ability for the patient to develop a rapport with the MDT and that patients have open access to a full MDT.

P1: ‘The big thing is that they don’t always need a referral to come back, like it’s an open system’.

P6: ‘It’s just amazing; it’s a one stop shop’.

In relation to the role of specialism in physiotherapy for people with neurological conditions, six interviewees believed that access to a specialist neurological physiotherapist was important and that having access to ‘the right person with the best expertise’ (P9) who is ‘specially dedicated’ (P2) to neurological patients was an essential element of an ideal service.

The overall consensus was that PC as a model of service delivery can manage basic level physiotherapy care for neurological patients but that complex care needs require specialist services. They also considered that specialist neurological community services should be an integral component of a pathway of care for neurological patients in the community.

P2: ‘Particularly when you are talking about more complex neurological conditions with more complex needs. I think that a tertiary specialist centre can then have considerations for kind of a more private, em, cubicle so that you know, you’re dealing with a client group where, to try and maximise their dignity and to have that option available to them where they would have increased treatment time as well, wider plinths, wheelchair access, a consideration for that’.

A minority of participants expressed uncertainty about the role of specialist neurological services. This was based on the fact that many neurological patients may also present with respiratory and MSK impairments which require physiotherapy management and resultanty PC based therapists who are up-skilled in a wide variety of areas were thought to be best suited to providing these services. This sentiment was illustrated by the following quotes:

P5: ‘A lot of people with a neurological condition have a musculoskeletal condition as well and a lot of musculoskeletal people could have some neurological things going on, so where do you go?’

P2: ‘Something that we need to bear in mind is that you’re dealing with someone who is likely, who may develop respiratory complications, so kind keeping up skilled even to a general level in all these areas is as important as being just one specialist focus’. 
In summary, interviewees were positive about the potential of PC as a model of service provision. For them, specialist services for complex neurological patients are required to work alongside PC in the community and specialist training in neurology is required for PC physiotherapists.

3.5 Theme C

Defining Quality Service Provision

The quality standards identified included: access, resources, flexibility, collaboration between services, high professional standards and training, MDT work, engagement in health promotion and the development of good relationships between patient and physiotherapist.

The majority of the participants identified access to physiotherapy as the main quality indicator. Access was described in terms of the speed of access, the continuity of access and physical accessibility to the service.

P4: ‘It would be accessible kind of as urgently as needed’.

P9: ‘Easily accessible for those types of patients from the point of view of physical access’.

Sufficient resources were also highlighted as a key quality standard. Resources in this context were identified as time, equipment, infrastructure and staffing.

P2: ‘You need to have, em, sufficient equipment that is going to be appropriate for their different stages of their condition’.

P9: ‘More staff so they wouldn’t have to wait so long. More staff so that they could be seen more often. More staff so that they could have longer, emm, I suppose, phases of treatment.’

In addition, flexibility in the service to enable patient-centred care was identified by seven of the participants. The capacity to ‘tailor your treatment’ (P9) so that a ‘needs specific physio service’ (P2) could be delivered was suggested as an important component of this quality service. Participants also noted:

P2: ‘I think allowing a longer time frame particularly for patients with mobility issues or say Parkinson’s patients, emm, consideration for their on and off periods’. 
Communication and collaboration with other services were also identified as components of a quality service. Furthermore, collaborative training was viewed by two participants as having a significant role to play in improving these links between PC teams and other services.

P3: ‘Open communication between all those involved. Ideally more links between the community and their sort of main services, be it their consultant, hospital based services’.

P3: ‘There was like a Motor neurone disease specific training day there back in [named month] you know, for those specifically in the community and it was great and as a result of that you put a face to a name as well and you feel you can ring, it’s easier then to ring people.’

P1: ‘It’s very good when you meet up with your fellow professionals. You see what’s available and develop links that way. That’s very important and should be, you know, promoted’

High professional standards and engagement in evaluations of service provision were defined by participants as essential elements of quality service provision.

P2: ‘Ensuring that the service that you are providing is in keeping with the evidence base that we are seeing at the moment so emm, systematic reviews in that area can be helpful to make sure that what we are providing in terms of the treatment is em that we are meeting that mark.’

A ‘multi-disciplinary approach’ (P6) to PC was also identified by the participants as an important feature of a quality service, one that has ‘linked pathways between the MDT clinics to feedback information’ (P2).

P7: ‘you know comprehensive, as in having a multi-disciplinary kind of aspect to it and not just purely physio….in other areas that I’ve worked in it’s definitely been a bonus’.

The vast majority of the participants emphasised engagement in health promotion and secondary prevention as a quality standard.

P2: ‘I think we have a huge role to play in terms of health promotion. I think that it’s becoming more to the forefront thankfully….to try and increase their activity levels to reduce their cardiac risk factors, to prevent secondary stroke’.

Finally, the importance of the relationship between the patient and the therapist was also cited by participants as a key indicator of a quality service.

P4: ‘You do want to establish a rapport with them and you do want to you know, kind of have a bit a relationship with them, not in a personal level but in respect of the service, the recognition of their need for service’.
Patient-centred care was a central theme throughout all quality standards identified. These insights into physiotherapists’ perspectives on an ideal standard of PC allow us to examine how their impression of the reality of their existing practice concurs with these quality ideals.

3.6 Theme D
Mismatch between the Quality Service Ideal and the Practice Reality

Many participants reported satisfaction with their general service in PC.

\[ P1: \text{‘I think in this area we are quite lucky that we have a good community service’} \]

However they acknowledged that there were many aspects of the service that required improvement for neurological patients. One participant reported significant dissatisfaction with the quality of their service.

\[ P3: \text{‘at the minute we provide a bit of an ad-hoc service to be honest, that is really what it’s at the minute and obviously that’s not great...here at the moment it’s kind of if you’re safe if you’re managing at home or you have a home exercise programme and you are managing with that then you’re kind of left you’re kind of left on your own... It’s understaffing at the minute you’re kind of fighting fire’.} \]

The majority of issues which were defined as quality standards of a physiotherapy service provision for neurological patients were simultaneously presented as requiring significant improvement in their existing services highlighting a significant mismatch between the ideal service and the practice reality. The existing service delivery issues include inadequate resources, inequity, ineffective collaboration between services and ineffective MDT work.

Inadequate resources were identified as having a significant impact on the quality of service provision. A lack of time was emphasised by all participants in relation to management of the neurological patient population in PC.
P2: ‘There are some imposed limitations, your treatment duration for example, when we are screening patients we have a half an hour which does put a limitation on it and it is harder to pick up on maybe some subtle things’.

P10: ‘They only have access to a certain amount of sessions because of the waiting lists, you kind of think that, you know, we could do better, or it would be nice to do better for them’.

Inappropriate staffing levels and difficulty accessing the relevant staff were also highlighted as a resource issue.

P1: ‘Sometimes to access the relevant professional in time can be a problem’.

P3: ‘Again you are kind of restrained as to how much you can sort of just, from a staffing point of view, how much input you can actually give, that’s the problem’.

A lack of administration support was highlighted by nine participants as a major issue in their PC service which consequently ‘cuts down on clinical time because so much of our time is devoted to administration’ (P7).

P8: ‘If you work seven hours a day and an hour and a half has been taken out on admin, you know, then that could be two patients that you’re not seeing, like you know, so no wonder the waiting lists are well up’.

A lack of appropriate infrastructure was also highlighted by the majority of therapists as illustrated by the following quotes:

P9: ‘We are on the fifth floor, there is a lift but they’ve to go through some gates with kind of key coding numbers and everything that by the time they get in they’re a little bit stressed by the whole access to the building’.

P3: ‘I know I have people coming in at the minute in wheelchairs and they do have trouble mastering the doors, so they nearly have to maybe wait for somebody to hold the door open for them so there is access but it’s not as easy as it should be’.

In addition, some participants reported a lack of equipment appropriate for the needs of the neurological patient population.

P3: ‘We still lack equipment that we would need for a lot of that patient group’.

P2: ‘our plinths in primary care are single plinths and that makes for really difficult transfers for certain patients’.

One participant highlighted issues of inequitable service provision depending on geographical location.
The majority of participants reported that there was poor communication and ineffective collaboration with other organisations and the PC team.

P2: ‘Communication between systems as well, outside of different areas can sometimes be really poor and quite difficult to kind of track down between acute and primary care in particular is an ongoing issue’.

In addition, poor MDT work within PC was reported by seven participants and this was mainly attributed to a lack of buy-in to the PC team model by the GPs.

P4: ‘The GPs couldn’t among themselves couldn’t come to one meeting so all the disciplines like myself and the OT and whatever so we were foolishly going to three different venues trying to keep them all happy’.

P6: ‘The GPs aren’t attending our primary care meetings. They haven’t been for the last six months... felt like it was a bit of a mockery of what we were trying to achieve when the GPs weren’t attending and we were all attending’.

P9: ‘We used to have monthly primary care meetings but then the GP’s, emm, have decided not to come for a while, because there’s some, some political issues there. Definitely they said not local issues, more political but I think that’s a nationwide thing’.

3.7 Associated Inhibiting and Facilitating Factors

The participants identified a lack of organisational support as the main inhibiting factor to quality service provision. They reported a lack of support for training and CPD in their existing services. One physiotherapist described the situation as follows:

P1: ‘I think there is an onus on the HSE to do more, possible more neuro training and more regional neuro training where they allow staff to go on training days’.

This was particularly relevant because of the participants’ concerns about maintaining high professional standards in all areas of PC. This was captured by the following quote:

P5: ‘I would just be just conscious of: did I see everything, did I catch everything that I needed to catch not being a specialist neuro physio, like, am I missing something, did I miss something, would I need to touch base with somebody about something’.
In addition, two participants reported a ‘political agenda’ at an organisational level, whereby resources and infrastructure were developed without appropriate consultation with service users and providers, ‘a model was very much imposed upon us’ (P1). This top-down approach resulted in inadequate allocation of limited resources which were ill-equipped to meet the needs of neurological patients.

P1: ‘at the moment there is talk of putting in a whole new primary care building that is much bigger than we need….the HSE are top heavy and they are trying to force primary care area here because it is politically right at the moment. We are not clabbering for a new physio department or anything like that…they seem to be happy to be talking about putting in a 12 million unit here that nobody really wants’.

Participants also reported feeling pressure to perform well on regular statistical evaluations of the service. Some participants felt that they were required to quantify throughput of patients rather than evaluate the quality of service provision resulting in a service where quality was undervalued.

P9: ‘It's understood by our line managers, but it's not understood by the one's above them which unfortunately are very focussed on our stats, which doesn't look at, it doesn't look at performance, it looks at performance in the sense of numbers but it doesn't look at the quality of service’.

P8: ‘You have to hand in your stats, you have to be meeting measures, they don't want the waiting lists to go up, you know, and if you're doing all your admin on top of it like, it just doesn't add up, no, we just don't have the time’.

In particular participants felt that pressure to reduce waiting lists impacted on the quality of the service in a variety of ways resulting in a reduction in continuity of care, difficulty in providing sufficient time for neurological patients and restricted time for CPD.

P1: ‘The waiting list we could get it to a reasonable level that was, emm, you know, acceptable then we could probably look at health promotion but it’s a long way off’.

All participants revealed that physiotherapy colleague support facilitated their attempts to provide a quality physiotherapy service in PC ‘great peer support…makes a big difference’ (P10). Participants described how knowledge exchange and the skill mix of the physiotherapy team in PC was used to address challenges around managing complex cases through informal arrangements whereby therapists with a specialisation or interest in a specific area of practice would assume responsibility for that caseload.

P10: ‘it's fantastic and it's great peer support and there's great learning involved and then I think with the neuro as well, some patients are doubles, so you need assistance, and even to get
ideas or, I suppose, problem solve or look at complex patients together, it makes a big
difference’.

P3: ‘we have nearly somebody based out in the community that does have a specialty area so
they act as sort of a resource, point of contact, any concerns you have you ring them, if you want
to do a joint visit that’s fine or a joint appointment that’s fine and we are quite open’.

Line managerial support was identified by half of the participants as a facilitator in
terms of supporting professional autonomy, maintaining service flexibility, supporting
training needs and sanctioning resources as needed. However, it was perceived by a
number of participants that upper levels of management ‘have no comprehension of
how complex it is’ (P10) and this hinders the delivery of a quality service provision for
patients with neurological conditions.

P2: ‘I think our management is quite supportive in terms of what our training needs are or if
there is particular CPD, like if there is an area interested or would like to develop she is
generally very good in terms of study leave’.

P10: ‘They both have a neuro background so we’re very lucky with that but I think other
managers I could understand that they wouldn’t, definitely above them, they have no
comprehension of how complex it is’.

3.8 The Impact of this Mismatch

The consequences of this mismatch are revealed by the participants in their reports of
the impacts on the neurological patient caseload and the physiotherapist. Some
participants acknowledged that neurological patients were receiving a basic level of
service, fragmented care and a lack of communication from the MDT.

P3: ‘At the minute we provide a bit of an ad-hoc service to be honest that is really what it’s at
the minute and obviously that’s not great’.

P5: ‘They really need to be reviewed and just the capacity for review is really not there in a lot
of primary care centres’.

The participants describe the frustration this mismatch creates in their attempts to
deliver a quality service in the face of limited resources and occupational pressure.
Seven interviewees detailed the ‘constant pressure to get patients through the door and
keep waiting lists down’ (P10) that they experience as a result of this and this stress is
reflected in many of the transcripts:
P3: ‘It’s kind of like if you are managing to deliver what is here at the minute you are doing well, so that’s kind of, yeah, kind of hard in that respect’.

P4: ‘Your waiting list is growing but I think it’s a pressure for you’.

P5: ‘You’re waiting then for them to have another incidence or another problem before you see them again. It’s not a review to tweek or a review to progress, it’s to solve another problem that has happened because the review couldn’t take place in a timely manner’.

P10: ‘there is a constant pressure to get patients through the door and keep the waiting lists down and even if the managers aren’t putting you under pressure you’re putting yourself under pressure because you’re always conscious of the waiting list and I think more so with the neuro caseload, you feel you can’t let them wait because they may deteriorate’.

Participants also revealed the organisational pressure they experience when it comes to discharging neurological patients in PC. They admitted that a neurological patient ‘often doesn’t feel that they are getting enough treatment’ (P1) and that ‘in an ideal world they would have more input more regularly’ (P9). This is partly attributed to a lack of continuity of care in the service due to pressure on the therapist to reduce waiting lists. Issues around discharge are also emotive for the therapist in PC as they view themselves as the last point of contact in these patients’ care.

P10: ‘We’re the end of the line, and when you discharge people it was actually a very hard thing to do for a lot of people who’d have months and months of rehab and then they came out to us and we were discharging them so they really felt they were being left off’.

3.9 Conclusion

There is a mismatch between the quality ideal and the practice reality for neurological patients in PC. The participants identified significant deficits in their current service; cited organisational barriers which inhibit the quality of these services and the impact for neurological patients and physiotherapists. In addition, the participants highlight the role of their physiotherapy colleagues and their line managers in facilitating a quality PC service.
The key findings of the results section are summarised in Table 3.
<table>
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<th>Table 3. Key Findings</th>
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<tr>
<td><strong>Neurological Patients</strong></td>
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<tr>
<td>Viewed as distinct from the general patient population</td>
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<tr>
<td>Seen to have specific service needs</td>
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<tr>
<td>Physiotherapists can become emotionally engaged in their progress</td>
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<tr>
<td><strong>Primary Care Model</strong></td>
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<tr>
<td>Valued as a model of service provision for neurological patient group due to:</td>
</tr>
<tr>
<td>- Locality of PC services</td>
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<tr>
<td>- De-emphasis on acute care</td>
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<tr>
<td>- Potential for health promotion</td>
</tr>
<tr>
<td>- Access to MDT</td>
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<tr>
<td>Complex care needs require specialist neurological services</td>
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<tr>
<td><strong>Defining Quality Service</strong></td>
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<tr>
<td>Quality service provision was defined according to patient centred care</td>
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<tr>
<td><em>Specific quality standards identified:</em></td>
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<tr>
<td>- Access</td>
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<tr>
<td>- Resources</td>
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<tr>
<td>- Flexibility</td>
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<tr>
<td>- Collaboration with acute services &amp; other organisations</td>
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<tr>
<td>- High professional standards and training</td>
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<td>- Effective multi-disciplinary work</td>
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<td>- Engagement in health promotion &amp; secondary prevention</td>
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<td>- Good relationships between patient and physiotherapist</td>
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<tr>
<td><strong>Mismatch between Quality Service Ideal and the Practice Reality</strong></td>
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<tr>
<td>Majority expressed satisfaction with existing physiotherapy service</td>
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<tr>
<td><em>Existing Issues:</em></td>
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<tr>
<td>Lack of resources</td>
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<td>Inadequate patient access</td>
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<td>Poor collaboration with acute services</td>
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<td>Ineffective multi-disciplinary team work</td>
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<td><em>Inhibiting Factors:</em></td>
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<td>Organisational issues</td>
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<tr>
<td>Lack of buy-in from GPs in PC</td>
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<td><em>Facilitating Factors:</em></td>
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<td>Physiotherapy team and line-manager support</td>
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<tr>
<td><em>Impact of Mismatch:</em></td>
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<tr>
<td>Poorer quality service for patients</td>
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<td>Occupational stress for physiotherapists</td>
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CHAPTER 4: DISCUSSION

4.1 Introduction

This chapter will analyse the results presented in chapter four in relation to the existing evidence base and the key implications of the findings. Consideration is also given to practice recommendations within the context of the limitations of the study.

4.2 The Neurological Patient Population

Participants in this study reported developing professional relationships with neurological patients over the duration of their care. As a result, they developed an in-depth knowledge of the characteristics of neurological conditions, how they present and their impact on the lives of patients and families and, therefore, are suitably placed to provide information in relation to what their particular physiotherapy service needs are from a professional perspective.

The majority of physiotherapists interviewed reported that neurological patients have service needs distinct from the general PC patient caseload. The main distinctions related to the complexity of these conditions and the associated multimorbidities which many neurological patients experience. These findings are supported by similar literature examining physiotherapy and health care service provision for neurological patients (Beeston and Simmons, 1996; Murray et al. 2003; Mc Coll et al. 2008; Bodenheimer, 2008; Scott and Keating, 2011). It is, therefore, unsurprising that participants in this study reported the need for flexible PC services to accommodate these specific needs and that they highlight patient-centred care as the core quality standard for physiotherapy service provision for neurological patients. Other quality standards identified by participants including access, adequate resources, equity, effective collaboration between services, effective PC team work, access to staff with specialised training, access to health promotion and the development of a rapport between patient and physiotherapist are triangulated with national and international
literature examining quality service provision for neurological patients (Beeston and Simmons, 1996; WHO, 2006; ABN, 2007; NAI, 2010; DOH, 2011).

Contrary to the general consensus two participants in this study reported that neurological patients are not distinct from other patients in PC. They identified other chronic patient groups as having similar needs to chronic neurological patients and highlighted that some neurological patients may present with few impairments especially at the early stages of their condition. Both of these participants had considerable experience (>20 yrs) and similarities drawn between complex chronic patients are accurately described. Notably one of these participants reported not enjoying working in the area of neurology and had a post-graduate qualification in MSK. This may result in a lack of consideration of some of the ‘distinct’ needs identified by other participants.

The specific needs of neurological patients which were identified in this study are valuable, as research which determines the needs of people with specific conditions can create a platform of knowledge to enable services to meet these needs and develop models of service provision accordingly. This is particularly pertinent in patient population groups which are experiencing unmet needs such as neurological patients in Ireland (Horgan et al. 2008; Whitford et al. 2009).

4.3 Existing Service Issues

The participants reported feeling satisfied with the general service which they are providing in PC. However, they identified substantial challenges and service issues for providing a quality service for neurological patients in PC. This is an interesting finding which may indicate that physiotherapy PC services are more equipped to provide a quality service to specific patient population groups. It may be postulated that physiotherapists are experiencing fewer challenges managing less-complex and resource-intensive patients. This is consisted with research which highlights that PC services are designed to manage basic health care needs (DOH, 2001; WHO, 2006).
However, this finding may also indicate that in the context of limited resources and imposed limitations, participants are satisfied with the service they are providing or perhaps the participants are reluctant to negatively portray their own overall service provision. This insight into the participants’ high satisfaction ratings with a self-reported low quality service highlights the need for physiotherapy evaluations, to ask probing questions regarding service quality, the barriers and the facilitators to service provision, in order to obtain a comprehensive picture of the service. It is noteworthy that one participant reported definite dissatisfaction with the service provided. This participant was also the only interviewee with a post graduate qualification in neurology and consequently may have been more acutely aware of the disparity between best practice and the service provided or might have felt more confident to express this view.

Remarkably, the participants only reported limitations of physiotherapy services which were outside of their locus of control (Rotter, 1954). This may be linked to previous findings in this study whereby the effectiveness of the service or patient outcomes were not identified as quality standards of a physiotherapy service and quality was defined in terms of the service’s structure and process. This further strengthens the argument for gaining all stakeholders perspectives on a health care service because the physiotherapists interviewed did not perceive their own ability to produce quality patient outcomes as an issue and did not acknowledge the need for quality measures of patient outcomes as part of a quality physiotherapy service. This is in paradox with some participants feeling challenged to remain competent at a high level in all areas of PC and their identified need for further training in the area of neurology. However, this paradox may be explained by the participants’ confidence in their physiotherapy team to overcome any challenges they face in the management of the neurological patient caseload.

One of the main limitations of the physiotherapy service identified in this study was the lack of patient-centred care for the neurological patient caseload. This was described in terms of a lack of access, inadequate resources specific to the needs of neurological patients and inflexibility in terms of treatment times and follow up appointments. It was recognised by the participants and supported by the literature that the management of people with disabilities such as neurological conditions in PC is time-consuming (Mc
Coll et al. 2008) and that time constraints form a significant barrier to the provision of a quality services. This concurs with national literature examining neurological services in the community (Horgan et al. 2008; Scott and Keating, 2011). Participants also emphasised that limitations in the physical access to their PC physiotherapy departments due to poor infrastructural planning imposes further time restrictions as patients struggle to access the department. Notably, the participants highlighted the need for consultation with health service providers and users prior to developing infrastructure and resources for PC services. Reports of inadequate access to buildings, parking and equipment, despite significant capital investment in these PC sites, signifies a lack of patient-centred planning in the PC model in Ireland.

Inadequate physiotherapy staff and administration support was also identified as resource limitations by the participants. The lack of administration support staff in PC is covered extensively in the national (Scott and Keating, 2011) and UK literature (Bourne et al. 2007). Consistent with a report from the ISCP (2005) the participants described how insufficient staffing levels restrict quality service provision for neurological patients and reduces their engagement in health promotion activities.

The need for a MDT approach is significant in order to produce quality outcomes for neurological patients (Suddick and De Souza, 2006; Council for Stroke, 2009). Furthermore, the physiotherapists identified the potential for MDT work as one of the main assets of PC service provision. However, the majority of participants expressed frustration that PC team meetings are limited or absent due to the lack of attendance from GPs. The inefficiency of PC teams in Ireland was previously reported by Scott and Keating (2011). Ineffective teamwork in PC is widely recognised in the literature, the main barriers including; a deficiency of dedicated time for meetings, a lack of interdisciplinary training and insufficient organisational support (Pullon et al. 2009). This finding suggest that there was a high level of cooperation and integration within physiotherapy team services but a notable lower level of cooperation between other service providers, in particular the GPs.

A lack of collaboration and communication between PC and acute and other services was identified by participants and this shortcoming is also widely acknowledged as a
barrier to quality service provision for neurological patients (Horgan et al. 2008). The participants in this study suggested practical solutions to resolve this issue. One participant stated that interdisciplinary training (IDT) results in more effective collaboration with acute and community services. This is supported by a study exploring the role of IDT for health professionals aiming to promote community re-engagement post-stroke in Canada (Mc Kellar et al. 2011), whose findings demonstrated enhanced interdisciplinary communication, patient goal setting and understanding of individual disciplines among health professionals. The rotation of physiotherapy staff between acute and community settings was recommended by another participant as a method of developing relationships, shared understanding and improved collaboration between acute and community services.

It is possible that the lack of patient-centred care identified by this study is justified in the sense that PC services were never intended to manage complex conditions (DOH, 2001) and it may be that a lack of tertiary specialist services for neurological patients in Ireland has resulted in PC services being forced to manage complex neurological cases for which it is not designed. In addition to placing a strain on PC services, it reduces the quality of service provision for community dwelling neurological patients because access to tertiary specialist services is associated with improved quality of life and health outcomes (DOH, 2005). The need for these specialist services was strongly emphasised in this study and it is also supported throughout national policy (DOH, 2011) and existing literature (WHO, 2006; Mc Coll et al. 2009; NAI, 2010; Gridley et al. 2011; Intercollegiate Stroke Working Party, 2012).

However, PC services need to address the issue of patient-centred care for all service users, irrespective of the implementation of specialised tertiary services for complex conditions. International and national literature highlights that, in addition to the neurological patient caseload, people with disabilities, multimorbidities and chronic care needs are also not having their needs met in PC services (Mc Coll et al. 2009; Smith et al. 2010; Darker et al. 2011). This reveals a significant, more far-reaching issue with unmet needs in existing PC services and it is consistent with findings in this study whereby many of the service deficits reported by participants would also have implications for other patient populations such as those with disabilities, chronic
conditions and multimorbidities. In addition, it was also highlighted that people with complex neurological needs often require respiratory or musculoskeletal physiotherapy input simultaneous to their neurological physiotherapy placing a responsibility on PC services to facilitate people with complex care needs.

The requirement for specialist training in neurology for PC physiotherapists was stressed by all participants and the majority expressed challenges in maintaining high levels of professional competencies in all areas of PC. This need for specialist training is supported by previous studies exploring PC service provision for neurological patients (Beeston and Simmons, 1996; Davidson and Waters, 2000; Plum and Morrisey; 2002; Bourne et al. 2007; Scott and Keating, 2011). However, despite international recommendation for specialist training for all PC service providers involved in neurological patient care (WHO, 2006), a lack of organisational support and allocated time for training from the HSE was highlighted as a significant barrier to acquiring specialist training in the area of neurology.

Support for training and CPD revealed conflicting opinions among participants in relation to who is responsible for professional competency and training. Some participants stated that the onus for professional competency lies with the individual therapist and that it is mandatory for members of the ISCP to engage in training (ISCP, 2006), however many participants reported that the HSE and management need to actively fund and provide time for training to meet the needs of the professional and their caseload. The importance of shared responsibility between the individual and the organisation for professional training is recognised by French (2006) and Davidson and Waters (2000). One participant reported that they only undertake training in areas in which they have a professional interest because they are funding the training independently and attending courses outside of work hours. The clinical relevance of this finding is that training needs to reflect competency gaps as opposed to professional interests to meet the needs of the patient caseload. Therefore, to ensure that PC physiotherapists are competent in all areas of PC practice, organisational support for training is essential.
The participants’ perception of the role of continuity of care for neurological patients in PC warrants attention and further highlights the need for specialist training in the area of neurology. Although the majority of participants identified continuity of care as a quality standard in accordance with the national guidelines for people with a stroke in Ireland (Council for Stroke, 2010), it is noteworthy that there was a difference of opinion in relation to these. Professional knowledge regarding plateau in the first three months post-acute neurological event and the need for patients to self-manage were the main justifications for two participants questioning need for continuity of care quality standards for neurological patients. This reinforces the necessity for neurological training for PC physiotherapists to update their knowledge around plateau, which was traditionally recognised at three months post stroke as an indicator of diminished capacity for further recovery (Demain et al. 2006). This traditional assumption resulted in premature discharge from physiotherapy services and further compounded the burden on patients and carers in the community (Demain et al. 2006). The current evidence base challenges the concept of plateau and affirms the possibility of recovery in chronic neurological patients (Page et al. 2004; Demain et al. 2006). These insights highlight the rapidly developing knowledge base in the area of physiotherapy for neurological patients and spells the need for CPD for PC physiotherapists to ensure an informed, quality service provision.

The participants in this study attribute responsibility for the deficits in quality physiotherapy service provision for neurological conditions with the HSE and its managerial structures. The HSE was identified as accountable for a lack of implementation of specialist neurological services, insufficient support for specialist training and CPD, inadequate allocation of resources, the development of PC infrastructure without prior consultation to ensure a patient-centred brief was realised and a lack of supportive strategies to improve MDT work and communication between acute and community services. In addition, the participants expressed frustration at the absence of GPs in PC team meetings.

A significant finding from this study was that seven participants highlighted the current method of monitoring physiotherapy services in PC which is ‘based upon quantity not quality’ (p.10), as an inhibiting factor to the provision of a quality physiotherapy
service. This was also reported in a study of physiotherapy management of stroke patients in the UK (Sackley and Lincoln, 1996). Currently in PC, the prime evaluation tool is healthstat (HSE, 2014a), which captures purely quantitative data. The Clinical and Strategy Programmes Directorate developed by the HSE have the responsibility for monitoring quality service provision in PC and have representation from all therapy disciplines on their team (HSE, 2014b). However, this study found that qualitative performance indicators have not been implemented to date in these physiotherapists’ services. This is a significant finding because, as stated by Healthstat: ‘what gets measured gets done’ (HSE, 2014a).

4.4 Impact of the Mismatch

Hitherto, this discussion has revealed that there is a mismatch between the ideal service which the physiotherapists would like to provide and their existing service provision. In addition to the implications of this mismatch for patients, this study finds that there are significant implications for physiotherapists. Occupational stress was consistently reported by participants and it mainly related to the imposed limitations on physiotherapy services and a lack of professional autonomy. The theoretical concept of moral distress ‘when one knows the right thing to do, but institutional constraints make it nearly impossible to pursue the right course of action’ (Jameton, p. 23, 1984) may be applied to some of the physiotherapists in this study. This is illustrated by the participants when they expressed a professional desire to continue with a neurological patient’s care but were unable to do so due to time constraints. A similar finding was reported by Sackley and Lincoln (1996) who discovered that physiotherapists expressed conflict within themselves when discharging stroke patients due to waiting list constraints as opposed to when they felt the time was right to discharge in a professional context.

In addition, the physiotherapists reported experiencing high level of job demands and felt that the main limitations of the service are outside of their control. This combination of high job demand and low levels of job control, results in poor psychosocial outcomes (Karasek, 1979). Moreover, participants reported that, as a result of the professional
relationships developed with their neurological patients, they become emotionally engaged in their patient’s progress, instilling a desire to ensure a high quality service, and an inability to do so further compounds their occupational stress. A combination of these factors culminates in moral and occupational stress for the physiotherapist.

The findings of this study highlight that the participants are cognisant of, and grateful for, the level of peer and line managerial support in the PC setting. The majority of participants distinguished their line manager from the HSE management structures and in general reported that their own line managers facilitated them to overcome the challenges of providing care to neurological patients. Line managers who had a background in neurology were singled out by some participants as being particularly supportive. This suggests that line managers who understand the neurological patient caseload are more likely to be empathetic. In addition, this study’s findings highlight the value of physiotherapy team work in PC. The support of physiotherapy colleagues were described as instrumental in alleviating some of the challenges of physiotherapy service provision in PC and the occupational stress associated with it.

4.5 Key Implications

PC services need flexibility to provide accessible services which are adequately resourced to meet the needs of neurological patients and those with chronic care needs.

There is a need for increased professional autonomy and flexibility for physiotherapists in PC, the need for a supportive work environment to enable them to deliver health promotion and secondary prevention and support for specialist training in neurology.

There is a need for implementation of evaluation and performance tools which adequately capture patient’s outcomes and the effectiveness of physiotherapy services. Additionally it is important to ensure that a physiotherapist is on the therapy board of the clinical and strategy programmes directorate to inform on physiotherapy specific issues.
PC teams require organisational support, dedicated time for team meetings and interdisciplinary training. The UK model of promoting teamwork through a centre for the advancement of inter-professional learning might be a model worth adopting in Ireland to address the current challenge of PC team work.

There is a need for increased collaboration across services. The introduction of a national health records database, interdisciplinary training and physiotherapy rotations across acute and community services may facilitate this.

There is a need for the implementation of specialist neurological services to work alongside PC services in the community.

Physiotherapists in PC need to work in physiotherapy teams in conjunction with the PC team and should not work in isolation from their physiotherapy peers.

Line managers working in PC need to be facilitated to support their staff and managers should spend time on the ground familiarising themselves with the PC caseload and service users’ needs.

4.6 Study Limitations

1) The findings of this study highlight the limitations of exploring the quality of health services from the sole perspective of the health professional. As reported in Chapter 2, quality standards in PC services throughout Europe are categorised into the dimensions of structural, process and outcome standards (Donabedian, 1980). However, the participants in this study only reported quality standards relating to the structure and process of the physiotherapy service and did not identify any outcome standards, such as attainment of goals or the use of outcome measures. This correlates with research that states that perspectives on what constitutes a quality service will vary according to the stakeholder involved (Donabedian, 1980; Gunther and Alligood, 2002). This finding reinforces the need for explorations of health care services to take all stakeholders
perspectives into account to ensure all aspects of the service are considered including the patients outcomes.

2) The researcher was an “insider” and may have biased the study by projecting their own views and beliefs onto the study’s findings. However, the researcher took methodological steps to avoid this.

3) A methodological limitation of this study is the lack of generalisability in this study’s findings. Due to time constraints and mode of recruitment, participants from one service area formed the majority of participants in this study (n=7) which limits the applicability of these findings on a national level.

The recommendations for future research are summarised in Table 4.

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<th>4.7 Recommendations for Future Research</th>
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<tr>
<td>1 A continuation of the current study incorporating greater national representation</td>
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<td>2 An exploration of service users, line-managers and higher management structures perspectives on physiotherapy service provision for neurological patients in PC</td>
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<tr>
<td>3 An exploration of occupational and moral distress in physiotherapists working with neurological patient caseloads in PC and support structures required</td>
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<td>4 An exploration of the role of the physiotherapy team in PC</td>
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<td>5 An exploration of the relationship between the physiotherapy background of a line manager and how supportive they are according to the perspective of the physiotherapist</td>
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<td>6 A comparison study examining neurological patient outcomes when they have or have not access to PC physiotherapists with specialist neurological training</td>
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CONCLUSION

Despite limited national and international literature on this subject, the existing national literature highlights that current physiotherapy service provision for neurological patients in the community does not adequately meet the needs of these patients. Consequently, this study sought to answer the question: What are the views and experiences of physiotherapists on physiotherapy service provision for people with neurological conditions in PC? An awareness and understanding of these issues provides a platform from which recommendations for the enhancement of physiotherapy service provision for neurological patients in PC can be made.

This section will synthesise the study’s findings to answer the questions set out in the objectives.

1) What are physiotherapists’ views on what constitutes a quality physiotherapy service for neurological patients in PC?

All participants identified patient-centred practice as central to a quality service. The study highlighted the requirement of sufficient resources and access to meet the needs of neurological patients. Quality standards such as continuity of care, effective collaboration between services, high professional standards and training, effective MDT work, engagement in health promotion and the development of good relationships between patient and physiotherapist were identified in recognition of the complex nature of neurological conditions.

2) What are physiotherapists’ experiences of their management of neurological patients in PC?

Physiotherapists emotionally engage and build relationships with neurological patients in PC. They experience challenges in delivering a quality service and to meet the expectations of neurological patients and their families in PC. They also encounter high levels of occupational stress as a result of these challenges.
3) What are physiotherapists’ experiences of inhibiting and facilitating factors to providing a quality physiotherapy service provision for neurological patients in PC?

A lack of organisational support from the HSE was the main inhibiting factor cited. The perceived failings of the HSE include a lack of patient-centred resources, insufficient support for specialised training, inadequate access to specialist centres for neurological conditions, ineffective investment in the PC team, limited collaboration between community and acute services and a lack of support for continuity of care and health promotion. The participants’ highlighted the HSE’s managerial methods of evaluating physiotherapy services to illustrate the disparity between the HSE’s objectives and the physiotherapy service needs of the neurological patient population.

The facilitators of a quality service provision include the support of the physiotherapy line manager and the knowledge, skill mix and peer support of the physiotherapy team in PC. This was highlighted by the majority of physiotherapists as instrumental in overcoming the challenges to providing a quality service for this patient group.

This study provides a unique contribution to the literature base. Previous research highlighted the inadequacy of service provision for neurological patients in the community; however this study demonstrates this within the context of the primary care setting nationally. In addition the theoretical concept of moral distress experienced by these physiotherapists is an original finding in this context and the implications are that the physiotherapists’ perspectives are significant not only in terms of neurological patient outcomes but also for the individual physiotherapist themselves.

The scale of the challenge to improve physiotherapy service provision for neurological patients in PC is extensive and requires a multi-faceted approach. Firstly, a lack of organisational support needs to be addressed. Secondly, support structures such as physiotherapy team work and line management support need to be promoted and facilitated. Thirdly, the development of centres for the advancement
of inter-professional learning as seen in the UK would be a model worth adopting in Ireland to promote more effective collaboration in PC and across services. Finally, the increasing prevalence of neurological and chronic conditions in Ireland and the associated public health challenges require the implementation of a chronic care model and a focus on health promotion and preventative activities in PC.

Limitations of this study include the lack of service users and managerial perspectives. Future qualitative research should consider these perspectives in the PC setting. In addition, the limited national representation of PC physiotherapists reduces the ability to generalise the study’s findings on a national scale. Future research which examines this subject with enhanced national representation will prove valuable.

Despite these limitations, this study captures trustworthy and dependable findings in the context of localised PC settings, contributes valuable qualitative data to the literature base in this field, makes recommendations on further research and suggests approaches which can be taken to improve service provision, support PC physiotherapists and provide a brighter future for patients with neurological conditions.

Total Word Count: 13,317
REFERENCES


Darker, C; Martin, C; O’Dowd, T; O’Kelly, F; O’Kelly, M; O’Shea, B. (2011) A National Survey of Chronic Disease Management in Irish General Practice. Department of Public Health and Primary Care, Trinity College, Dublin.


Gallagher, K; Morrison, D; Jani, B; MacDonald, S; May, C; Monto, V.M; Erwin, P.J; Batty, D.G; Eton, D.T; Langhorne, P; Mair, F.S. (2013) Uncovering treatment burden as a key concept for stroke care: A systematic review of qualitative research. www.plosmedicine.org (accessed on 20/01/14).


Langhorne, P; Taylor, G; Murray, G; Dennis, M; Anderson, C; Bautz-Holter, E; Dey, P; Indredavik, B; Mayo, N; Power, M; Rodgers, H; Ronning, O.M; Rudd, A; Suwanwela, N; Widen-Holmqvist, L; Wolfe, C. (2005) Early supported discharge services for stroke patients: a meta-analysis of individual patients' data. Lancet, 365(9458): 501-6.


O’Donoghue, B; Cunningham, C; Murphy F; Woods, C; Aagaard-Hansena, J. (2014) Assessment and management of risk factors for the prevention of lifestyle related


APPENDICES

Appendix. 1

Interview Schedule

1) In your opinion, what is a quality physiotherapy service for people with neurological conditions in the community setting?

Prompts: Models of service delivery in terms of setting, access, resources, treatment durations, specialism of therapists, communication with other services, health promotion and community integration

2) In your opinion, are patients with neurological conditions different from patients without neurological conditions in your primary care service? If so, how?

Prompts: Health complaints, access, support, motivation,

3) Do you feel that you are different with patients with neurological conditions in your primary care service? If so, how?

Prompts: Types of services offered, treatment duration, workspace, personal effect of working with neurological population

4) What are the barriers to your management of patients with neurological conditions in the primary care setting?

Prompts: Intrinsic factors: professional training, speciality, attitudes
Extrinsic factors: Resources, settings, team work, communication with other services, managerial support, opportunity for CPD, access

5) What are the facilitators to your management of patients with neurological conditions in primary care?

Prompts: Intrinsic factors: Professional training, specialty, attitudes
Extrinsic factors: Resources, settings, team work, communication, managerial support, opportunity for CPD, access

6) In your opinion what would improve physiotherapy service provision for people with neurological conditions in primary care and the community setting?

Prompts: External factors: model of service delivery, setting, access, resources, treatment duration, specialism, communication, health promotion
Internal: CPD, specialty
Appendix 2

Ethics application

ROYAL COLLEGE OF SURGEONS IN IRELAND
RESEARCH ETHICS COMMITTEE APPLICATION FORM

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<tr>
<td>Short title of Project:</td>
<td>Physiotherapy service provision for people with neurological conditions in primary care</td>
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INSTRUCTIONS:

Do you have permission to do this research if work is to be carried out in another institution / body? Evidence of permission will be required with this application.

- This form is also available on [http://research1.rcsi.ie/Ethics_Committee/index.asp](http://research1.rcsi.ie/Ethics_Committee/index.asp)
- Complete typescript - an incomplete application may delay the application process
- Select Yes/No options as appropriate.
- Refer to the accompanying Guidance Notes
- Complete the Checklist below
- Ensure that all supporting documents are attached securely to the 1 copy of the application form and secured together with a staple. **Documents requiring only 1 copy such as CV etc may be left loose.**
- Applications which are not collated in sets will be returned to the author.
- Send application: Jacqui Quigley, The Research Office, 121 St Stephens Green, Ground Flr., Dublin 2
Please indicate if the following have been enclosed by selecting Yes/No/Not applicable options below. Please forward copies of the form and relevant enclosures required as outlined below.

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☒ Send application: Jacqui Quigley, The Research Office, 121 St Stephens Green, Ground Flr., Dublin

Section 1 – Details of Applicant(s)

1. Title

| Short Title of Project: Physiotherapy for people with neurological conditions |
| Full Title of Project: Physiotherapy service provision for people with neurological conditions in primary care - a qualitative study of physiotherapists |

2. Contact Details of Applicant (All correspondence will be sent to this address unless indicated otherwise.)

<table>
<thead>
<tr>
<th>Surname: Mc Daid</th>
<th>Forename: Mairead</th>
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<tbody>
<tr>
<td>Title (Prof, Dr., Mr. Ms): Ms</td>
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<tr>
<td>Present Appt of Applicant: Student</td>
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<tr>
<td>Qualifications: BSc in Human Biology and Sport Science; MA in Health Promotion; MSc in Rehabilitation Science.</td>
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<td>Address: Coolaw, Taghmon, Co. Wexford</td>
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3. Other Workers/Departments involved (Name, Department, and Appointment):
School of Physiotherapy, Royal College of Surgeons in Ireland

4. Signature(s) of Relevant Personnel

**Applicant**

- I undertake to carry out the work outlined here in accordance with the principles of the Declaration of Helsinki (5th Revision 2000) and RCSI Guidelines on Good Research Practice - (copies available on website or from the REC secretary) and its amendments. The details contained in this document are, to the best of my knowledge, correct. I confirm that any training necessary for the execution of this project will be undertaken by current and by future researchers on the project.

Signature: ............................................................................................................ Date
Print Name: MAIREAD MC DAID

**Head of Department/Supervisor with overall responsibility for the project**

- I am fully aware of the details of this project and agreeable for it to continue as outlined in this application.
- I can confirm that the necessary facilities and resources are available to the researcher.

Signature: ............................................................................................................ Date
Print Name: 

**Section 2– Details of Project**

This section must be completed. A copy of the protocol should be enclosed with the application form but it is not sufficient to complete questions by referring to the protocol. Please summarise in the space provided.

5. Aims and Objectives of the Project:

**Aim:** To explore physiotherapists’ views and experiences of primary care service provision for people with neurological conditions

**Objectives:**
- To explore physiotherapists’ experiences of their management of people with neurological conditions in primary care.
- To explore physiotherapists’ experiences of the barriers and facilitators to physiotherapy service provision for people with neurological conditions in primary care.
- To explore physiotherapists’ views of what would improve physiotherapy service provision for people with neurological conditions in primary care and the community setting.
6. Scientific Background to Study

Neuro-rehabilitation is widely recognised as complex and resource intensive (Bodenheimer, 2008). International (WHO, 2006) and national (DOH, 2011) policies recommend that specialist community based teams are available for people with neurological conditions living in the community. However implementation of these teams to date has been disappointing, resulting in the majority of people with neurological conditions in Ireland being managed in Primary Care Services. The literature clearly demonstrates that people with neurological conditions are not having their needs met in General Practice (Murray et al. 2003; McColl et al. 2005). Physiotherapists are key members of primary care teams and are highly demanded and utilised by people with neurological conditions in Ireland (National Physical and Sensory Disability Database Committee, 2010). It is well established that physiotherapy is effective in producing positive outcomes for people with neurological conditions including in the chronic phase of the condition (Taub et al, 1993, Merholz et al, 2010; Khan et al, 2011). However, the majority of physiotherapy services for community dwelling people with neurological conditions are based in primary care services. There is a gap in the literature with regard to physiotherapists’ perspectives of service provision for this patient population group. Given the significant impact of optimal physiotherapy service delivery for patient care, this study aims to explore physiotherapists’ experiences and identify the barriers and facilitators to physiotherapy service delivery for people with neurological conditions in primary care.

7. Brief Outline of Project:

The applicant will initially contact physiotherapy managers with responsibility for physiotherapists working in primary care services in Ireland from the Health Service Executive (HSE) to seek permission for their staff to take part in the study and to identify suitable physiotherapists working with people with neurological conditions. A cover letter including an information sheet about the study will be included in the e-mail. The managers will be asked to forward the e-mail onto physiotherapists who fit the inclusion criteria. The first fifteen physiotherapists who agree to participate in the study will be e-mailed participant information sheets and consent forms and a date and location of the interview that is convenient for the participant will be scheduled. Semi-structured interviews will be conducted in a quiet and private room. The interviews will be recorded using a tape recorder with prior consent from the participants. The interviews will consist of pre-set themes and within each theme the researcher has a list of prompts to use in the interview to ensure that issues are explored fully. These prompts will be ever evolving as emerging themes develop throughout the data collection process. Preset themes will be developed according to the aim of the study, the pilot study and relevant literature. Additionally, demographical details of the participants will be taken. The interviews will be transcribed verbatim and at this stage respondent validation will be sought, whereby a participant will be asked to verify if the data accurately portrays what they were trying to say. Upon achieving data saturation no further interviews will be conducted. A thematic analysis will be conducted throughout the data collection process by the main researcher and a second researcher will be asked to also conduct an individual thematic analysis to increase the trustworthiness of the emerging themes and categories. The main study will be preceded by a pilot semi-structured interview with one physiotherapist working in primary care. This Physiotherapist will be interviewed for the pilot interview only and will not participate in the main interviews. The pilot interview will enable an estimation of the duration of the interview, ensure the clarity and coherence of the questions asked and will inform pre-set themes.

8. Study Design (e.g., cohort, case control)

A qualitative study, employing semi-structured interviews
9. How was the size of the study determined?
The sample size is based upon existing health service qualitative research using semi-structured interviews (Pullon et al. 2011; Sharma et al. 2012; Minns & Bithell, 1998; Beeston & Simons, 1996). It is anticipated that 15 participants will be sufficient to reach data saturation.

9ii. Is there formal statistical input into the overall study design?

☐ Yes  √ No

9iii. What method of Analysis will be used?

Thematic Analysis will be employed. Transcripts will be systematically coded. Sub-categories of codes will be formed. Themes will be reviewed and refined (Braun & Clarke, 2006). A map of themes and sub-themes will be generated. Rigour is demonstrated by the independent thematic analysis of a second researcher. Analysis and data collection will continue to the point of data saturation is reached. Additionally, participant validation will be sought whereby participants will be asked to review the verbatim accounts of their transcripts and asked to verify if this is really what they were trying to portray.

10. Does the study fall into any of the following categories?

<table>
<thead>
<tr>
<th>Category</th>
<th>☐ Yes</th>
<th>√ No</th>
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<tbody>
<tr>
<td>Pilot</td>
<td>☐</td>
<td>√</td>
</tr>
<tr>
<td>Multi-centre study</td>
<td>☐</td>
<td>√</td>
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<tr>
<td>If Multi Centre Study:</td>
<td>☐</td>
<td>√</td>
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<tr>
<td>Name of Centre(s):</td>
<td>☐</td>
<td>√</td>
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<tr>
<td>Undergraduate Student Project</td>
<td>☐</td>
<td>√</td>
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<tr>
<td>If student project:</td>
<td>☐</td>
<td>√</td>
</tr>
<tr>
<td>Name of Course:</td>
<td>☐</td>
<td>√</td>
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<tr>
<td>Name of Institution:</td>
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</tbody>
</table>

10ii. Which Ethics Committee have been approached, and what is the outcome to date?

Name of Ethics Committee: Not applicable
Outcome: Not applicable

10iii. Who will have overall responsibility for the study?

The applicant (Mairead Mc Daid) and the research supervisor (Dr. Helen French)

10iv. Who has control of the data generated?

The applicant (Mairead Mc Daid) and the research supervisor (Dr. Helen French)

10v. How will you protect it under the Data Protection Guideline?

All data will be confidential and coded. A code will be assigned for each participant at the start of the data collection process which will be utilised throughout the study. There will be no relationship evident between the code assigned and the individual participant. All field notes and tapes will be stored in a locked filing cabinet in the Physiotherapy Department in RCSI. Additionally, computer files will be encrypted and password protected and stored on the Royal College of Surgeons in Ireland's server V drive. The data will be retained for five years only.
11. Where will the study take place and in what setting? (e.g. Dublin/Gen Practice/Home)
The interviews will take place in a quite location, convenient for the participants, most probably in the Primary Care building in which they work.

12. Has funding been obtained, or is it being sought by the investigator in respect of this study?
Funding applied for: ☐ Yes ☑ No
Funding secured: ☑ Yes ☐ No
☑ RCSI Grant Code:

Does the investigator(s) have any direct personal involvement (e.g. financial, share-holding, etc.) in the sponsoring organisation?
☐ Yes ☑ No

If Yes, please give details:

13. Schedule
Proposed Starting Date: September, 2013
Proposed Duration: April, 2014

Section 3– Recruitment of Participants and Control Groups

14a. How will the participants in the study be selected, approached, and recruited?
Recruitment will take place via the e-mailing list of the special clinical interest group of Chartered Physiotherapists in Neurology and Gerontology (CPNG) within the Irish Society of Chartered Physiotherapists. Permission to survey CPNG members will be sought from the Irish Society of Chartered Physiotherapists (ISCP) in accordance with the ‘policy on the application process for surveying members for research purposes’. An e-mail including a cover letter and a participant information leaflet will be sent to the Chair of CPNG for circulation to all members of the special interest group in Neurology and Gerontology CPNG within the Irish Society of Chartered Physiotherapists. The first fifteen physiotherapists who reply to the e-mail, who fit the inclusion criteria and agree to participate in the study will be contacted again by the applicant and a date and location for the interview will be scheduled.

14b. What inclusion and exclusion criteria will be used?
The inclusion criteria: Physiotherapists currently working in primary care, who have at least one years’ experience of working in primary care and who treat people with neurological conditions.
Exclusion criteria: unwilling to participate.

15. How many participants will be recruited and of what age?
Approximately ten to fifteen physiotherapists will be recruited dependent upon data saturation. There will be no age restrictions.

16. How will the control group (is used) be selected, approached, and recruited?
Not applicable

16b. Control Group: What inclusion and exclusion criteria will be used?
Not applicable.
17. How many controls will be recruited and of what age?

Not applicable

18. Are the participants included in this study involved in any other research investigation at the present time?

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<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>Not Known</th>
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If yes, please provide details:

18. Will participants receive any payment or other incentive to participate?

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<tr>
<th></th>
<th>Yes</th>
<th>No</th>
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If yes, please give details of incentive per participant:

If yes please indicate the source of the incentive:

In cases where the research involves an intervention that may interact with concurrent medical treatment, applicants should undertake to explain to participants that the researcher would contact their doctor to ask about any medical treatment.

### Section 4 – Consent

20. Is written consent to be obtained?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
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<tr>
<td>√</td>
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</table>

Fill in

- If yes, please attach a copy of the Consent Form to be used
  - Guidance on Consent is provided in Appendices 2-4 in The Guidance Notes
- If No, please justify:

21. Does the study include participants for whom English is not a first language? No

<table>
<thead>
<tr>
<th>Children under 16</th>
<th>Yes</th>
<th>No</th>
<th>Not Known</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>√</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>People with learning difficulties</th>
<th>Yes</th>
<th>No</th>
<th>Not Known</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Other vulnerable groups (e.g. psychological disorders, dementia)</th>
<th>Yes</th>
<th>No</th>
<th>Not Known</th>
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<td></td>
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</table>

If you have answered “Yes” to any of these questions, please complete the questions below – otherwise proceed to Question 23.

1. What special arrangements have been made to deal with the issues of consent and assent, e.g. is parental or guardian agreement to be obtained, and if so what form?
2. In what way, if any can the proposed study be expected to benefit the individual who participates? The findings of this study will provide a valuable insight into the barriers and facilitators to physiotherapy service provision for people with neurological conditions in the primary care setting. It will also enable the participants to propose ways of improving the existing service. This insight will add the existing evidence base and provide a platform of knowledge upon which potential service development can occur. Service development which addresses the issues expressed by the participants will benefit the participant by enhancing their working life and their professional development.

[Please answer Question 22 only where invasive or other interventions are planned which could be a risk to the pregnancy]

22. Are women of childbearing potential included?

☐ √ Yes □ No □ Not Known

If YES, Does the protocol/patient information sheet address the 8 points in the committee’s check list for studies involving women of childbearing potential: No

1. Scientific justification,
2. Negative teratogenic studies,
3. Warning participant that foetus may be damaged,
4. Initial negative pregnancy test,
5. Forms of contraception defined,
6. Duration of use to exceed drug metabolism,
7. Exclude those unlikely to follow contraceptive advice,
8. Notify investigator if pregnancy suspected?

If NO, Please explain: This study does not involve any invasive or other interventions that could be a risk to pregnancy.

23. Will the participant be given a written information sheet or letter?

☐ √ Yes □ No

Fill in

✓ If “Yes”, please attach copy to this application form
✓ If “No”, please justify:

Section 5 – Details of Interventions

24. Does the study involve the use of a new medicinal product or medical device, or the use of an existing product outside the terms of its product license?

☐ Yes √ □ No

✓ If yes, please complete this page and then Annex A. Question 25.
25. Will any ionising or non-ionising radiation, or radioactive substances or X-rays be administered to a participant?

☐ Yes  √ ☐ No

Please ensure information in Q14 includes exclusion criteria with regard to ionising radiation if appropriate.

☐ Yes, please complete this page and then Annex A. Question 26.

26. What investigations and/or interventions will participants and/or controls have over and above routine care?

(Please complete the table below by selecting YES/NO options as appropriate. If YES, details should be available in protocol.) Please see guidance notes*

<table>
<thead>
<tr>
<th>Investigation</th>
<th>☐ Yes</th>
<th>☐ No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self completion questionnaires</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interviews/interview administered questionnaires</td>
<td>√ ☐ Yes</td>
<td>☐ No</td>
</tr>
<tr>
<td>Video/audio tape recording</td>
<td>√ ☐ Yes</td>
<td>☐ No</td>
</tr>
<tr>
<td>Physical examination</td>
<td>☐ Yes</td>
<td>☐ No</td>
</tr>
<tr>
<td>Internal physical examination</td>
<td>☐ Yes</td>
<td>☐ No</td>
</tr>
<tr>
<td>Venepuncture*</td>
<td>☐ Yes</td>
<td>☐ No</td>
</tr>
<tr>
<td>Arterial puncture*</td>
<td>☐ Yes</td>
<td>☐ No</td>
</tr>
<tr>
<td>Biopsy material*</td>
<td>☐ Yes</td>
<td>☐ No</td>
</tr>
<tr>
<td>Other tissue/body sample*</td>
<td>☐ Yes</td>
<td>☐ No</td>
</tr>
<tr>
<td>Imaging investigations (not radiation)</td>
<td>☐ Yes</td>
<td>☐ No</td>
</tr>
<tr>
<td>Other investigations not part of normal care</td>
<td>☐ Yes</td>
<td>☐ No</td>
</tr>
<tr>
<td>Additional outpatients attendances</td>
<td>☐ Yes</td>
<td>☐ No</td>
</tr>
<tr>
<td>Longer inpatient stays</td>
<td>☐ Yes</td>
<td>☐ No</td>
</tr>
<tr>
<td>Local anaesthesis</td>
<td>☐ Yes</td>
<td>☐ No</td>
</tr>
<tr>
<td>General anaesthesia</td>
<td>☐ Yes</td>
<td>☐ No</td>
</tr>
<tr>
<td>Other</td>
<td>☐ Yes</td>
<td>☐ No</td>
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Details: Semi-structured interviews will be conducted and will be recorded using a tape recorder with prior consent from the participants. All participants will be given an opportunity to review, edit, or erase any audio recording or transcript of a recording to which they have contributed.
## Section 6 – Risks and Ethical Problems

27. Are there any ethical problems or considerations that the investigators consider to be important or difficult with the proposed study?

- [x] Yes
- [ ] No

There are no ethical considerations which the investigator considers to be important or difficult with the proposed study. Informed consent will be obtained prior to commencement of the interviews. Participants will be advised that they are free to refuse to participate or to withdraw from the study at any time without any adverse effects. Participants will also be advised of the steps taken to ensure confidentiality. All field notes and tapes will be stored in a locked filing cabinet in the Physiotherapy Department in the RCSI. Additionally, computer files will be encrypted and password protected and stored on the Royal College of Ireland’s server V drive. The data will be retained for five years only.

27a. Will treatments provided during the study be available if needed at the end of the study?

- [ ] Yes
- [ ] No
- [x] Not Applicable
- [ ] Not Known

27b. If not is this made clear in the patient information sheet?

- [x] If “NO”, please give reasons:

28. Are there any potential hazards to participants or patients?

- [x] Yes
- [ ] No

- [x] If Yes, please give details, and give the likelihood and details of precautions taken to minimise them, and arrangements to deal with adverse events, including reporting to the relevant authorities.

29. Is this study likely to cause discomfort or distress to participants/patients?

- [x] Yes
- [ ] No

It is highly unlikely that this study will cause discomfort or distress. However, in the event of a participant experiencing discomfort or distress the interview may be terminated and the participant may withdraw from the study, the research supervisors name and contact details are provided for the participant on their information leaflet and they will be advised to contact the research supervisor.
### Section 7 – Indemnity and Confidentiality

Product liability and consumer protection legislation make the supplier and producer (manufacturer) or any person changing the nature of a substance, e.g. by dilution, strictly liable for any harm resulting from a consumer’s use of a product.

#### 30. What arrangements have been made to provide indemnification and/or compensation in the event of a claim by, or on behalf of, a participant for negligent harm?

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<td>□</td>
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#### 30a. What arrangements been made to provide indemnification and/or compensation in the event of a claim by, or on behalf of, a participant for non-negligent harm?

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#### 30b. Will an undergraduate student be involved directly in conducting the project?

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#### 31. In cases of equipment or medical devices, have appropriate arrangements been made with the manufacturer? (Please indicate NA if not applicable.)

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#### 32. Will the study be held on a computer?

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<tr>
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<td>Yes</td>
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- If Yes, will the data be held so that participants cannot be identified from computer files (i.e. no name, address, medical chart number or other potential identifier such as GMS or RSI number)?

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- If No, give reasons

Will records (preferably paper records) linking study participant ID numbers with identifying features be stored confidentially?

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<td>□</td>
<td>Yes</td>
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#### 33. Will the patient’s medical records be examined?

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If Yes, will information relevant to this study be extracted

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<td>□</td>
<td>Yes</td>
<td>□</td>
<td>No</td>
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If extra information is extracted, please justify

**What, if any, additional steps have been taken to safeguard confidentiality of personal records?**
34. Will the study include the use of any of the following?

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audio/videotape recording</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Observation of participants</td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>

If “Yes” to either:

1. How are confidentiality and anonymity to be ensured?
   Anonymity will be ensured by assigning a code for each participant at the start of the data collection process which will be utilised throughout the study. There will be no relationship evident between the code assigned and the individual participant. Confidentially will be ensured by storing all field notes and tapes in a locked filing cabinet in the Physiotherapy Department in the Royal College of Surgeons. Additionally, computer files will be encrypted and password protected and stored on the Royal College of Surgeon in Ireland’s server V drive.

2. What arrangements have been made to obtain consent?
   Written informed consent will be obtained after the participant has read the information leaflet. Please see the consent form attached for details.

3. What will happen to the tapes at the end of the study? [Note: they should be stored for data verification or transcribed] s
   They will be stored in a locked filing cabinet in the Physiotherapy Department in the Royal College of Surgeons in Ireland. They will be retained for five years only.

35. Will medical records be examined by research worker(s) outside the employment of the RCSI?

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<tr>
<th>Yes</th>
<th>No</th>
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</table>

If “YES”, it is the responsibility of the principal investigator to ensure that research workers understand that information obtained about and from research participants is confidential to the study and must not be divulged except in legitimate methods of study data presentation or exceptional circumstances as discussed and agreed with the principal investigator or other competent advisor.

**Please ensure that you complete the checklist on the front cover of the application form and include all relevant enclosures.**

Thank you -
ANNEX A

This form is to be used if the study involves the use of a new medical product or medical device, or the use of an existing product outside the terms of its product licence.

i) Does this project have Irish Medicines Board approval or has an application been made?

☐ Yes ☐ No ☐ N/A ☐ Application is at present with Irish Medicines Board

ii) Is a pharmaceutical or commercial company arranging this trial?

If yes, attach indemnification.

If no, has the licensing authority been notified?

☐ Yes

iii) Does the drug(s) or device have a product licence(s) for the purpose for which it is to be used?

☐ Yes

If yes, give details.

iv) Is any drug or medical device being supplied by a company with a Clinical Trial Exemption Certificate or in response to an investigator with a Clinical Trial Exemption, or Doctors’ and Dentists’ Exemption?

☐ Yes

If yes, give details:

Clinical Trial Certificate Number:

Clinical Trial Exemption Number:

Doctors’ and Dentists’ Exemption Number:

Details of drug use or medical device. (Please complete the table below.)

<table>
<thead>
<tr>
<th>Approved name</th>
<th>Strength</th>
<th>Dosage and frequency</th>
</tr>
</thead>
</table>

v) Does this project have Irish Medicines Board approval

Yes ☐ No, applied for ☐ No, not applied for ☐

vi) Who will administer the drug or fit the medical device?

vii) If a medical device, has the device been through acceptance and safety testing locally?

☐ Yes

Please give details:

viii) Who is supplying the drug/or medical advice? (If imported, name country.)

ix) Have arrangements for dispensing been agreed with pharmacy?

☐ Yes
<table>
<thead>
<tr>
<th></th>
<th>Question</th>
<th>Yes</th>
<th>No</th>
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<tbody>
<tr>
<td>ix)</td>
<td>Has the Chief Pharmacist been informed?</td>
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<tr>
<td>x)</td>
<td>Does the organisation and performance of this trial conform to European Directives on Good Clinical Practice?</td>
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<td></td>
<td>Yes</td>
<td></td>
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<td>Yes</td>
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ANNEX B

This form is to be used if the study involves the use of ionising or non-ionising radiation, radioactive substances or X-Rays. The Radiation Protection Adviser must be involved in implementing this section.

a) RADIOACTIVE SUBSTANCES
   i) Details of substances to be administered. *(Please complete the table below.)*

<table>
<thead>
<tr>
<th>Investigation</th>
<th>Radionuclide</th>
<th>Chemical form</th>
<th>Quantity of radioactivity to be administered (MBq)</th>
<th>Route</th>
<th>Frequency</th>
</tr>
</thead>
</table>

   ii) Estimated Effective Dose (Effective Dose Equivalent)** (mSv):

   iii) Absorbed dose to organ or tissues concentrating radioactivity** (mGy) (Specify dose and organ.)

   iv) Administration of Radioactive Substances Advisory Committee (ARSAC) Certificate holder

      Name of person:
      Position:
      Certificate No.:

      *I have delegated authority to administer the radioactive substance(s) in this project to:*
      
      *and I approve the arrangements that have been made.*

      Signature of Certificate holder................................................................. Date................................

b) X-RAYS
   i) Details of radiographic procedures

<table>
<thead>
<tr>
<th>Investigation</th>
<th>Organ(s)</th>
<th>Frequency</th>
</tr>
</thead>
</table>

   ii) Estimated Effective Dose (Effective Dose Equivalent)** (mSv)

      ** Please supply source of reference or attach calculation.

c) NON IONISING RADIATION
   i) Details of procedures

<table>
<thead>
<tr>
<th>Investigation</th>
<th>Organ(s)</th>
<th>Frequency</th>
</tr>
</thead>
</table>

   ii) Who has given safety advice?
ANNEX C

For research conducted in a general practice setting all GPs whose patients will be involved must sign to indicate that they are aware of and in agreement with the planned project.

**Agreements** (All partners must sign this section.)

<table>
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<tr>
<th>Name (in caps)</th>
<th>Position</th>
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</table>

The RCSI Research Ethics Committee would like to acknowledge the assistance of the NHS Executive (South West) Department of Health, Bristol in compiling these forms.
Appendix 3

Ethics Approval Letter

Royal College of Surgeons in Ireland
The Research Ethics Committee
121 St. Stephens Green, Dublin 2, Ireland.
Tel: +353 1 4022373 Fax: +353 1 4022205 Email: recadmin@rcsi.ie

Dr. David Smith, Acting Chair
Dr. Niamh Clarke, Convener

16th October 2013

Ms Mairéad McDaid
School of Physiotherapy,
RCSI,
123 St Stephen's Green,
Dublin 2

<table>
<thead>
<tr>
<th>Ethics Reference No:</th>
<th>REC857</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Title:</td>
<td>Physiotherapy for people with neurological conditions</td>
</tr>
<tr>
<td>Researchers Name (lead applicant):</td>
<td>Ms Mairéad McDaid</td>
</tr>
<tr>
<td>Principle investigator of the project</td>
<td>Dr. Helen French (Project Supervisor), School of Physiotherapy, RCSI, 123 St Stephens Green, Dublin 2</td>
</tr>
<tr>
<td>Other Individuals Involved:</td>
<td>As above</td>
</tr>
</tbody>
</table>

Dear Ms McDaid

Thank you for your Research Ethics Committee (REC) application. We are pleased to advise that ethical approval has been granted by the committee for this study.

This letter provides approval for data collection for the time requested in your application and for an additional 6 months. This is to allow for any unexpected delays in proceeding with data collection. Therefore this research ethics approval will expire on 16th November 2014.

Where data collection is necessary beyond this point, approval for an extension must be sought from the Research Ethics Committee.

This ethical approval is given on the understanding that:

- All personnel listed in the approved application have read, understand and are thoroughly familiar with all aspects of the study.
- Any significant change which occurs in connection with this study and/or which may alter its ethical consideration must be reported immediately to the REC, and an ethical amendment submitted where appropriate.
- Please submit a final report to the REC upon completion of your project.

We wish you all the best with your research.

Yours sincerely,

[Signature]

PP Dr. Niamh Clarke (Convener)
Dr. David Smith (Acting Chair)
Appendix 4

Participant Information Form

School of Physiotherapy, Royal College of Surgeons in Ireland, 123 St Stephens Green, Dublin 2, Ireland.

Principal Investigator Name: Mairead Mc Daid

Research Supervisor Name and Address: Dr. Helen French. School of Physiotherapy, The Royal College of Surgeons in Ireland, 123 St Stephens Green, Dublin 2, Ireland

Title of the project: Physiotherapy service provision for people with neurological conditions in primary care—a qualitative study of physiotherapists

You are being invited to participate in an interview as part of a study exploring physiotherapist’s views of physiotherapy service provision for people with neurological conditions in Primary Care. This study is being undertaken in partial fulfilment of the requirements for an MSc in Neurology and Gerontology in the Royal College of Surgeons in Ireland. It is important that you read the following information before you agree to participate in this study and if you have any questions, please do not hesitate to contact the main researcher (Mairead Mc Daid) or supervisor on the contact details below.

What is the purpose of this study?

The purpose of this study is to explore physiotherapists’ views of physiotherapy service provision for people with neurological conditions in Primary Care. This will provide a deep insight into physiotherapist’s views and experiences of the challenges which they
experience in the Primary Care setting and the factors that enable and promote quality
service provision.

**Who is organising and funding this study?**
The main researcher (Mairead Mc Daid) is responsible for organising and funding the
study. There is no external funding for this study.

**Why have I been chosen and do I have to take part?**
Potential participants, like yourself, have been approached because you are a
physiotherapist with at least one years’ experience working in primary care and you
treat people with neurological conditions within this setting. It is up to you whether or
not you decide to take part in this study. If you agree to take part you will be asked to
sign a consent form. At any stage, you may withdraw from this study without giving
any reasons as to why you are doing so and there will be no adverse consequences as a
result of your decision.

**What will happen to me if I decide to take part?**
This study requires you to take part in an interview, which involves answering a list of
questions and discussing your views about the topics raised within the questions. There
is no preparation required and the interviews will be informal and with one researcher
(Mairead Mc Daid). It is proposed that the interview will be conducted in a quiet,
private location in the Primary Care building in which you work or alternatively a
location of your choosing and at a time that is convenient for you. The estimated
duration of the interview is thirty to forty-five minutes. The interview will be tape-
recorded. The audio tapes will be transcribed. You will be provided with the
opportunity to review, edit, or erase any audio recordings or transcripts of a recording to which you have contributed.

**What are the possible disadvantages and risks of taking part?**

There are no risks or disadvantages to taking part in this study. However if you have any concerns or wish to discuss any aspect of this study, please feel free to discuss these concerns with the researcher (Mairead Mc Daid) or the supervisor of the study at any time.

**What are the possible benefits of taking part?**

There is a gap in the current literature so it is hoped that this study will add to the research base in this area, identify possible gaps in physiotherapy service provision, and prompt an evaluation of the existing model of service provision and methods of enhancing the quality of service delivery for people with neurological conditions living in the community.

**Will my taking part in the study remain confidential?**

Your participation in the interview and the data collected will remain totally confidential. The interviewer will be the only person to listen to the tapes and record your interview and the interviewer, the research assistant and the supervisor will be the only people who will review the transcript of your interview. The data collected will be given a code, which will then be used in the analysis of the data; therefore after the interview your personal details will remain protected. All hard copies of information will be stored in a locked cabinet in Brain Injury Matters, Belfast and all other information will be stored on a password-protected computer. The completed study will
be held in the library of the Royal College of Surgeons in Ireland, Mercer Street Lower, Dublin 2.

**Who has reviewed the study?**

This study has gained the approval of the Royal College of Surgeons in Ireland Research Ethics Committee.

**For more information relating to your participation in this study please contact:**

Interviewer: Mairead Mc Daid maireadmcdaid@rcsi.ie Tel no: 087-9602368

Supervisor: Dr. Helen French hfrench@rcsi.ie Tel no: 01 1 402 2258

Thank you for reading this information sheet and for taking an interest in this study.
Appendix 5

Participant Consent Form
School of Physiotherapy, Royal College of Surgeons in Ireland, 123 St Stephens Green, Dublin 2, Ireland.
Principal Investigator Name: Mairead Mc Daid
Research Supervisor Name and Address: Dr. Helen French, School of Physiotherapy, Royal College of Surgeons in Ireland, 123 St Stephens Green, Dublin 2, Ireland
Date:
Study Title: Physiotherapy service provision for people with neurological conditions in primary care – a qualitative study of physiotherapists.

Please cross out as necessary

Have you read or have read to you the Study Information Sheet? Yes / No
Have you had an opportunity to ask questions and discuss this study? Yes / No
Do you understand the information provided? Yes / No
Have you received satisfactory answers to all your questions? Yes / No
Have you received enough information about the study? Yes / No
To whom have you spoken? ____________________________
Do you understand that you have a right to review, edit, or erase any audio recordings or transcripts of a recording to which you have contributed? Yes / No
Do you understand that you are free to withdraw from the study:
• At any time? Yes / No
• Without having to give a reason for withdrawing? Yes / No
Do you agree to take part in this study? Yes / No

Signed: ____________________________ Date ____________________
Name in block letters) __________________________________________________

I the undersigned have taken time to fully explain to the above participant the nature and purpose of this study in a manner that they could understand. I have invited them to ask questions on any aspect of the study that concerned them.

Name …………………………………………………………………………………………………………………..

Signed (Researcher): _______________________ Date _________________
Appendix 6

Curriculum Vitae

Mairead Mc Daid
Coolaw, Taghmon, Co. Wexford
maireadmcdaid@.rcsi.ie
087 9602368

Educational Background

Third level Education: BSc in Health and Human Biology with Sport Science, Grade: 2.1
St. Mary's University College, Twickenham, TW1 4SX, Surrey, UK, 1998-2001
MA in Health Promotion, Grade 2.1
National University of Ireland, Galway, Ireland, 2001-2002
MSc in Rehabilitation Science, Grade: Pass
MSc in Neurology and Gerontology
The Royal College of Surgeons, Dublin, Ireland, 2012-Present

Work Experience

Health Promotion Department, National University of Ireland Galway. Researcher, 2003
Waterford Regional Hospital, Health Service Executive. Physiotherapist, 2006-2009
Gorey Primary Care Team. Health Service Executive. Physiotherapist, 2009-2013
Brain Injury Matters, Northern Ireland, Neuro-physiotherapist, 2014-present

References
Margaret Sweetman  
Physiotherapy Manager,  
Physiotherapy Department,  
Grogans Road,  
Co. Wexford  

Judy Colin  
Physiotherapy Manager,  
Physiotherapy Department,  
Waterford Regional Hospital  
Co. Waterford