Can an occupational therapy intervention increase independence in activities of daily living (ADL) in people who use homecare re-ablement services?

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Abstract

Homecare re-ablement services have been widely implemented by local authorities in England, although there are widespread variations in relation to occupational therapy input within them. These services aim to improve users' ability to manage independently at home and reduce the need for other health and social care services. It is not known whether outcomes are better for people who receive occupational therapy as part of their homecare re-ablement compared with those who do not. This thesis reports a programme of work investigating this, encompassing: a systematic review, a qualitative interview study, and a feasibility randomised controlled trial (RCT) of an occupational therapy intervention targeted at activities of daily living (ADL).

For the systematic review, 11 databases were searched and 13 studies were identified comparing interventions to improve performance in ADL with routine homecare. The review found variability in the content of interventions delivered and the measures used for ADL ability. However, there was moderate evidence that the interventions led to improvements in ADL ability, although most effects were not statistically significant. Those interventions involving occupational therapists led to improvements in ADL, but the content of the occupational therapy input varied.

Semi-structured qualitative interviews were completed with 12 occupational therapists working in re-ablement services and ten people who had received re-ablement services. Interviews covered experiences and opinions of the service, and were analysed using thematic analysis. Findings were categorised in three themes: (1) Re-ablement: Tasks and Activities (2) Re-ablement: Modalities and Strategies for Delivery, and (3) Facilitators and Barriers. The occupational therapists' primary focus was delivering graded programmes to improve users' ability to manage ADL, which they believed they were uniquely placed to provide and tailor to each individual's needs. People using services valued this graded approach believing that it improved their confidence to manage activities.

A feasibility randomised controlled trial (RCT) was conducted in which 30 re-ablement users were randomised to receive either: usual homecare re-ablement without routine OT input (control) (n=15), or usual homecare re-ablement plus a tailored OT programme targeted at ADL (intervention) (n=15). The OT programme was tailored for each participant and included: goal-setting; teaching or practising techniques; equipment and adaptations; and provision of advice or support. Outcomes were: personal and extended ADL; quality of life; falls; and health and social care service use. These were assessed at two-weeks, three and six months post re-ablement. Although there were methodological challenges due to service changes which affected usual care and trial recruitment, it was feasible to enrol and retain participants, deliver the intervention, and collect outcome data which were responsive to change. Participants in both groups showed improvements from baseline, although overall the OT group showed greater improvement; they also used homecare services less frequently and had fewer falls. However, confidence intervals were wide, reflecting the small sample. The intervention was acceptable to participants who particularly valued the tailored advice and support.

The principal conclusions were that there is some evidence that interventions targeted at personal activities of daily living can reduce homecare service users' dependency. Although the content of interventions is variable, those involving occupational therapists appear to be beneficial. Occupational therapists believed that their specialist skills and knowledge in ADL performance were essential facilitators implementing an approach which was suited to each individual's needs and therefore to successful re-ablement. The RCT was feasible and a further powered definitive study is warranted, subject to methodological alterations. The favourable trends in the OT group indicate the potential benefits in this population group.

This is the first RCT of occupational therapy in homecare re-ablement and it is therefore important in the development of the evidence base for this area of practice. A definitive RCT is needed given the widespread national and local government investment, and policy and legislation that continues to underpin the development of homecare re-ablement services.

Publications arising from this study

The following papers, based on this programme of research, have been published:

- **Whitehead, PJ**, Drummond, AER, Walker, MF and Parry, RH. (2013) Interventions to reduce dependency in personal activities of daily living in community dwelling adults who use homecare services: protocol for a systematic review. *Systematic Reviews* 2,49.

- **Whitehead, PJ**, Drummond, AER, Walker, MF, Parry, RH, McGeorge, ID, and Latif, Z. (2014) Occupational Therapy in HomEcare Re-ablement Services (OTHERS): study protocol for a randomized controlled trial *Trials* **15:**447. *Highly Accessed*

- **Whitehead, PJ**, Worthington, EJ, Walker, MF, Parry, RH, and Drummond, AER. (2015) Interventions to reduce dependency in personal activities of daily living in community-dwelling adults who use homecare services: A systematic review *Clinical Rehabilitation* **29**(11): 1064-1976.

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Phillip Whitehead's Role in the Research

Phillip Whitehead conceived the overall study and was awarded the funding to complete the study from a Doctoral Research Fellowship awarded by the National Institute for Health Research (NIHR). Phillip undertook the role of principal investigator throughout the duration of the study. Specifically, Phillip:

- Acted as the first reviewer for the systematic review, carried out the searches and extracted the data. He undertook the data synthesis and write up
- Conducted the pre-intervention qualitative interviews and analysis with occupational therapists and service users
- Recruited and randomised participants to the feasibility randomised controlled trial (RCT)
- Delivered the treatment intervention in the feasibility RCT and completed the intervention pro forma
- Transcribed and analysed the post-intervention qualitative interviews.

Due to Phillip's role in the above activities, assistance was necessary with some aspects of the data collection for this study in order to maintain research rigor. Therefore, the following components were completed by research assistants:

- A second reviewer screened studies and extracted data for the systemic review
- Follow-up (outcome) data for participants in the RCT was collected and entered by research assistants who were masked to the group allocation
- Post-intervention qualitative interviews were completed by a different research assistant.

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List of Abbreviations

ADL – Activities of Daily Living
ASCOT – Adult Social Care Outcomes Toolkit

BI – Barthel Index

CBA- Controlled Before and After Study
COT – College of Occupational Therapists
CRF – Case Report Form
CSSRs – Councils with Social Service Responsibilities
CTL – Care Team Leader

Eq5D –European Quality of Life 5-Dimensions

GCP – Good Clinical Practice
GHQ – General Health Questionnaire

HRQoL – Health Related Quality of Life

IQR – Inter-Quartile Range

MCS – Mental Component Summary (of the Short-Form 36)
MeSH – Medical Subject Headings
MMSE – Mini-Mental State Examination

NCTU – Nottingham Clinical Trials Unit
NEADL – Nottingham Extended Activities of Daily Living
NICE – National Institute for Health and Care Excellence
NIHR – National Institute for Health Research
NRS – Non-Randomised Studies

OT – Occupational Therapy

PCS – Physical Component Summary (of the Short-Form 36)
PGMS – Philadelphia Geriatric Morale Scale
PIS – Patient Information Sheet

QALY – Quality Adjusted Life Year

RCT – Randomised Controlled Trial
REC – Research Ethics Committee

SCIE – Social Care Institute for Excellence
SCRQoL – Social Care Related Quality of Life

SF-36 – Short-Form 36

Chapter One - Homecare Re-ablement Services and Occupational Therapy: A logical partnership?

1.1 Introduction

The provision of services to enable or assist people to remain living independently in their own homes has been central to UK government policy for a number of decades. Lister (2010) quotes Ian Macleod, Minister for Health, speaking in the UK House of Commons in 1953 on the challenges facing social care services:

> "I think that the House will agree that, ideally, we should try to keep people as long as possible in their own homes." (pg. 1).

However it was not until 2014 that the Government placed a statutory duty on local authorities to deliver services that optimise people's independence to manage independently. The Care Act (2014) stipulated that local authorities in England must provide services which will result in the prevention or delay of the amount of care and support needed by adults. Furthermore, The Social Care Institue for Excellence (2014) has argued that there is a need for research which identifies existing services which fall within the remit of 'prevention' in order to improve the evidence base for social care practice.

Homecare re-ablement services are a relatively new development within the adult social care system which form a key component of the Government's strategy for maintaining users' independence at home (Department of Health, 2010, Department of Health, 2012). Re-ablement services have been identified as one of the top ten 'most promising' prevention interventions (Allen and Glasby, 2013) and are therefore now provided by many local authorities across England. However, despite the popularity of such services there are many different ways in which they are delivered and, in particular, it is currently unclear whether occupational therapy involvement in re-ablement is essential to improve outcomes for people who use services (Francis et al., 2011). Indeed, the optimum nature and content of occupational therapy involvement in homecare re-ablement services is not currently known (Social Care Institute for Excellence, 2011a). The programme of research presented in this thesis will investigate this.

This chapter will provide an introduction to homecare re-ablement services and the context, policies, and emergent evidence that have informed their development. It will also provide an overview of occupational therapy, including the theoretical premises of the profession. It will highlight the compatibility between occupational therapy and homecare re-ablement with a particular focus on activities of daily living. This chapter will also outline the research aims and objectives, the philosophical perspective informing the research, and provide an introduction to the thesis.

1.2 Homecare Re-ablement Services

1.2.1 The Growing Demand for "Homecare Services"

In the United Kingdom (UK) and other parts of the world there has been a sustained movement away from the delivery of health and social care services in institutions towards the delivery of services in the home where this is feasible, practicable, and cost effective (World Health Organization, 2008). A plethora of factors have contributed towards the increased emphasis on home-based models of care including: service user and carer preferences, perceived cost benefits compared to hospital based care, and robust research evidence of effectiveness across a range of outcomes spanning a range of services (Chappell et al., 2004). The term "homecare" may thus encompass a variety of services (Thomé et al., 2003) and may include: rehabilitation, home visits by doctors, district and community nursing, end-of-life care, social care, assistive technology, and meals at home services.

For the purposes of this research "homecare services" are defined specifically as those in which a paid care worker visits the person at home in order to provide assistance with a daily living task. These tasks include getting washed and dressed, transferring out of bed or out of a chair, or household tasks such as cooking, cleaning, laundry, and bin emptying. Homecare services are therefore different to "home healthcare services" in which qualified or licenced healthcare professionals provide home visits for activities such as assessment, nursing, or rehabilitation (Rhodes, 2013). Although the terms homecare and home health care may often be used interchangeably, this research adopts

the definition of homecare applied by social care departments in England: formal services providing personal care and domestic support to individuals in their own homes (Social Care Institute for Excellence, 2013a).

Homecare originated as an alternative to the residential care home as it became increasingly apparent that many individuals requiring help with daily living tasks did not need to reside in an institution in order to receive this assistance. Indeed the NHS and Community Care Act 1990 placed a statutory duty on local authorities in Great Britain to provide community care services to those who might benefit from them. By the start of the current millennium up to 97% of social services departments in England had developed an explicit policy to deliver a community-based alternative to residential care (Challis et al., 2001). An individual's need for homecare is linked to an impaired ability to carry out personal care or domestic tasks safely or independently within the home. This need may arise due to one or multiple morbidities, general frailty and/or a disability (Fried et al., 2004). Impairment may either be temporary due to illness, injury or surgery, or long-term due to one or more chronic conditions (Hagsten et al., 2004). People of all ages with temporary or permanent disabilities may therefore receive assistance from homecare services.

Although social care services provide homecare to people of all ages, it is predominantly directed towards older adults. There are currently over ten million people in the UK aged over 65 years, and this figure is expected to double by 2050 (Parliament UK, 2015). Increasing life expectancy is not being proportionately matched with healthy life expectancy (Cracknell, 2010); therefore people are living longer, with a greater level of disability. The combination of an ageing population, an increased emphasis on community based care, and a reduction in the capacity for informal care provision within the family unit has led to a rapid escalation in the demand for homecare services (Genet et al., 2011, World Health Organization, 2008). As demand has increased, so too have the costs associated with care provision, with many countries facing a shortfall in the number of workers to supply the amount of care that will be required in the coming decades (Hussein and Manthorpe,

2005). Although there are between-country differences in the organisations that have the responsibility for providing homecare services, with provision spanning both health and social care service providers, there is a consistent demand for these services in Europe (World Health Organization, 2008) and in other parts of the world (Jacobs, 2013).

In the UK the responsibility for community care services, including homecare, lies with local authority 'councils'. Councils with Social Service Responsibilities (CSSRs) are more generally referred to as social care services, with homecare forming a specific component of the service. Until recently, homecare services in the UK have predominantly centred on providing assistance in the form of doing the tasks which the individual is no longer able to manage. This has been termed 'a doing for' approach (Lewin and Vandermeulen, 2010, Parsons et al., 2012). Pilkington (2008) has highlighted that traditional homecare services have taken over the responsibilities for carrying out personal care activities from users and assigned these to formal care workers. He also reports that anecdotal evidence suggests that such services are rarely reduced once they have been setup. Thus, when a homecare service has commenced for an individual recipient it has often remained in place on a long-term basis. In the current financial climate the economic rationale of this may be questioned. Such an approach is likely to foster a culture of dependency, with service recipients becoming deskilled by reliance on others, or becoming accustomed to regular social contact with care workers (Petch, 2008).

In response to the growing demand for homecare services, the increasing costs of providing this care, and the recognition that such services may lead to premature dependency, "prevention services" have been developed which aim to avert the need for homecare support (Curry, 2006, Allen and Glasby, 2013).

1.2.2 The Prevention Agenda and Homecare Services

In the context of health and social care services, prevention refers to:

> "interventions which seek to help people maintain or improve

> health before it is compromised… that prevent/delay the need for more costly intensive services" (Curry, 2006: 6)

The UK Government has placed increasing emphasis on the development and commission of preventative services in both health and social care sectors, underpinning this with legislation as part of The Health and Social Care Act (2012) and The Care Act (2014) . This change in emphasis is primarily due to the rationale that interventions which delay the need for further services will result in cost savings and facilitate greater efficiency within the health and social care system. Within the UK, health and social care services have historically been structured in order to respond and react to acute healthcare crises (Department of Health, 2012). The Department of Health has recognised that a proactive approach towards crisis avoidance is likely to be judicious, and complementary to the approach of acute services. A number of key policy documents have informed this process in social care which will be outlined chronologically.

In 1998 the Government first emphasised the importance of prevention and promoting independence for users of social care services. The White Paper *Modernising social services: promoting independence, improving protection, raising standards* (Department of Health, 1998) criticised the culture of services that fostered dependency and recommended an alternate focus on 'enablement' services in order to ensure that people were able to remain living independently at home where this was most appropriate. The succeeding White Paper *Our Health, Our Care, Our Say: a new direction for community services* (Department of Health, 2006) and policy document *Putting People First* (Department of Health, 2008b) firmly established the Government's commitment to establishing preventative services as a means of promoting well-being, re-emphasising the shift away from crisis-based services.

The most recent White Paper relating to social care *Caring for Our Future: Reforming Care and Support* (Department of Health, 2012) built upon the goals of the 2006 paper, particularly with regard to adult social care services. This paper was based upon extensive consultations with people who use

services and highlighted that the overall objectives of 'prevention' are consistent with their wishes to remain living independently at home for as long as possible. However, *Caring for Our Future* goes further than its predecessor in outlining the intention of the Government to place statutory duty on local authorities to incorporate both preventative services and early intervention into their service provision. It also specifically highlights that re-ablement services form a core part of the Government's "vision" for the future care and support system in both assisting recovery after a crisis event, and supporting people to maintain their independence at home. Allen and Glasby (2013) conducted a review aiming to identify the top ten most promising preventative initiatives in the UK for older people. They reported that re-ablement, embedded within local authority homecare services, was amongst that top ten.

The Care Act (2014) received royal assent in May 2014. This act placed "the wellbeing principle" at the core of all social care service delivery. This means that local authorities must consider the wellbeing of their citizens in everything they do. Although the act does not specifically relate to independent living, the wellbeing principle is inextricably linked to independent living as it relates to dignity, choice and control (Department of Health, 2014). It is well documented that many disabled people wish to retain their ability to live independently in their own homes. Furthermore, The Care Act (2014) specifically promotes re-ablement services as an example of tertiary prevention: interventions aiming to minimise the impact of disability for those who already have health and social care needs.

1.2.3 What are "Homecare Re-ablement Services"?

A number of local authorities in England have responded to the political focus on prevention by remodelling their homecare services as "*homecare re-ablement* services" (Allen and Glasby, 2013, CSED, 2007, Glendinning et al., 2010, Glendinning and Newbronner, 2008, Littlechild et al., 2010). In contrast to the traditional 'doing for' homecare approach, the aim of homecare re-ablement services is to assist people to regain their ability to complete daily living tasks by improving their physical and social functioning (CSED, 2007,

Pilkington, 2008, Littlechild et al., 2010). A widely accepted definition of homecare re-ablement is:

> "Services for people with poor physical or mental health to help them accommodate their illness by learning or re-learning the skills necessary for daily living" (Kent et al., 2000: 12).

Essentially, the primary difference between a traditional homecare service and a homecare re-ablement service is a change in the philosophy from a 'doing for' approach to an enabling one. Rather than simply going into the person's home to take over the completion of a task or activity the re-ablement worker will instead often stand alongside and observe the person carrying out a task rather than doing the activity for them in order to assist them to build their confidence and regain their functional abilities (Le Mesurier and Cumella, 1999). The services are provided for a time-limited period, usually lasting for up to six weeks, with some flexibility to extend this in certain circumstances (Glendinning et al., 2010). They are usually provided by local authorities, although some authorities may contract their services to an external provider. Following the re-ablement episode, if on-going homecare is required this will be provided by a long-term care agency (either the local authority or an external provider).

Through homecare re-ablement, the local authority is able to gather more detailed information about the person's abilities thus extending the assessment process. Whereas previously an initial one-off assessment would have been completed, which informed the need for homecare, the re-ablement service can instead provide an on-going assessment period with continual assessment and review over the course of the episode (Pilkington, 2008). Homecare re-ablement workers are able to provide input into this process through their continual observation (Le Mesurier and Cumella, 1999). This change means that the assessment process may be considered to be more realistic and comprehensive, based on the actual abilities of the person over a given time-period. The need for and provision of on-going services can then be based on these observations rather than a one-off "snap shot".

1.2.4 Homecare Re-ablement or Rehabilitation at Home – Is there a difference?

In the UK, homecare re-ablement services differ from community rehabilitation teams, and this is due in part to the way that they are funded. Re-ablement services are commonly funded by the local authority (Littlechild et al., 2010), although some services may be jointly funded by the health authority (CSED, 2007). In contrast, community rehabilitation services tend to be primarily funded by the health authority. Another difference between re-ablement and community rehabilitation services is the conceptual basis for the interventions. Community rehabilitation teams tend to adopt a medical model of rehabilitation in which there is a focus on restoring the physical abilities of the user. By contrast, re-ablement services are purported to conform to the social model of disability which postulates that people are disabled by physical and social *societal* barriers rather than physical impairments (Oliver and Sapey, 2006, Bricher, 2000). As such:

> "Medical models focus on restoring the passive individual to normal levels of functioning, while social models emphasise the person's right to achieve a preferred lifestyle and the professional's role in tackling social and environmental barriers which might hinder that achievement" (Le Mesurier and Cumella, 1999: 27).

Although it is often claimed that re-ablement services are based on a social model approach, with a focus on the environment and the environmental barriers to participation (Rabiee and Glendinning, 2011), there are limitations in applying this model to such services. There may be little discernible difference in terms of what is provided in such services compared with those that are deemed to operate according to a more 'medical model'. Services operating within a social or medical model *may* both focus on an individual's functioning and both *may* focus on social and environmental barriers to participation. Thus, in practice, there may be considerable overlap between services, and the boundaries between the remit of re-ablement, intermediate care and rehabilitation services are often blurred (CSED, 2007, Department of Health, 2014). This applies to both service provision and service philosophy.

The Department of Health (2014) has acknowledged that the terms 'intermediate care', 'rehabilitation' and 're-ablement' tend to be used interchangeably. They state that home-based intermediate care services mainly provide rehabilitation services by a team of qualified healthcare specialists such as nurses and therapists. By contrast, re-ablement tends to provide services to help people live independently but is mainly led by "care and support professionals". As the integration of health and social care services continues to gather pace, there is increasingly less and less distinction between health and social care services. Indeed the *National Audit for Intermediate Care* in 2013 and 2014 included re-ablement and defined the re-ablement workforce as "MDT [multidisciplinary] but predominantly social care professionals" (pg. 54) (NHS England, 2014). This definition would include occupational therapists as social care professionals.

The definition which was used in the present study is consistent with that adopted by NHS England (2014) in the *National Audit for Intermediate Care*. This study also specifically defines "*homecare re-ablement*" as a service led by local authorities (councils) which is commonly provided by a reconfigured homecare service with social care staff as the main providers. This is in contrast to rehabilitation which is mainly led by the health service involving a multidisciplinary healthcare team. Occupational therapists may be employed to work directly in homecare re-ablement (Boniface et al., 2013), usually by the local authority, but the principal difference is that the service is configured around an initial need for homecare. It is acknowledged here that this may not exclusively be the case and that there may be differences between services and that re-ablement services may also involve multi-disciplinary teams.

1.2.5 Who are Homecare Re-ablement Services for?

Homecare re-ablement services are usually provided to people who are newly referred for homecare support. This means that, at the time of the referral, they usually have no current existing homecare package in place. These may be people being discharged from hospital, suffering from a crisis event at home, a breakdown in an existing informal or family care arrangement, or a

deterioration of an on-going chronic condition. Alternatively, other services may accept referrals for people with a homecare package in place who may be deemed to benefit from a further re-ablement episode (i.e. those with a new impairment or a reduction in their ability to cope at home). Some services restrict their eligibility to older adults, whilst others accept any adult aged 18 or older.

In their early days, homecare re-ablement services were categorised into two different types of services: 'selective' or 'intake' schemes (Glendinning and Newbronner, 2008). In selective based services, only those who were believed to benefit most from a re-ablement approach will receive a service. This may be people returning home after a hospital stay, or at those who are assessed as having potential for improvement. Alternatively, intake schemes generally accepted all users newly referred for homecare services and operated much less selectively. Overall, it is unclear which individuals should be specifically targeted in selective based schemes, or whether intake services are less effective because of the broader range of people they accept (CSED, 2007). More recently, intake schemes have become the default style of delivery for local authority led re-ablement services (Social Care Institute for Excellence, 2011b).

1.2.6 Homecare Re-ablement – The evidence

Four key studies have evaluated homecare re-ablement in the UK. Two of these were individual service evaluations (Kent et al., 2000, McLeod and Mair, 2009), and two were evaluations across several services carried out by the Social Policy Research Unit at the University of York (CSED, 2007, Glendinning et al., 2010).

The individual evaluation studies compared outcomes for users of the Leicestershire County Council re-ablement service (Kent et al., 2000) and the City of Edinburgh re-ablement service (McLeod and Mair, 2009) with matched control groups receiving usual homecare. For the re-ablement groups in both studies, use of homecare services was much more likely to be discontinued or reduced, with over 60% of users experiencing reductions in services at the

end of the re-ablement episode. These studies focussed on service level outcomes at the end of the re-ablement period, primarily number of hours of homecare received, but did not focus on individual outcomes or longer-term outcomes.

A retrospective longitudinal study selected four local authority sites which had a re-ablement service that had been established for at least four years (CSED, 2007). The study team retrospectively obtained routinely collected quantitative data for people who had had a period of re-ablement and analysed their social care usage (homecare, residential care and meals at home) over the succeeding two years. The study reported that in three of the four sites, between a third and a half of all people did not require any homecare following the re-ablement episode. In the fourth site over 85% did not require any homecare following re-ablement. Overall, the percentages of participants needing less homecare increased over the two-year period following the re-ablement episode (with the exception of one site at which there was a small increase). This applied to all age groups, including those aged 85 and over.

A prospective evaluation (controlled before and after) study was subsequently completed (Glendinning et al., 2010). This study compared people using re-ablement services from five local authorities in England (n=654) with users of usual homecare from five other local authorities (n=361), over a 12-month follow-up period. Recipients of re-ablement services had significantly better health and social care related quality of life outcomes than the usual homecare group. Furthermore, it was reported that although the cost of the re-ablement episode was higher than usual homecare, this was offset by the subsequent reduction in social care costs amongst the re-ablement group. The social care costs for the re-ablement group were 60 per cent lower than the usual homecare group, following the period of re-ablement. The authors reported a high probability that re-ablement is cost effective.

Although these studies provide indications for the potential of re-ablement services to reduce subsequent social care use, there are some methodological

limitations which should be considered. In the matched control studies, few details regarding the process of matching the two groups are provided, and there is limited information in order to determine whether they were comparable in terms of their demographic and other characteristics. It is therefore possible that there may be important differences between these groups in known and unknown confounding factors. There were also some methodological limitations to the retrospective longitudinal study. The authors highlighted that as the data were collected retrospectively there was no baseline data or control group. Thus, any causality cannot be directly attributed to the re-ablement service. Finally, the prospective study also had methodological limitations. The authors stated that a randomised controlled trial design was not feasible due to each local authority providing *only* one of either homecare re-ablement or usual homecare. However, there was a high loss to follow-up in the study with 50% of participants lost and an additional 12% died. This may have a significant impact on the validity of the findings. A randomised controlled trial comparing re-ablement with standard 'compensatory' services is currently ongoing in Norway (Tuntland et al., 2014), however the results of this have not yet been reported.

The evidence above highlights that homecare re-ablement services result in significant reductions in subsequent homecare usage. Notwithstanding the limitations described, the evidence spans 11 UK re-ablement sites, and demonstrates consistent reductions in social care usage following re-ablement. However, Francis et al. (2011) have suggested that the emphasis on service outcomes as opposed to individual outcomes has been misplaced. Although it might be inferred that those who need less homecare are able to manage self-care activities more independently, there is limited actual evidence for this and a dearth of evidence of outcomes of performance in self-care (personal activities of daily living) following a period of re-ablement. It might be that the emphasis on reducing services leads people to find other, alternative ways of managing their daily activities (such as with help from family) and therefore it is important to also measure these individual outcomes specifically.

Despite the indications that homecare re-ablement services have a reductive effect on subsequent social care usage, a number of questions are raised by the research regarding how services should be organised to maximum effect. Rabiee and Glendinning (2011) conducted a qualitative study embedded within the larger evaluation study discussed above (Glendinning et al., 2010) which aimed to identify organisational factors and service delivery components which impacted upon their overall effectiveness. The qualitative data were collected from five sites with established re-ablement services and included: interviews with service managers, observations of service user visits, and focus group discussions with front line staff. A number of factors were identified which were believed to contribute to the success of re-ablement services. These covered aspects such as: characteristics of people using services; flexibility and prompt commencement of the intervention; and staff attitudes, skills and training. Furthermore, access to the specialist skills provided by occupational therapists was highlighted as a particularly important factor (Glendinning et al., 2010, Rabiee and Glendinning, 2011).

More widely, studies evaluating interventions to prevent or delay functional decline in older adults are commonplace (Beswick et al., 2008, Daniels et al., 2008, Gill et al., 2002, Cunliffe et al., 2004, Giltlin et al., 2006). However, the results of systematic reviews have produced mixed results. This may be, in-part, due to the heterogeneity of the interventions and study populations. This would suggest that there is a need to direct research towards specific components of programmes aiming to prevent or delay functional decline. Occupational therapy may be one such component.

The College of Occupational Therapists (2010) produced a position statement *Re-ablement: the added value of Occupational Therapists.* In this they argued that the specialist skills of occupational therapists were essential to successful outcomes:

> "If local authorities want to achieve the best outcomes for both their service users and demonstrable cost benefit for their re-ablement services they need to involve occupational therapists" (pg. 1).

Re-ablement team managers and staff have reported that early and rapid access to occupational therapy skills, particularly relating to the specialist assessments for equipment for personal care, bed mobility or transfers, is an effective way to reduce the on-going care burden (Rabiee and Glendinning, 2011). Similarly, Yates (2011) highlighted that 48% of people receiving re-ablement in a pilot service in Wolverhampton received equipment, potentially delaying the need for care and/or major housing adaptations, which resulted in cost savings. Such equipment is provided following occupational therapy assessment.

Despite the views of re-ablement staff and the College of Occupational Therapists that occupational therapists are integral to the success of re-ablement services, it seems that the quantity and content of occupational therapy input varies. In Glendinning et al. (2010)'s study, two of the five sites had occupational therapists within the team, one had 'negotiated fast tracked access' to occupational therapists outside the team, and two had no specialised access arrangements. The authors reported that 29% of the 654 re-ablement people using re-ablement services received support from an occupational therapist. Although this was the largest evaluation of homecare re-ablement in the UK to-date, Glendinning et al. (2010) reported that it was not possible to compare services directly employing occupational therapists with those that did not. Thus it is still unknown whether teams with direct access to occupational therapists are more effective at improving users' independence than those without such access. Moreover, the role and remit of occupational therapists within these teams is also unclear. The Social Care Institute for Excellence (2011a) has argued that there is a need for research that compares the effectiveness and cost effectiveness of homecare re-ablement teams that employ occupational therapists as core team members with those that do not, highlighting that this is a research priority.

1.3 Occupational Therapy and Homecare Re-ablement Services

This section of the chapter will provide an introduction to occupational

therapy, focussing on the philosophy and theoretical basis of the profession highlighting how occupational therapy practice is being increasingly delivered in community settings. It will also outline how occupational therapy has been defined as a complex intervention and detail how an occupational therapy intervention may affect individuals' performance of personal activities of daily living in the home environment. It will highlight the role of occupational therapy in adult social care and link the principles of occupational therapy with those of homecare re-ablement, focussing particularly on activities of daily living as the core component of treatment.

1.3.1 Occupational Therapy – Core Concepts and Community Focus

> "The primary goal of occupational therapy is to enable people to participate in the activities of everyday life. Occupational therapists achieve this outcome by working with people and communities to enhance their ability to engage in the occupations they want to, need to, or are expected to do, or by modifying the occupation or the environment to better support their occupational engagement" (World Federation of Occupational Therapists, 2012).

Occupational therapists use the definition of 'occupation' in its broadest sense to encompass the way people spend their time and thus incorporate all those activities people conduct in their daily lives (College of Occupational Therapists, 2013). These activities range from personal activities of daily living involving self-care such as washing, dressing and feeding; extended activities of daily living such as outdoor mobility or meal preparation; involvement with family; and wider participation in the community, including leisure activities and paid and unpaid vocational activities. Put simply, occupational therapists focus on the 'simple things' (Hagedorn, 2000): self-care, productivity and leisure (McColl, 2003).

Yerxa (1994) asserts that the element of practice linking all occupational therapists globally is a focus on "engagement in daily life". She proposes that the occupational therapy profession is uniquely placed in holding the key skills necessary to help people to "manage and thrive in their environments" (pg.

587). The theoretical basis for occupational therapy is a link between the concepts of 'occupation' and 'health' (Wilcock, 2006, Townsend, 2002, Yerxa, 1990, McColl, 2003). Occupational therapists propose that the maintenance of health and well-being is enhanced by participation in activities that are relevant and stimulating to each individual. They believe that health can be improved by 'doing', and that doing is an innate part of human behaviour and evolutionarily essential to the maintenance of good health (Wilcock, 2006). They argue that although a lifestyle filled with a variety and balance of occupations will not prevent disease or illness, it will promote well-being through fulfilment (Wilcock, 2006).

Occupational therapists place particular importance on the environment in which activities are carried out, assessing how an individual's ability to perform specific occupations may be facilitated or impacted by this. The Person-Environment-Occupation Model (Law et al., 1996) roots occupational performance in the person's environment. This model postulates a dynamic link between the person, the environment and their occupations: the greater the compatibility between the person's ability and the properties of the environment, the greater their ability to perform activities. Furthermore, Law et al. (1996) propose that occupational therapy interventions should seek to maximise the compatibility between the person and their environment in order to enhance their occupational performance, and that it allows occupational therapists to incorporate the complexities and realities of individuals' environments on their functional abilities (Strong et al., 1999). This may involve focussing on the abilities of the person or focussing on adapting the environment in order to maximise the person's ability to function within it. This position is consistent with the social model of disability adopted by many re-ablement services, which focuses on environment and community barriers as principal contributors to disability (Rabiee and Glendinning, 2011, Le Mesurier and Cumella, 1999).

The increased emphasis on healthcare delivery in the home has been mirrored by an increasing focus on delivering occupational therapy in community settings (Scaffa and Reitz, 2013). In the United Kingdom occupational

therapists are the largest group of allied health professionals employed in social care services. Despite comprising only 2% of the social care workforce occupational therapists deal with over 35% of social care referrals (Department of Health, 2008a). This illustrates the high demand for their services and the contribution that occupational therapists make to people living in the community. The College of Occupational Therapists (2012) has identified a number of different ways in which occupational therapists can contribute to social care services including: promoting personalisation of services, reviewing care packages, providing manual handling advice, assessing for and providing assistive devices, modifying the home environment in collaboration with people who have disabilities, and contributing to re-ablement services.

1.3.2 Occupational Therapy as a Complex Intervention

'Occupational therapy' is a therapeutic intervention which aims to assist individuals to maximise their ability to carry out activity; it has been defined by Creek (2003) as a complex intervention insofar as it is an overall process in which several components are combined:

> "The visible aspect of occupational therapy intervention is a series of actions by the therapist [conducted in negotiation with the client] that together form a recognisable sequence called the occupational therapy process" (Creek 2003: 8).

The Medical Research Council (2008) has defined a complex intervention as one that has several interacting components. These components may present problems when evaluating effectiveness as it may be difficult to pinpoint the exact mechanism of the intervention that is having an effect. Therefore it is important to base a complex intervention on a thorough theoretical understanding of the mechanisms by which the intervention causes change (Medical Research Council, 2008, Craig et al., 2013).

According to Creek (2003) the occupational therapy intervention begins with the collation of information about the individual client and an assessment as

to whether he or she may be rehabilitated or re-abled to manage an activity. It then involves activity as both the content of the treatment intervention and the desired outcome of treatment. Thus, in occupational therapy, 'occupation' is often used as both the goal of the treatment and the treatment itself (Legg et al., 2006). The actual treatment process commonly involves activity analysis in which an activity is broken down into its component parts in order to identify the skills that are essential to perform it (Creek, 2003). Based on this analysis, tasks may then be graded or sequenced whereby the task is manipulated in therapy in order to make it progressively more or less difficult to perform (Creek, 2003). If it is not possible to assist the individual to restore performance then the occupational therapist will consider alternative compensatory strategies. These involve adapting the activity to make it easier to perform, or if this is not appropriate then the individual's environment may be modified so as to enable the activity to be performed.

In practice, the above components may be combined in an infinite number of ways that are appropriate to each individual's circumstances, abilities, and capabilities. Occupational therapists use their knowledge, skills, experience and training in order to combine these into a process which forms the occupational therapy intervention (Creek, 2003, Hagedorn, 2000). Occupational therapists combine their knowledge about medical conditions and their likely prognosis with their assessment of the person and their home environment to provide an intervention which is based upon a balance of the above components. Therefore although each intervention may be unique and bespoke, because it is tailored to the specific needs of each individual, the core components of the therapeutic process are implicit in each intervention.

Complex 'occupational therapy interventions' have been delivered in numerous randomised controlled trials. Two examples will be outlined here. Sackley et al. (2015) conducted a cluster RCT involving 1042 care home residents with stroke. The treatment was a three-month occupational therapy programme focussing on personal activities of daily living (ADL), mobility, and adaptations to the environment. The frequency and duration of therapy sessions were determined by the goals that were agreed between therapists

and participants. This is particularly relevant as it was delivered outside a healthcare setting to a care home population. Gilbertson et al. (2000) conducted an RCT in which a six week occupational therapy programme was given to the intervention group. This intervention consisted of client centred goal setting to inform a programme targeting self-care, domestic or leisure activities. The interventions in both of these studies consisted of targeted occupational therapy programmes; the specific content of these programmes was tailored to the needs of each particular recipient. However, the core concepts were assessment and goal setting leading to a programme that was based upon the principles of occupational therapy, delivered or directed by a qualified occupational therapist. In the study by Sackley et al. (2015) in care homes there was no treatment effect in terms of ADL, whereas the study by Gilbertson et al. (2000) showed improvements in the intervention group in terms of both personal and extended ADL.

1.3.3 Occupational Therapy and Homecare Re-ablement Services: A shared focus on Activities of Daily Living

> "Home care re-ablement services provide personal care, help with activities of daily living and other practical tasks for a time-limited period, in such a way as to enable users to develop both the confidence and practical skills to carry out these activities themselves" (Glendinning et al., 2010: 1).

Although there are many ways in which occupational therapy principles and skills are congruent with homecare re-ablement, a central tenet of this research is that a focus on everyday personal activities of daily living is the core compatibility between the two. Homecare re-ablement services tend to focus on increasing self-care skills (While, 2011): a core component of occupational therapy practice (College of Occupational Therapists, 2013). Managing activities of daily living is essential for independent living (Covinsky et al., 2003). Eligibility, or need for homecare services, is based upon on impairment or difficulty in managing personal care. Thus it is logical that a primary focus on enhancing users' capacity to carry out these activities independently is a judicious route to improved outcomes for people using services and service providers. In the short-term, if people are able to manage

tasks independently this will entail less reliance on services. Furthermore, remaining independently at home is consistent with the aims and wishes of people using services, and a priority for local authorities and national Government (Department of Health, 2012).

Improved ability to manage personal activities of daily living is also linked with positive long-term outcomes. Studies have identified that loss of ability to manage these activities is often a precursor to further disability (Jagger et al., 2001, Boyd et al., 2008), with bathing being a particularly important activity (Gill et al., 2006). A prospective cohort study, conducted in the United States, recruited 754 independent living adults aged over 70 years who did not require any assistance with activities of daily living (Gill et al., 2006). Disability was assessed in: bathing, dressing, indoor mobility, and transferring from a chair every month for up to six years. The onset of bathing disability was not preceded by disability in the other three activities of daily living in 86% of cases. However, disability in bathing often served as a gateway for further impairments. Boyd et al. (2008) compared functional outcomes of 2,279 older adults aged over 70 years non-electively admitted to general medical services. They reported that being discharged with new or additional disability in activity of daily living performance was associated with a worse prognosis for recovery. They also reported that recovery of ADL ability within the first month was associated with better long-term outcomes. These findings indicate that timely restoration of newly impaired performance in activities of daily living may enhance longer-term prognosis for independent living.

Thus the time-point at which people need a new or increased care package represents a significant point to intervene in order to improve functional ability (Nadash and Hollander Feldman, 2003, Parsons and Parsons, 2012), prevent the need for further intervention and more costly services, and delay the onset of further disability (Boyd et al., 2008).

A recent study in Denmark (Winkel et al., 2014) used a before and after evaluation of a re-ablement service. The re-ablement intervention was led by an occupational therapist who agreed ADL goals with the user which were then

handed over to home care workers. These workers were not intended to provide 'therapy', moreover to provide an opportunity to practice and assist with the activities and tasks that were not able to be done independently. These results demonstrated improvement in ADL ability among the recipients, which was maintained at ten-month follow-up. However, the absence of a control group is problematic as the underlying effect is not known.

1.3.4 Occupational Therapy Improves Activities of Daily Living Outcomes – What is the evidence?

There is robust research evidence across a range of clinical settings and diagnostic conditions demonstrating that interventions provided by, or under the direction of, an occupational therapist can improve an individual's performance in activities of daily living. This section will present the evidence on occupational therapy and performance in activities of daily living and draw links to homecare re-ablement services.

The majority of the research evidence that occupational therapy enhances recovery of self-care abilities has been generated in the field of stroke rehabilitation. An individual patient data meta-analysis of randomised controlled trials of community occupational therapy for stroke patients, included data on 1143 participants from eight trials (Walker et al., 2004). The results indicated that occupational therapy interventions, targeted specifically at activities of daily living, improved performance in both personal activities of daily living and extended activities of daily living for people living in the community. The authors concluded that interventions were most effective at improving performance in activities of daily living when they specifically targeted this. A subsequent Cochrane systematic review focussed on occupational therapy targeted at personal activities of daily living for patients following a stroke (Legg et al., 2006). This review compared interventions provided by an occupational therapist, with routine care or no care. Nine randomised controlled trials were included in the review with a total of 1258 participants. The results indicated that occupational therapy interventions significantly increased participant's personal activity of daily living scores, and significantly reduced the odds of a poor outcome (defined as: death, requiring institutionalised care at the end of scheduled follow up, experiencing a decline

in ability to perform personal activities of daily living, or being dependent in personal activities of daily living).

There is also evidence that occupational therapy interventions are effective for community-dwelling older people. A systematic review of occupational therapy for community dwelling independent living people aged over 60 years included data from 17 studies, comprising ten randomised controlled trials and seven non randomised controlled designs (Steultjens et al., 2004). The authors reported strong evidence that functional ability (ADL ability) can be improved following provision of equipment as part of a home assessment by an occupational therapist. They also reported some evidence supporting the training of skills combined with the use of equipment in reducing falls and increasing functional ability. A similar systematic review of occupational therapy for older adults included data from 17 studies (Wilkins et al., 2003) also concluded that there is evidence that occupational therapy interventions can prevent functional decline with older people.

There is a myriad of randomised controlled trials demonstrating positive impacts of occupational therapy on performance in activities of daily living. Three of particular relevance to the proposed research will be described below. The two systematic reviews conducted with older people (Steultjens et al., 2004, Wilkins et al., 2003) rated the strongest evidence as having been produced by a study conducted in the United States (Clark et al., 1997). This was a randomised controlled trial of a preventative occupational therapy intervention in which 361 independent-living older adults were randomised to one of three groups: an OT intervention, a social activity control, or a non-treatment control group. Those in the occupational therapy intervention received two hours of group occupational therapy and nine hours of individual occupational therapy, which was tailored to their individual needs and circumstances. The social activity group participated in group activities such as cinema outings. The control group received no intervention. At the end of the nine-month treatment period participants in the occupational therapy group had significantly better scores on the life-satisfaction index and the health perception scale, indicating that they had better functional ability.

A randomised controlled trial of early individualised postoperative occupational therapy provided to patients after hip fracture randomised 100 participants to receive either an individualised occupational therapy-led intervention focussed on training in activities of daily living, or usual care (Hagsten et al., 2004). After two months, all participants had regained their ability to carry out activities of daily living. However, those in the intervention group regained these skills faster, which reduced the likelihood of their requiring post-operative care at home. Only one trial was identified which was conducted within adult social care services within the UK (Logan et al., 1997). In this study people with a stroke were randomised to receive an early enhanced occupational therapy intervention, compared to the usual waiting list service. At three months, participants in the enhanced group had improved ability to perform activities of daily living, and better personal mobility than the usual care group at six months. Again, the findings from these two studies highlight the importance of timely intervention provided by occupational therapists when independence is compromised.

The above studies provide compelling evidence for the effectiveness of occupational therapy interventions with populations who have impaired ability to carry out activities of daily living due to disease specific pathology (e.g. stroke), temporary impairment such as hip fracture, and/or multiple morbidities associated with the ageing process. Although many of the studies were small, meta-analyses have provided statistically significant results. These findings could be extrapolated to suggest that occupational therapy is likely to lead to improved outcomes for users of homecare re-ablement services whose diverse range of medical conditions and circumstances lead to impairment in performance in activities of daily living.

1.4 Why is this Study Needed?

The primary goal of homecare re-ablement services is to assist users to regain lost skills and abilities (Kent et al., 2000), particularly relating to independence within the home. Given the specialist skills of occupational therapists in this area, it may seem logical that occupational therapists should be involved in

these services; however, the extent and nature of their input varies nationally. The Social Care Institute for Excellence (2011a), in collaboration with the College of Occupational Therapists, has outlined four potential configurations of occupational therapy within re-ablement services. These are:

1. Working as core team members;
2. Working collaboratively with the team, based externally to the team;
3. Providing training to re-ablement team members;
4. Providing progress reviews to people moving through the re-ablement service.

A central tenet of this research is that occupational therapists have the greatest value when working as core team members at the frontline of the service. It is the specialist skills of the occupational therapist that are particularly important in identifying the factors which are compromising independence. People using services or non-specialist assessors may not always identify these (Littlechild et al., 2010), therefore important potential strategies may be missed. In a study by Pighills et al. (2011) 238 adults aged over 70 years with a history of falling were randomised to have either: a home assessment and modifications by an occupational therapist, a home assessment and modifications by a trained (non-professionally qualified) assessor, or usual care. Those who had the occupational therapy assessment and intervention were significantly less likely to fall during the 12-month follow-up period (IRR 50.54, 95% CI 0.36–0.83, P=.005). This study suggests that the specialist skills of occupational therapists when assessing the home environment are more likely to lead to better user outcomes in terms of safety and independence. Thus, it seems reasonable to extrapolate that the specialist skills provided by occupational therapists have an impact on outcomes.

The Department of Health has emphasised its commitment to re-ablement services suggesting that the provision of re-ablement services should form part of a national strategy to reduce the number of people requiring on-going care, and to increase the overall efficiency and cost effectiveness of the care system (Department of Health 2008b, 2009, 2010, 2012). It has also allocated substantial funding to these services (Department of Health, 2010). However,

it is not known whether people have better outcomes with occupational therapy as part of their re-ablement than without it. Given the specialist skills of occupational therapists in providing interventions targeted at activities of daily living, it seems likely that they could lead to improved ability to manage ADL and less use of ongoing homecare services. Occupational therapy input could thus be essential to successful re-ablement outcomes. However, given the lack of specific evidence in re-ablement, research to investigate this is needed.

The Social Care Institute for Excellence (2011a) suggest that research on re-ablement should compare the effectiveness and cost effectiveness of teams that employ occupational therapists as core team members with those that do not. This research will investigate this.

1.4.1 Selection of this topic for Doctoral Study

This study was conceived and designed in response to the above statement by the Social Care Institute for Excellence (2011a). The researcher is a social care occupational therapist by professional background and worked in social care services for over eight years as a homecare worker and an occupational therapist. Occupational therapists are the only allied health professionals to be routinely employed in social care services. The researcher had a previously held belief, resulting from his time in clinical practice, that their involvement in the assessment and management of homecare packages could lead to better outcomes for users and service providers; this belief was based particularly on the shared focus on activities of daily living outlined earlier in this chapter. This interest pre-dated the advent of homecare *re-ablement* services. When homecare re-ablement services became extensively implemented, with widespread variations in occupational therapy input, this afforded an opportunity to develop a research proposal for doctoral study, addressing this issue of central importance to the current health and social care policy agenda, which was consistent with a previous interest arising from clinical practice.

1.5 Research Aims and Plan of Investigation

The overall aim of this research is to investigate whether an intervention, based on core occupational therapy principles and delivered by an occupational therapist, can increase independence in personal activities of daily living in users of homecare re-ablement services. This is based on the compatibility between the re-ablement ethos, the theoretical basis of occupational therapy intervention, and the existing evidence base of occupational therapy interventions. It is thus hypothesised that an intervention drawing on the core skills of the occupational therapist, which is tailored to the needs of each individual homecare re-ablement recipient, will increase users' ability to carry out personal activities of daily living independently and thus reduce their dependency on homecare services.

There are four aims for this research:

1. To identify the existing evidence for interventions in homecare re-ablement, and to assess the quality of this evidence.
2. To ascertain the role, interventions, and practices adopted by occupational therapists currently working in re-ablement services.
3. To investigate the views of people using re-ablement services in order to identify what they want from re-ablement and occupational therapy interventions, and how these can be delivered most acceptably.
4. To evaluate the feasibility of testing the effectiveness and cost effectiveness of an occupational therapy intervention in homecare re-ablement services, and to describe the content of that intervention.

1.6 MRC Framework for Complex Interventions

The Medical Research Council (2008) has produced guidelines for the development and evaluation of complex interventions. This recommends that the process should begin with a systematic review, in order to identify and assess the existing evidence. The systematic review should also identify those

components which will enhance the delivery of the intervention and factors such as the frequency and duration of the intervention. The guideline also recommends that the implementation of complex interventions is likely to be enhanced if users are involved at all stages of the intervention development and evaluation process, advocating that qualitative methods can inform this process. It also highlights that a full-evaluation study should be preceded by an appropriate piloting phase in order to ensure that both the intervention and research procedures are feasible.

There are three strands to this programme of research which are based on the recommendations of the Medical Research Council (2008) and designed to meet each of the aims outlined above. These are:

1. Systematic review. The systematic review will identify relevant evidence and assess its quality.
2. Qualitative investigation. This will explore current occupational therapy practice in homecare re-ablement services, and explore users' views and perceptions as to what they want from a re-ablement service.
3. Feasibility Randomised Controlled Trial. This will test the delivery of the intervention and the appropriateness of research procedures, including randomisation, outcome measures and their timing, and analysis of the content and acceptability of the occupational therapy intervention.

Each of these strands is presented consecutively in this thesis, in six chapters. The findings from each strand informed the development of the succeeding strand. Figure 1 has been adapted from The Centre for Evidence Based Medicine (2015) and illustrates how this research programme has been designed to fit with the MRC Framework and recommendations for evaluating complex interventions.

Chapter two presents the systematic review which identified and evaluated the existing evidence. Chapter three presents the qualitative interview study

with occupational therapists and people using re-ablement services; this chapter identifies the key processes and outcomes of occupational therapy in re-ablement. The findings from chapters two and three are synthesised to contribute to the design and delivery of the intervention in the RCT. Chapter four presents the feasibility randomised controlled trial, focussing on the feasibility of the research procedures and processes. Chapter five presents and discusses the intervention delivered in the randomised controlled trial in greater detail. It also presents findings on the acceptability of the intervention. Chapter six draws together the findings from the previous chapters and locates these findings in the context of current policy and other research, before providing some overall conclusions to the programme of research.

Figure 1: MRC Framework and the Thesis*

MRC Framework	Development Phase			Feasibility/Piloting			
	Identify Theory	Identify Evidence Base	Modelling Process and Outcomes	Testing Research Procedure	Recruitment and Adherence	Testing Intervention Procedure and Acceptability	
Thesis	Chapter 1	Chapter 2	Chapter 3	Chapter 4		Chapter 5	Chapter 6
	Introduction	Systematic Review	Qualitative Study	Feasibility RCT		Fidelity and Acceptability	Discussion

*Adapted from Centre for Evidence Based Medicine (2015)

1.7 Philosophical Perspective Informing the Research

It is particularly important to consider philosophical assumptions when combining different paradigms, as the philosophical underpinnings may be contradictory. This final section of the chapter outlines the philosophical perspective that informed the research programme. It begins with an explanation of ontology and epistemology, before describing the perspectives that have been adopted for this research.

Ontology refers to the study of "what is" - that is, the nature of reality (Crotty, 1998). Within health research the principal ontological question relates to whether phenomena can be deemed to exist independently of our ideas and are therefore 'real', or whether they are comprised in their entirety in our ideas and thus cannot be deemed to have an existence that is independent (Giacomini, 2010). These contrasting perspectives are termed 'realism' and 'idealism'. Epistemology refers to the process by how we might 'know' what we know, and what is required in order for us to acquire knowledge (Greco, 1999). This research programme is based upon an ontological premise of realism. It adopts a realist perspective insofar as it accepts the existence of a universal reality that can be studied, researched, and adequately represented through various means of observation and measurement. The epistemological assumptions which underpin this are based on those of critical realism and post-positivism. Both of these perspectives acknowledge that researchers are limited in being able to attain certain knowledge of an ultimate 'truth', and that they are limited by their research tools, their assumptions, and they accept that knowledge is fallible (Holt, 2009, Maxwell, 2012). Thus the findings of a study are deemed to constitute *representations* of reality, rather than reality itself.

For the qualitative component, a critical realist perspective informed the analysis. In analysing the interviews, it was not the intention to problematize whether interviews could be considered to be a true reflection of a person's experiences and perceptions (Silverman, 2006), moreover the analysis largely accepted what people said as straightforwardly representing reality. Thus, analysis was largely accepting of the validity of the content of the interview transcripts and did not adopt a more interpretative or constructivist approach (Astin and Long, 2009). Maxwell (2012) has argued that the basic premise of critical realism is compatible with such an approach to data collection: that our understanding of the 'real world' is shaped by the particular perspective or "lens" that we bring to the research, and that this is unavoidable in interview based studies, but that this need not undermine the ontological position of realism.

The systematic review and feasibility randomised controlled trial are informed by the epistemological tenets of 'post-positivism' (Holt, 2009). Positivism is based on the premise that knowledge is acquired by direct observation, measurement and experiment and that these aspects will lead to an objective 'truth' (Chalmers, 1999). However, this stance has been modified in 'post-positivism' to acknowledge that observation and measurement are fallible, and that all theory has the potential for change (Trochim, 2000). Thus, post-positivism and critical realism have similar tenets. The systematic review and feasibility randomised controlled trial are based on the assumptions that measurements and observable characteristics can be used from an experimental sample to make inferences to the population of interest (Holt, 2009, Delaney, 2009). However, the results will not be treated as objective 'facts' but as evidence that is put forward to be subject to further scrutiny (Trochim, 2000). Again, the findings may be deemed representations of reality that can be made as accurate as possible by enhancing the quality of the design of the study.

As highlighted in Section 1.6, this research programme was designed based upon the recommendations of The Medical Research Council (2008) for the evaluation of complex interventions. These recommendations advocate the combining of qualitative and quantitative methodologies as outlined earlier in this chapter. Therefore the design of this study has based upon the selection of particular methods for their suitability and appropriateness to address the research question, aims and objectives. Thus the methodological and philosophical perspectives have been largely determined by pragmatic rather than ideological factors; an increasingly common approach in health research (O'Cathain et al., 2007).

This research programme is enveloped within an epistemology that is consistent with the philosophical tenets of pragmatism, which advocates the combination of mixed methods and approaches based on an evaluation of "what works" in a particular context to answer a particular research question (Kroll and Morris, 2009, Johnson and Onwuegbuzie, 2004, Baert, 2005). Researchers adopting a pragmatist philosophy generally reject the

incompatibility of different philosophical perspectives and argue that knowledge is both constructed and real, but situated within the context in which it was generated (Hooper and Wood, 2002). They concur that different paradigms can be combined within a study in a practical way in order to answer the research question (Johnson et al., 2007). Conclusions are viewed as being "current truth" and knowledge is viewed as being tentative and subject to change over time (Johnson and Onwuegbuzie, 2004). The philosophical tenets of pragmatism are thus consistent with the aims and objectives of this research programme and are inherent throughout this thesis.

Chapter Two - Interventions to reduce dependency in personal activities of daily living in community dwelling adults who use homecare services: A systematic review

2.1 Introduction

The previous chapter highlighted that the role and remit of occupational therapy in homecare re-ablement services has been identified as a national research priority. The first stage of the research was to determine whether relevant evidence was already available regarding the effectiveness of occupational therapy in homecare re-ablement services, and the content of that intervention. Thus, a systematic review was an appropriate starting point and is presented in this chapter.

A systematic review of high quality randomised controlled trials (RCTs) is considered to provide the highest level of evidence of the efficacy of a healthcare intervention (Evans, 2003). As discussed in chapter one, The Medical Research Council's (2008) framework for developing and evaluating complex interventions states that research should begin by conducting a systematic review, unless such a high-quality review has been recently completed. Systematic reviews are often described as "the most reliable form of evidence to guide clinical practice" (Clarke, 2011) because they should include a detailed assessment, evaluation and collation of all the evidence which meets the criteria for the review. Therefore, such a review is warranted in order to inform the current research by identifying the existing evidence and assessing its quality.

Systematic reviews are intended to enhance rigor and minimise the possibility of bias and also involve collaboration and consensus by involving more than one individual at each stage of the review process. The fundamental principle that distinguishes a systematic review from a narrative or descriptive review is the combination of a systematic search and the attempt to locate a complete collection of high-quality studies on the research topic (Davies and Crombie, 2001, Higgins and Green, 2011). Thus, the findings from a well conducted systematic review should form a reliable tool to guide healthcare decisions and practice. The purpose of conducting a systematic review is not simply to ascertain whether an intervention is effective on a particular outcome, but also to determine the quality of the evidence. If the existing evidence is deemed to be at high risk of bias then this would support the rationale for

conducting further studies in order to reduce those biases (Eggar et al., 2008). A systematic review was selected, rather than a descriptive review, as this was considered to be a more rigorous method, that was less susceptible to bias. This would facilitate a greater degree of confidence that the results included all the relevant, available evidence.

Although the focus of the current research is on occupational therapy led interventions, the previous chapter highlighted that there is already high quality evidence for the effectiveness of occupational therapy in improving performance in activities of daily living in diverse population groups. This evidence spans systematic reviews and RCTs which encompass: stroke (Legg et al., 2006), community stroke (Walker et al., 2004), older adults in the community (Steultjens et al., 2004), adults with dementia (Giltlin et al., 2001), adults after hip fracture (Hagsten et al., 2004), and preventative services to independent living older adults (Clark et al., 1997). Based on the findings of these research studies, it may be hypothesised that occupational therapy interventions could be tailored to the needs of the people using the homecare re-ablement service in order to improve performance in activities of daily living.

A previous review was conducted by Ryburn et al. (2009) of re-ablement and restorative approaches to homecare. This review concluded that there was emerging evidence that such services led to improvements in resuming independence in activities, and reducing the demand for ongoing homecare services. However, this review did not describe a systematic search strategy, did not describe a formal process for assessing the quality of the included studies, and identified only three studies directly relevant to re-ablement. As re-ablement and restorative care services are relatively new, the evidence for interventions provided as part of these services is likely to be limited (Francis et al., 2011). As highlighted in the previous chapter the evidence for occupational therapy in such services is even more limited (Social Care Institute for Excellence, 2011a). It is possible, however, that other relevant evidence may exist in which interventions have been provided and evaluated for users of homecare services (in order to improve performance with

activities of daily living) which was not part of a restorative or re-ablement service. Furthermore, it is not clear whether re-ablement should be considered an intervention in its own right, or whether it forms a collection of interventions under the umbrella term re-ablement (Francis et al., 2011). Thus, because the exact content of a re-ablement intervention is unclear, a wider review was necessary in order to identify the content, scope and efficacy of those interventions which may be considered under the term re-ablement.

The scope of this systematic review was therefore widened to reflect the fact that homecare is a broad and generic concept, which may have different definitions between countries (Thomé et al., 2003). Also, in recognition that the terms such as "re-ablement" and "restorative care" may be country specific with other possible terms used, the scope was purposely broad to include studies which evaluated any intervention directed at improving performance in activities of daily living for the homecare service user population.

2.2 Review Aim and Objectives

The aim of the systematic review was to identify and assess the quality of those studies that have evaluated an intervention targeted at reducing dependency in personal activities of daily living for community dwelling adults who use homecare services.

There were three specific objectives:

1. To determine what interventions for adult users of homecare services, targeted at reducing dependency in personal ADL, have been provided and evaluated.
2. To determine the efficacy and effectiveness of these interventions on individuals' dependency in activities of daily living.
3. To determine whether interventions involving occupational therapists differ in their effect on users' performance in personal activities of daily living to those that do not involve occupational therapists.

2.3 Review Methods

This review was registered on the PROSPERO database (CRD42013004163) (Whitehead et al., 2013a) and the protocol was published prospectively (Whitehead et al., 2013b). Publication of a protocol, prior to the commencement of the review, is important to guard against arbitrary decision making during the conduct of the review (Shamseer et al., 2015).

2.3.1 Types of Studies

Systematic reviews of healthcare interventions have typically focussed on evidence from randomised controlled trials. Indeed, the Cochrane Collaboration has focused almost exclusively on reviews of RCTs until recently (Higgins and Green, 2011). With regard to the effectiveness of healthcare interventions, RCTs are considered to be the highest grade of evidence (Concato et al., 2000) because they are considered to be the most resistant to biases, particularly selection bias and the associated confounding effects (Higgins and Green, 2011, Evans, 2003). Selection bias occurs when there are fundamental differences between intervention and control groups in important factors which affect response to treatment (Centre for Reviews and Dissemination, 2009). These factors may be known or unknown.

The restricted focus on randomised controlled trials has, however, been criticised. Clegg (2005) has argued from a 'critical realist perspective' that such systematic reviews take on overly narrow definition of 'evidence' and that a focus on 'what works' within such a framework may not reveal how interventions are implemented or how they operate within 'real-world' settings. Furthermore Williams and Garner (2002) have argued that a pure evidence-based approach is over simplistic and neglects to address the complexities of interpersonal relationships involved in clinical care. Thus, these authors suggest that other approaches to systematic reviewing should be considered, arguing that human processes cannot be assigned to simple causalities. There may be a number of healthcare interventions that do not readily lend themselves to a randomised controlled trial design where it may be unethical or impractical to conduct such a trial. These authors argue that

other methods and approaches should be considered as there is scope for more than one methodological perspective. The rationale for a particular approach will depend on the aims and objectives of the particular review.

Realist reviewing is a relatively new approach to reviewing and seeks to explain and unpack how complex interventions might work, rather than evaluate whether the interventions actually work (Pawson et al., 2005, Shepperd et al., 2009). Such approaches might be appropriate in situations where the objective is to map how different aspects of the intervention interact (Petticrew et al., 2013) or to identify how it works for specific people or groups (Shepperd et al., 2009). However, with regard to the current review the objective was to appraise the evidence for efficacy and effectiveness of interventions in improving performance in personal activities of daily living – i.e. to identify what has been delivered and what has been shown to work. Therefore it is important to include only those study designs that can address this question. As such, the ideal review would be one that included evidence from well conducted, high quality randomised controlled trials. However, it is already known that there is a dearth of randomised controlled trials within social care settings (Pawson, 2003) and there may be methodological issues in conducting randomised controlled trials of preventative interventions (Curry, 2006). A review limited only to RCTs would likely identify few studies and be of limited use to researchers and clinicians or to inform the design of the intervention for this planned study.

The decision was taken to also include non-randomised studies (NRS). The *Cochrane Handbook for Systematic Reviews of Interventions* states that a lack evidence from RCTs is not sufficient justification for including non-randomised studies in a Cochrane systematic review (Reeves et al., 2011). However, it is argued that non-randomised studies (NRS) may be included:

> "To examine the case for undertaking a randomised trial by providing an explicit evaluation of the weaknesses of available NRS" (Reeves et al., 2011).

This is consistent with the rationale for the present review which was to inform the development and content of a subsequent feasibility randomised controlled trial. Therefore, the following types of studies were included in the review: randomised controlled trials, non-randomised controlled trials, and controlled before and after studies that compared an intervention designed to reduce dependency in personal activities of daily living with routine input or usual care as the control intervention. Non-randomised controlled trials were defined as those in which participants were allocated to treatment or control groups by investigators using methods which were non-random. Controlled before and after studies were defined as those in which participants' allocation to treatment or control groups was not facilitated by the researchers (for example based on geographical location such as a comparison between groups at two or more sites). Interrupted time series studies (where there was a clearly defined time point at which the intervention occurred and at least three data collection points both before and after the intervention) were also included.

It was decided that these types of study design would all be eligible for inclusion because they are evaluative research designs that can be used to determine effectiveness. However, the findings from any included non-randomised studies would highlight where relevant evidence exists but may be at risk of selection bias. This should identify areas where the proposed randomised controlled trial could add further support to the quality of the existing evidence base. The decision not to include observational and qualitative studies was made because these types of studies cannot provide evidence for the efficacy or effect of interventions.

2.3.2 Types of Participants

Participants included any individual, aged 18 years or older, living in a non-institutionalised home in the community, in receipt of homecare services. "Homecare" was defined as one or more weekly visit(s) from a paid care worker (i.e. not an unpaid relative or friend) to provide assistance with a personal activity of daily living. Homecare was differentiated from "home healthcare" which was defined as services offered by qualified (registered or

licenced) professionals including doctors, nurses and allied health professionals to individuals in their own homes. The homecare service may have involved a home healthcare component (e.g. nurse visits) but could not be composed exclusively of healthcare and must have included routine assistance with personal activities of daily living by paid staff. Studies were eligible for inclusion if the population received a mixture of assistance with personal and/or domestic activities of daily living. However if the entire population received help with domestic ADL only, then these studies were excluded.

Studies were included that recruited people regardless of gender, ethnic group, medical diagnosis or multiple diagnoses, as long as they were resident in the community and in receipt of a homecare service. Studies were excluded that focussed on homecare services for palliative care because of the likelihood of physical deterioration and different outcomes.

2.3.3 Types of Interventions

Interventions were included which had the following features:

- Were delivered in or from the person's home and were designed to reduce dependency in personal activities of daily living.
- Consisted of either: a single component (i.e. profession specific or "one off" visit), or multiple components (e.g. a service 'package' provided by a multidisciplinary team).

Standard care was defined as routine homecare in which assistance with personal activities of daily living was provided, but where there was no intention to improve individuals' performance with these activities.

2.3.4 Types of Outcome Measures

Primary outcomes

The primary outcome was ability to perform personal activities of daily living which include: washing, dressing, bathing/showering, feeding, toileting, management of continence, transfers, and basic mobility. This may take the form of either:

1. An ADL 'score' (e.g. Barthel Index) or,
2. A deterioration in ability to perform activities of daily living (i.e. a reduction in ADL score). This would be dichotomous (e.g. reduction in ADL score or not).

Secondary Outcomes

Individual outcomes

1. Death
2. Performance in extended activities of daily living (e.g. shopping, outdoor mobility) (measured using an extended or instrumental activities of daily living scale e.g. NEADL).
3. Number of participants admitted to hospital, residential or nursing care facilities
4. Number of falls
5. Participant mood/morale (measured using a questionnaire such as the General Health Questionnaire (GHQ) or Philadelphia Geriatric Morale Scale (PGMS))
6. Health or social care related quality of life (e.g. EQ5D or Adult Social Care Outcomes Toolkit)
7. Health economic outcomes
8. Caregiver strain/burden (e.g. Caregiver Strain Index)

Service use outcomes

9. Service use outcomes (use of health and community services) including whether or not individuals are in receipt of homecare and the number of homecare support hours per week
10. Participant and carer satisfaction with services
11. Health care provider satisfaction with service

Outcome measures were grouped into three categories to represent short-term, medium-term, and long-term outcomes. These categories were less than six months, six to twelve months, and more than twelve months respectively.

2.3.5 The Search Methods for Identification of Studies

It was important to incorporate different sources into the search strategy in order to ensure that the widest range of potentially relevant records was retrieved. A search strategy that was limited to only a few electronic databases may result in bias whereby certain studies or studies from certain countries were more likely to be identified. Furthermore, homecare services may span health and social care settings and thus it was important to include a range of databases to include both health and social sciences (DeLuca et al., 2008).

Searches were completed in April 2013 and then updated in November 2014. The following electronic bibliographic databases were searched: The Cochrane Central Register of Controlled Trials; MEDLINE; EMBASE; AMED; CINAHL; PsycINFO; Occupational therapy database of systematic reviews and randomised controlled trials (OTseeker); Physiotherapy Evidence Database (PEDro); Web of Science; Center for International Rehabilitation Research Information and Exchange (CIRRIE); Applied Social Sciences Index and Abstracts (ASSIA).

The search strategy for Medline (Ovid) is shown in Appendix 1 and was appropriately adapted for the other databases. The search strategy consisted of three separate strings. The first related to the population, the second related to the intervention, and the third related to the type of study design. The population string used a series of Medical Subject Headings (MeSH) and free text terms to search for people who use homecare services. The intervention search used MeSH headings and free text searches to search for activities of daily living (including self-care and functional independence) and activities such as re-ablement, restorative care and goal setting. The study design string combined terms to search for those study designs which had been included. It was not possible to include all of these strings in each

database as some databases did not permit the use of a complex search string. In these circumstances the search terms were adapted in consultation with a librarian.

The following additional sources were searched to identify on-going research: current Controlled Trials (www.controlled-trials.com) and Clinical Trials (www.ClinicalTrials.gov). The reference lists of all relevant papers which were included were also examined and the Science Citation Index Cited Reference search was also used for forward tracking of relevant papers. Key authors and researchers in the field were also contacted to identify on-going research and other sources of information.

2.3.6 Selection of Studies

A three stage screening process was adopted. During the first stage, one reviewer [the author, PW] appraised the titles and excluded those that were evidently not pertinent to the review. In the second stage, abstracts of all retained records were read. This was completed independently and in duplicate by two reviewers [PW and EW], in order to ensure that potentially relevant records were not overlooked, and to reduce bias. A paper copy of the full publication for every record that was potentially relevant was obtained. The same two reviewers then assessed these independently and in duplicate. Disagreements at each stage of the selection process were resolved by discussion between the reviewers and with the involvement of a third reviewer [AD] where necessary.

2.3.7 Data Extraction and Management

Data were extracted from all included sources using pre-prepared and piloted data extraction forms. Extracted information included: study methodology; study setting; study population; participant demographics and baseline characteristics; details of the intervention and control; recruitment and drop-out rates; outcomes measurements and timing; information for the assessment of risk of bias. Additional information was sought by contacting authors if necessary. Endnote X5 was used for to manage the references.

2.3.8 Assessment of Risk of Bias in Included Studies

Two reviewers [PW and EW] independently assessed the risk of bias of the included studies, using the risk of bias tool for studies with a separate control group (RCTs, NRCTs, and CBAs) developed by the Cochrane Effective Practice and Organisation of Care (EPOC) Group (2013). This assessment covered sequence generation, allocation concealment, baseline characteristics and measurements, blinding of primary outcome assessment, completeness of outcome data, selective outcome reporting, and other potential sources of bias. Each of these factors was categorised as being at low, high or uncertain risk of bias. Disagreement between reviewers was resolved by discussion and with a third reviewer [AD] if necessary.

2.3.9 Data Synthesis

The data were synthesised systematically with a narrative synthesis provided. Information was presented in text and tables to summarise and explain the characteristics and findings of the included studies. The narrative synthesis explored the relationship and findings both within and between the included studies, in line with the guidance from the Centre for Reviews and Dissemination (2009). The strategy for data synthesis was published *a priori* in the protocol and was subsequently used as a model example in the PRISMA-P statement published in 2015 (Shamseer et al., 2015).

The statistical power of individual RCTs may be limited, especially if they are of small or medium size (Davies and Crombie, 2001). However, comparable studies may be combined in a systematic review using a statistical technique termed 'meta-analysis'. A meta-analysis weights each individual study according to its size and then combines them all to produce an overall treatment effect. Thus, the statistical pooling of results from comparable studies may provide evidence for or against the effectiveness of a particular intervention which may not be clear from the results of each individual study. For non-randomised studies it is the exception rather than the rule to pool data (Reeves et al., 2011) and therefore a prospective decision was taken only to pool data if studies were judged to be of sufficient quality and methodologically and clinically comparable.

2.4 Results of the Review

2.4.1 Results of the Searches

5766 records were identified through database searching and two were identified through reference lists of included studies. A total of 3907 records remained after the removal of duplicates. During the initial stage, all titles were read by the lead reviewer [PW] and those which were evidently not relevant were excluded. This left a total of 429 records, the abstracts of which were read independently by two reviewers [PW and EW]. 381 were excluded at this stage. A total of 44 full-text publications were obtained and assessed independently by both reviewers. The search process is summarised in Figure 2 and conforms to the PRISMA statement (Moher et al., 2009). A total of 13 studies were included in the review and the summary characteristics of the included studies are summarised in Table 1. Six RCTs were included and seven controlled before and after studies (CBAs). The sample size of the studies ranged from 74 to 1382, with a mean of 383. The mean size of the RCTs was 276 and 474 for CBAs.

Figure 2: Flow Diagram of Systematic Review Search Process

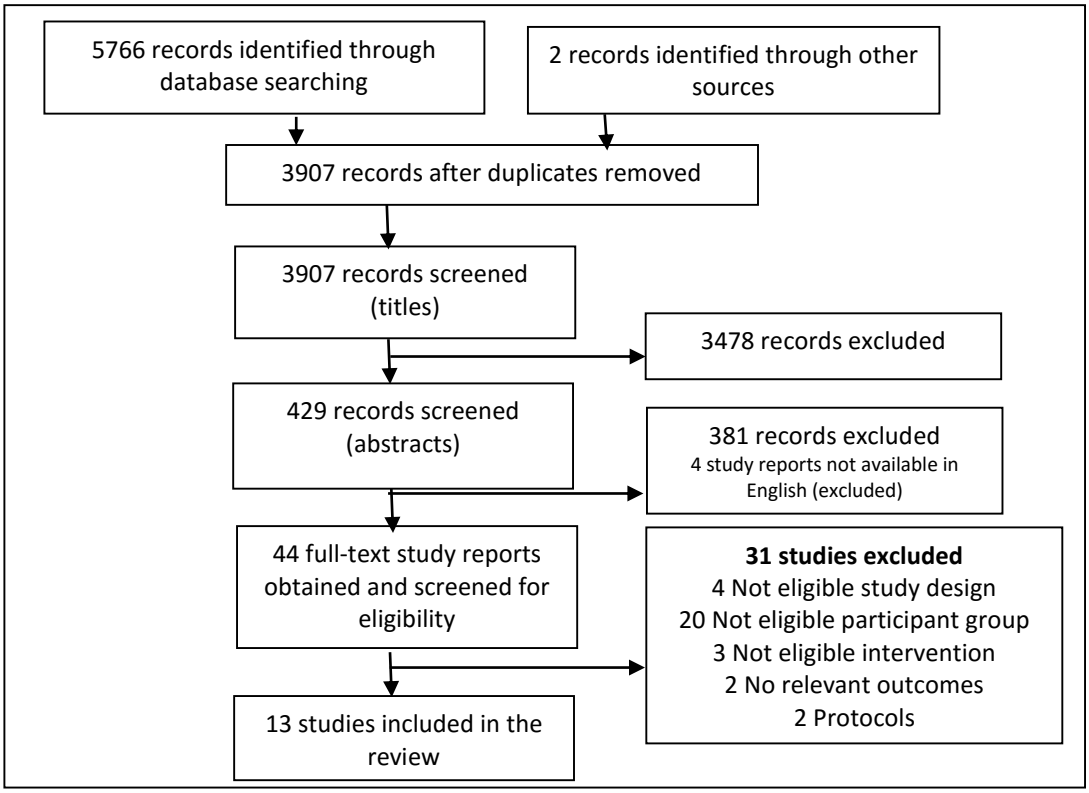


Table 1: Characteristics of Included Studies

Country, Reference	Study Type	Participants	Primary Outcome	Follow up months
USA (Feldman et al., 1996)	CBA	404 frail elderly and disabled homecare clients.	No primary stated. Home care costs, functioning, depression and satisfaction.	16
England (Glendinning et al., 2010)	CBA	1015 adults aged 18 and over receiving homecare or homecare re-ablement.	Health and social care related quality of life.	9 to 12
USA (Gottlieb and Caro, 2000)	CBA	159 adults aged over 60 years, receiving homecare services co-ordinated by case manager.	No primary. Functional, service and equipment use/satisfaction outcomes.	6
New Zealand (King et al., 2012a)	RCT (Cluster)	186 adults aged 65 years and over, receiving assistance from homecare agency.	Health Related Quality of Life (SF-36).	7
Australia (Lewin and Vandermeulen, 2010)	CBA	200 adults aged 60 and over referred for homecare assistance with domestic or personal care tasks.	No primary stated. Functional and service outcomes.	12
Australia, (Lewin et al., 2013)	RCT	750* adults aged 65 and over, referred for homecare assistance with personal care.	Service outcome - use of on-going homecare (for personal care).	12
USA, (Marek et al., 2006)	CBA	85 clients receiving 'state funded homecare program'.	No primary stated. Cognition, ADL, depression, pain, dyspnea, medication management.	12
Canada (Markle-Reid, 2002)	RCT	126 adults aged 75 and over, eligible for 'personal support' services	Functional Status and Quality of Life (SF-36)	6
Canada, (Markle-Reid et al., 2006)	RCT	288 adults aged 75 and over, eligible for 'personal support services'.	Functional Status and Quality of Life (SF-36).	6
Canada (Markle-Reid et al., 2011)	RCT	101 community-living stroke survivors using homecare services/	Health Related Quality of Life and functioning (SF-36).	12
New Zealand (Parsons et al., 2012)	RCT (Cluster)	205 adults aged 65 and over, newly referred for homecare.	Health Related Quality of Life (SF-36).	6
USA (Tinetti et al., 2002)	CBA	1382 adults aged 65 years and over, in receipt of Medicare-covered homecare.	Remaining at home, functional status, duration and intensity of home care episode.	1 (approx.)
Sweden (Zingmark and Bernspang, 2011)	CBA	74 adults aged over 65years in the process of applying for help with bathing.	Ability to perform ADL (ADL Taxonomy).	4(approx.)

Key
RCT – Randomised Controlled Trial; CBA – Controlled Before and After Study
*750 included for service outcomes, 300 included for user outcomes (i.e. ADL ability)

2.4.2 Assessment of Risk of Bias

Two review authors independently rated the risk of bias in the included studies, using the risk of bias for EPOC reviews (Cochrane Effective Practice and Organisation of Care (EPOC) Group, 2013). The reviewers' judgment about the risk of bias is shown in Table 2. Ten of the 13 studies (77%) were judged to be at high risk of bias in at least one domain. More than half of the studies (n=7) were judged to be at low risk of bias in less than half of the nine

domains. This indicates that, overall, there is a high risk bias across the majority of the studies in the review. Only one study was judged to be at low risk of bias in all domains.

Table 2: Risk of Bias Summary

Study	a	b	c	d	e	f	g	h	i
(Feldman et al., 1996)	H *	H *	U	H	U	U	U	L	L
Glendinning et al. (2010)	H*	H*	H	L	H	U	L	L	L
Gottlieb and Caro (2000)	H*	H*	H	H	U	H	U	U	L
King et al. (2012b)**	L	L	L	L	L	L	U	L	L
Lewin and Vandermeulen (2010)	H*	H*	L	H	L	H	L	L	L
Lewin et al. (2013)	L	H	L	H	L	H	L	H	U
(Marek et al., 2006)	H*	H*	H	H	H	U	L	L	L
(Markle-Reid, 2002)	L	L	L	L	L	U	L	L	L
Markle-Reid et al. (2006)	L	L	H	L	L	L	L	L	L
(Markle-Reid et al., 2011)	L	L	L	L	L	L	L	L	L
Parsons et al. (2012)**	L	U	L	H	L	L	L	H	L
Tinetti et al. (2002)	H*	H*	H	L	L	H	L	L	L
Zingmark and Bernspang (2011)	H*	H*	H	L	U	H	L	L	L

Key

a.) Selection bias (sequence generation)
b.) Selection bias (sequence concealment)
c.) Selection bias (baseline measurements)
d.) Selection bias (baseline characteristics)
e.) Attrition bias (outcome data)
f.) Detection bias (blinded assessor)
g.) Performance bias (contamination of intervention/control)
h.) Reporting bias (reporting of all outcomes)
i.) Other bias

H = High Risk
L = Low Risk
U = Unclear Risk
*Automatically rated high risk due to study design
** Cluster RCT

Selection bias

Selection bias was the most common type of bias in the studies. The seven controlled before and after studies were all rated at high risk of selection bias due to allocation sequence generation and concealment of allocation procedures, in accordance with the EPOC guidance. This is due to the non-random methods which were used to allocate the participants to the treatment or the control groups, and that these were known in advance of treatment allocation. The use of non-random methods of group allocation is more likely to lead to differences between the groups in respect of known and unknown participant characteristics. These characteristics could act as confounding

factors in the analysis whereby there are systematic differences between the groups, which are not related to the intervention (Centre for Reviews and Dissemination, 2009). Additionally, in one of the randomised controlled trials, it was reported that the individuals who recruited participants to the study may have been able to circumvent the randomisation process and influence group allocation (Lewin et al., 2013) and therefore this study was also rated at high risk of bias due to problems with the allocation concealment in this study.

Overall, there was a high risk of selection bias across the majority of the studies included in the review. This resulted in some studies having differences between baseline characteristics or baseline assessment measures (see columns c and d). These differences reflect potentially important differences between the groups that were evident prior to the intervention. In some studies these differences were adjusted for in the subsequent analysis and therefore these studies were then rated as low risk of bias in accordance with EPOC guidance; those which did not adjust for differences (or report this) were rated as high risk of bias.

Detection Bias

The reviewers also judged there to be a high risk of detection bias in six of the included studies. Detection bias was deemed to be present when the primary outcome was assessed by a person who had knowledge of the group allocation of the participants. This was judged to be unclear in a further four studies. Masking of group allocation can be problematic in studies of rehabilitative or therapeutic interventions, as it is usually not possible or practical to conceal group allocation from participants and there may be practical difficulties in concealing allocation from assessors (Siemonsma and Walker, 1997). As highlighted by Markle-Reid et al. (2006) participants may have revealed their treatment allocation, and this may have occurred across all studies included in the review.

Other Biases

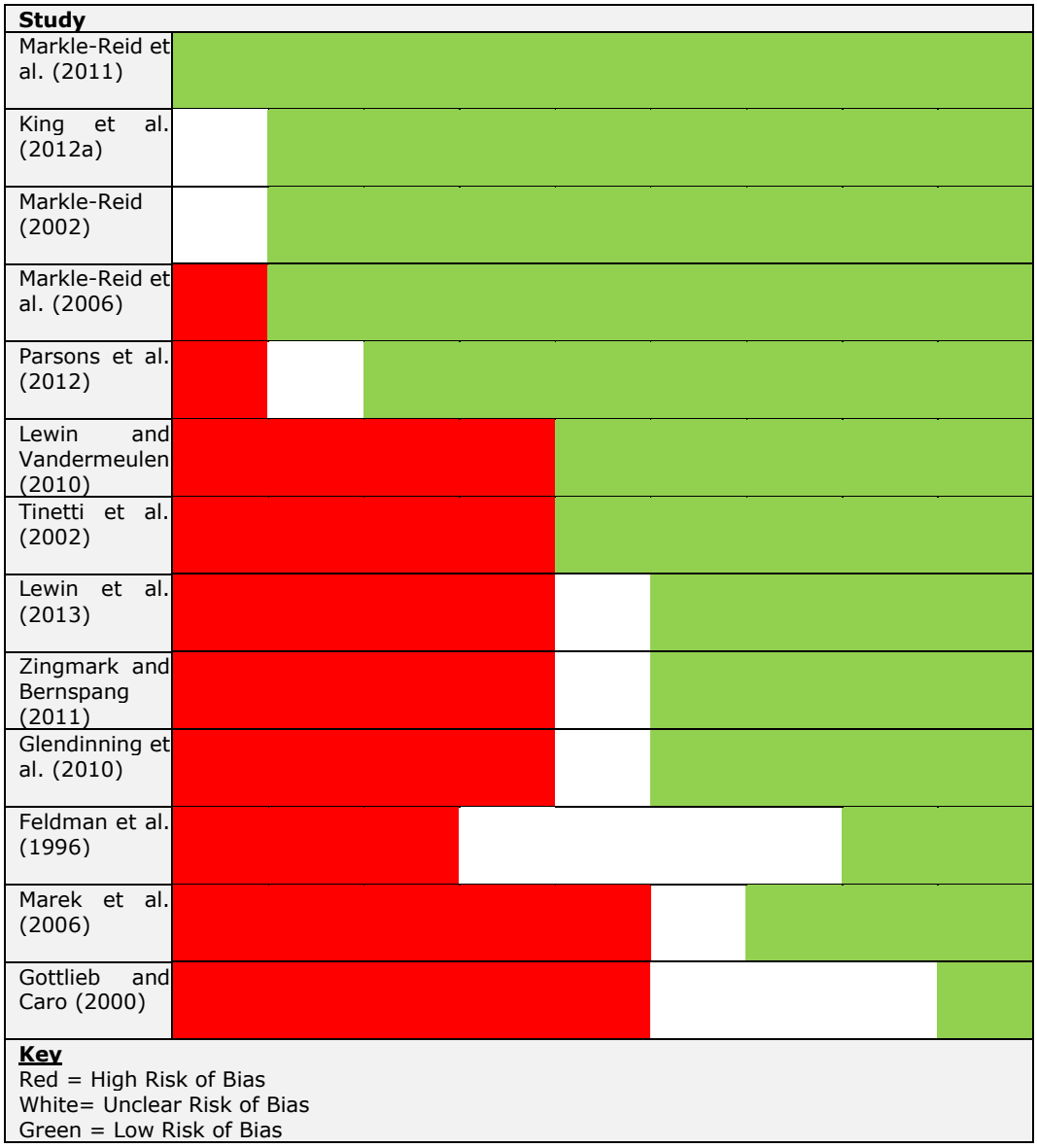
Attrition bias was judged to be present in three studies, whereby the missing

outcome data were considered to have possibly biased the results. This was either due to the high proportion of missing outcome data, or there being an imbalance in the proportion of data that were missing between the groups. Reporting bias was also judged to be present in two studies, with outcomes listed in the method section which were not clearly presented in the results section.

Overall Bias

Figure 3 shows a graphical representation of the risk of bias within and between the studies. In this figure studies are ranked with those with the lowest risk of bias at the top ranging to the highest at the bottom. The five studies with a high risk of bias in one or fewer domains were all randomised controlled trials representing the lower risk of selection bias. Overall this chart demonstrates that there is generally risk of bias present within the literature in this area, and that principally this relates to the limited number of randomised controlled trials in this area.

Figure 3: Risk of Bias Chart



2.4.3 What Interventions have been Provided and Evaluated?

The first objective was to describe those interventions that have been provided and evaluated for users of homecare services. For the purpose of analysis, studies were divided between those termed 're-ablement'/'restorative homecare' (*n*=5) and those in which community based interventions targeting reduced dependence in personal ADL were provided but not described using this terminology (*n*=8). Table 3 provides a summary overview of each intervention. Terms used for those that were not described as re-ablement or

restorative homecare were: 'nurse-led health promotion or care coordination' (*n*=3); 'cluster care' (*n*=1); assistive technology (*n*=1); inter-professional stroke care (*n*=1); goal-setting (*n*=1); and occupational therapy bathing intervention (*n*=1). An outline of each intervention category is presented below.

Table 3: Summary of Interventions

Intervention	Study	Details
Re-ablement/ Restorative Homecare	Glendinning et al. (2010); King et al. (2012a); Lewin and Vandermeulen (2010); Lewin et al. (2013); Tinetti et al. (2002)	A programme or package of homecare where there was a 're-ablement/restorative' philosophy in which the aim was to improve ability to manage activities independently. This involved a series of different practices and the exact combination of which varied within and between studies and sites. Services were usually time limited, goal-focussed and involved a different approach by paid support workers.
Nurse-led health promotion/Care coordination	Marek et al. (2006); Markle-Reid (2002); Markle-Reid et al. (2006)	A registered nurse acted as a named contact for the participant, coordinated services and implemented strategies to bolster health and wellbeing such as: providing education and monitoring illnesses .
Cluster Care	Feldman et al. (1996)	Reorganisation of homecare services into teams to deliver care to 'clusters' of individuals in a locality rather than one-to-one blocks of time. Reduced contact time meant that support workers' role was based on specific tasks rather than time allocated.
Assistive Technology	Gottlieb and Caro (2000)	Assessment by a case manager followed by the provision of assistive devices (equipment) to increase independence with ADL (meals, bathing, toileting, dressing, mobility). Case managers received training from occupational therapists.
Specialist inter-professional stroke care	Markle-Reid et al. (2011)	Comprehensive rehabilitation services provided by multidisciplinary team with specialist stroke training and expertise involving: rehabilitation, education, support and case management.
Goal-Setting	Parsons et al. (2012)	Use of a goal-facilitation tool to set objectives for the homecare episode was implemented by a trained assessor and then goals were passed onto the homecare agency staff.
Occupational Therapy Bathing Intervention	Zingmark and Bernspang (2011)	Assessment of individual needs by an occupational therapist. Interventions were then tailored in order to maximise their performance in bathing.

Restorative Care/Re-ablement

In the five studies which termed the intervention 're-ablement' or 'restorative homecare' (Glendinning et al., 2010, King et al., 2012a, Lewin and Vandermeulen, 2010, Lewin et al., 2013, Tinetti et al., 2002) the intervention was embedded within the homecare service itself. These interventions shared certain features in that they: involved a team approach to delivering the

intervention; incorporated multiple components within the intervention including: goal-setting, support, education and advice; assistance with, training or practice of activities; and sometimes falls prevention. Some also included training the support workers in relevant skills.

All five studies involved an intervention that was based upon a change in emphasis from a traditional model of homecare, in which assistance by carers was provided, to one where the aim was to improve users' ability to carry out activities independently. However, the exact mechanism by which the intervention was delivered differed between studies. These differences related to: the person or people delivering the intervention, the duration of the intervention, and the intensity of the intervention. In three of the studies, the intervention was delivered by a multidisciplinary team comprised of: nurses, physiotherapists, occupational therapists and support workers (Lewin et al., 2013, Lewin and Vandermeulen, 2010, Tinetti et al., 2002). In one study the intervention was delivered by a nurse care co-ordinator with additional training provided for the paid support workers (King et al., 2012a). In this study the nurse care co-ordinator adopted a case management approach but also worked collaboratively with the paid caregivers to hand over goals to them. The largest study which included five homecare re-ablement services (Glendinning et al., 2010) reported differences between the services in the composition of the re-ablement team: some involved occupational therapists, one also had 'direct access' to physiotherapists and district nurses, whilst others were staffed solely with support workers.

Interventions evaluated ranged in their duration between studies from just under four weeks (Tinetti et al., 2002), through six weeks (Glendinning et al., 2010) up to 12 weeks (Lewin et al., 2013, Lewin and Vandermeulen, 2010) and one which was not time limited (King et al., 2012a). The intensity (i.e. how much contact each participant received) appeared to vary both within and between studies. It appears that the intensity was based upon how much was considered necessary and how much was available. However, few details were recorded as to how intensity was decided for each individual user.

With regard to the content of the intervention, there were a number of components that were common across all studies in this category. All studies highlighted the setting of goals at the beginning of the re-ablement/restorative care intervention. This was stated to be important in order to establish clear rehabilitative aims. Goals were reviewed during the intervention, although there were differences between the people reviewing the goals and the time-points at which these were reviewed. Other core components included providing support and education, either relating to the condition or ways to manage self-care, or medication. Most studies in this category reported training or practice of activities as part of the process of improving physical function and/or facilitating confidence building. Modifying activities, the use of assistive devices (equipment), and environmental adaptations were also reported. One study which included five sites reported minimal differences between sites in terms of what was done, and also reported that a great deal of 'homecare' was provided (i.e. carrying out tasks for the user) in addition to the re-ablement (Glendinning et al., 2010).

The remaining eight studies evaluated the interventions targeting ADL independence that were not labelled as re-ablement or restorative homecare services (these were included because they delivered an intervention within homecare which aimed to reduce dependency in PADL). The interventions evaluated in these eight studies overlapped with one another, and with the interventions provided within the re-ablement/restorative homecare category. For example, the occupational therapy bathing intervention (Zingmark and Bernspang, 2011) involved the provision of assistive technology which was delivered as a standalone component in another study (Gottlieb and Caro, 2000) and as part of several of the re-ablement interventions. These interventions are described below.

Nurse-Led Health Promotion/Care Coordination

Two studies evaluated a health promotion intervention that was provided by a registered nurse (Markle-Reid, 2002, Markle-Reid et al., 2006). The main goal of the intervention was to identify health problems and factors predisposing functional decline. The intervention strategy was to "bolster the

participant's personal resources and environmental support" (Markle-Reid et al., 2006: 384). In both studies the aim was for the nurse to have minimum contact of once per month, preferably by a home visit. The strategies that were employed included: initial and on-going assessment, managing functional decline, education about health and self-management; developing a participatory approach to health (including carer involvement); and the development of a health plan that included short-term and six month goals. Thus, consistent with the above studies, goal-setting was a strong feature of these interventions. However, these were provided by a single profession rather than working collaboratively with the MDT/homecare team as in the re-ablement/restorative care services.

A further study also evaluated nurse care coordination (Marek et al., 2006). This essentially involved case management by a registered nurse. In this study the intervention involved "*close monitoring of older adults in their home environment... by providing a link between physicians... and the client's self-care at home"* (pg. 81). This led on to liaison with other services, and input from other health professionals as required. The intervention comprised a mean of 2.13 nurse visits per month. This intervention appeared to be on-going over the 12-month period (though the duration was not stated explicitly in the paper).

The core principles of the interventions in this category involved the on-going assessment and monitoring of clients' chronic conditions, within the home environment, by a registered nurse.

Cluster Care

One study evaluated a so called 'cluster care' intervention in New York City, USA (Feldman et al., 1996). The cluster care intervention involved a reorganisation of homecare services from the traditional 1:1 attendant:client care system in which support workers spent blocks of 4, 8 or 12 hours in people's homes, to delivery of services based on tasks to be accomplished rather than on blocks of time. Services were also reconfigured so that individual carers worked with a number of users within the same apartment

block 'clusters', rather than numerous carers working 1:1 with different individuals in the same block. Thus the principal aim was to improve the overall efficiency of service delivery. However, in addition the authors argued that this change may also lead to improvement in the ability to manage activities of daily living as participants necessarily had to do more independently as carer time was reduced. This is the earliest study included in the review and the intervention may not be regarded as being directly rehabilitative. However, it was judged to be eligible for inclusion due to the authors' assertion that this intervention may improve ADL ability by encouraging participants to do more activities independently, and their reporting of an ADL outcome measure.

Assistive Technology (equipment)

One study provided case managers from a state funded home care programme in Massachusetts, USA with training in the assessment and provision of assistive equipment devices (Gottlieb and Caro, 2000). The case managers received in-service training from a team of occupational therapists from a rehabilitation hospital. The training provided guidelines on identifying individuals who were suitable to use assistive devices, and also provided guidelines on appropriate devices to be used. The case managers received a manual and an assessment tool (in the form of a checklist) to assist with their decision-making, and a budget of $150 per user to cover the cost of the equipment. This intervention aimed to complement the formal homecare services with the use of equipment.

Specialised Inter-Professional Stroke Care

One study (Markle-Reid et al., 2011) focussed specifically on stroke care but, as detailed in the protocol for this review, studies were not excluded on the basis of diagnosis. In this intervention home visits were provided by a "dedicated interprofessional team of healthcare providers" (pg. 319) which included: nurses, physiotherapists, occupational therapists, speech and language therapists, dieticians, social workers and personal support workers who all had specific expertise in stroke care. This specialised stroke knowledge and expertise was the core component of this intervention, which also involved

the use of standardised assessment tools, caregiver support, and enhanced communication amongst the interprofessional team. The intervention aimed to enhance community integration and quality of life and reduce the use of more expensive on-going services. This was compared to the routine service in which usual homecare services were provided without a specific dedicated team and without the stroke-specific expertise.

This study was included because the intervention was delivered within the context of a homecare service which provided assistance with personal care tasks, and involved a population of homecare users who were receiving assistance with personal care tasks. However this intervention is less directly relevant to the review question because it focussed specifically on specialist stroke care. On the other hand, there are aspects of this intervention particularly around how services are organised and delivered, which are relevant to the review question: structured visits, enhanced communication amongst the team, continuity of care though a dedicated team, and the use of specialised assessment tools.

Goal Setting

Parsons et al. (2012) evaluated the use of a goal facilitation tool: Towards Achieving Realistic Goal in Elders Tool (TARGET). This tool was utilised by assessment staff who had received standardised training in its use. The assessment tool focussed on "cognition, nutrition, functional ability, vision and hearing, continence and informal care" (pg. 25). It then facilitated the setting of a client-centred goal for the homecare episode based on an identified deficit in performance. This goal was then passed onto the homecare agency with an overview of the steps necessary for goal attainment. This intervention was similar to that in the King et al. (2012a) study. However, in this study the carers were not directly working with the assessors as part of an integrated homecare team and therefore this intervention has been categorised separately as 'goal setting' rather than part of restorative care.

Occupational Therapy Bathing Intervention

One study provided occupational therapy assessment and a bathing

intervention as a precursor to the implementation of 'home-help' services in Sweden (Zingmark and Bernspang, 2011). The intervention was based on basic principles of occupational therapy and provided by qualified occupational therapists. Interventions were broadly categorised into either 'adaptive' or 'acquisitional'. Graded activity and an encouraging approach were used in 76% of cases, in which the activity was staged to increase the level of difficulty as the participants' ability improved. Provision of assistive devices and/or environmental modifications were provided to 60% of users. Participants were visited on average 2.9 occasions with an average time over the whole period of 120 minutes (range 10-500 minutes). The intervention continued until the participant had achieved independence or the occupational therapists believed that no further gains would be made.

Key components identified across the 13 studies were[1]:

- goal-setting at the beginning of the homecare episode
- repetitive practice and/or grading of activities
- co-ordination or case management of the homecare episode by an individual or team
- provision of equipment (assistive devices)
- Re-organisation of services to maximum efficiency based on approach, tasks, time or specialist knowledge.

Key differences between the interventions related to:

- the number and combination of components
- the combination of people delivering the intervention (i.e. single discipline or multidisciplinary team; professionally qualified or non-qualified)
- the duration and intensity of the intervention.

2.4.4 Effect on Personal ADL Ability and Physical Function

The second objective was to determine effectiveness of interventions in

[1] These components have been synthesised across all studies and were not necessarily present in each individual study.

improving individuals' performance in activities of daily living. Table 4 summarises this outcome of each study. Only eight of the 13 studies (Feldman et al., 1996, Glendinning et al., 2010, Gottlieb and Caro, 2000, Lewin et al., 2013, Lewin and Vandermeulen, 2010, Marek et al., 2006, Tinetti et al., 2002, Zingmark and Bernspang, 2011) reported this outcome using an ADL measure; the others used physical functioning. In total, eight different measurement methods were used. Some of these were not standardised: some studies used actual reports of ability or completion of tasks, others were based on users' perceived difficulty in completing tasks. Of these eight, two showed statistically significant improvement in ADL ability in favour of the intervention group (indicated by * in the far right column of Table 4), one a non-significant improvement in the intervention group compared to the control group, and one showed no difference between the groups, although the authors noted possible contamination of the control group (Lewin et al., 2013). A further two reported the non-significant change scores only. It was therefore impossible to extract group or change data. Two reported ADL measurement for individual activities (such as 'dressing') separately. This made it impossible to determine an overall effect for these studies (Glendinning et al., 2010, Zingmark and Bernspang, 2011), although more activities improved in the intervention group compared to the control group. Overall, findings on ADL favoured the intervention group in five of the eight studies.

Table 4: Summary of Effect on ADL Performance/Physical Function (by Study)

Study Reference	Measure Used	Time Point(s)	Effect	Sig
Feldman et al. (1996)	Participant reports of difficulty.	LT	Change scores only reported. No difference between groups.	
Glendinning et al. (2010)	List of ADL activities	MT	No overall scale score. Higher percentage in intervention group gained the ability to: walk outside, bath or shower, dress and undress.	
Gottlieb and Caro (2000)	Perceived difficulty in ADL	MT	Change scores only – bathing and dressing. No differences between groups.	
Lewin and Vandermeulen (2010)	ADL scale based on Modified Barthel Index	ST MT	Significant difference in mean change score (favours intervention) at 3 months z= -3.71, P< 0.001 and 12 months z= -2.90, P = 0.004, adjusted for baseline differences.	*
Lewin et al. (2013)	ADL scale based on Modified Barthel Index	ST MT	No significant difference between the intervention group (M= 11.87) and control group (M=12.65) at 3 months. No significant differences between the intervention group (M= 12.11) and control group (M= 12.82) at 12 months. Data were obtained from authors – SD not given.	
Marek et al. (2006)	Five ADL items from minimum dataset for homecare used	MT	No significant difference between the intervention group (M=1.8; SD= 4.3) and the control group (M= 0.4; SD= 1.3); p= 0.65, at 6 months. Significant difference (favours intervention) between the intervention group (M= 2.1; SD= 4.7) and the control group (M= 3.3; SD= 4.7); P= 0.01, at 12 months.	*
Tinetti et al. (2002)	Self-Care ADL Score	ST	Mean self-care score better (not significant) in intervention group (adjusted for baseline difference) t=-1.81, P= 0.07.	
Zingmark and Bernspang (2011)	ADL Taxonomy	ST	Of 19 ADL activities, seven showed significant improved in both groups and six activities in the intervention group only (walking inside, walking in neighbourhood, getting clothes from wardrobe, washing hair, combing hair, and manicuring).	
Markle-Reid (2002)	SF-36 Physical Function	MT	Significant difference between the intervention group (M= 39.20; SD= 27.40) and the control group (M= 26.30; SD= 22.80); t=2.480, p= 0.015.	*
Markle-Reid et al. (2006)	SF-36 Physical Function	MT	Difference in mean change score favours intervention (not significant) -5.39 CI -11.13, 0.35, P=0.065	
Markle-Reid et al. (2011)	SF-36 Physical Function		Difference in mean change score favoured intervention (not statistically significant but authors argued that this was clinically significant) 5.87 CI -3.98, 17.73, P=0.24	
Parsons et al. (2012)	SF-36 Physical Component Summary	MT	Significant difference in inter-group change from baseline (I: 44.45 (3.52) to 54.04 (3.52) C: 52.08 (3.42) to 51.31 (3.42) P=0.0002). Linear mixed methods model used.	*
King et al. (2012a)	SF-36 Physical Component Summary	MT	Change from baseline to 7 months favours intervention (not significant) 2.6 CI -1.5, 6.6 P= 0.22.	

Key:
SF-36 Short-Form 36
ST – Short-term, <6 months
MT – Medium-term 6 to 12 months
LT – Long-term > 12 months
* Significant

The remaining five studies (King et al., 2012a, Markle-Reid, 2002, Markle-Reid et al., 2011, Markle-Reid et al., 2006, Parsons et al., 2012) did not report a specific ADL measure, instead reporting the Short-Form-36 (SF-36) either the Physical Component Summary (PCS) or the Physical Functioning component. The physical functioning component is a sub-scale of the PCS and both measure ability to carry out physical activities more globally than specific ADL measures. Physical functioning may be an important outcome for this population group and may provide a broad indication as to their ability to perform ADL, although this should not be regarded as a substitute for a specific ADL outcome. All these five showed an effect in favour of the intervention group, which was statistically significant in two studies. It was considered important to include these studies as the population were in receipt of homecare for assistance with personal activities of daily living. To exclude them would have been to omit important studies from the analysis.

For the purpose of the review, length of follow-up was divided into short-term (less than six months); medium-term (six to 12 months) and long-term (more than 12 months). Four studies reported short-term outcomes, ten reported medium term outcomes, and one reported long-term outcomes. Of these, two reported both short and medium-term outcomes.

A meta-analysis was considered in order to collate the results and determine overall effect. However, this was judged to be inappropriate for the current review. There are a number of reasons for this decision which will be outlined. Firstly, a meta-analysis is only justified where the interventions are clinically comparable. The Cochrane Handbook for Systematic Reviews states that: "If studies are clinically diverse then a meta-analysis may be meaningless, and genuine differences in effects may be obscured" (Higgins and Green, 2011). Although the studies all focussed on interventions to improve performance in personal activities of daily living, there were differences between them which mean they were not directly comparable. Secondly, the decision was specified *a priori* in the method section, and in the published protocol (Whitehead et al., 2013b), that the randomised and non-randomised studies would not be combined in a meta-analysis but they would be considered separately. Of the

six identified RCTs, the interventions were categorised across four different areas and therefore pooling their results may not be appropriate or meaningful. Similarly, of the seven CBAs there were five categories of intervention. Thirdly, it is important only to combine studies that are judged to be of appropriate and similar methodological quality. Thus, a judgement of the overall risk of bias within and between studies has to be incorporated into the decision to undertake a meta-analysis. Overall, 12 of the 13 studies were judged to have risk of bias and pooling them would have the potential to inflate the effect of this bias.

Finally, the Cochrane Handbook further specifies that diverse outcomes should not be combined (Higgins and Green, 2011) as this is a further form of methodological heterogeneity. As shown in Table 4 seven different measurements were used for ADL ability across the included studies (plus physical functioning measured using the Short-Form 36). In order to combine different rating scales that have measured the same outcome standardised mean differences need to be used. This expresses the size of the intervention effect relevant to the variability in each study in order to standardise the results (Higgins and Green, 2011). However, standardised mean differences cannot be used to combine both change from baseline and between group differences. As shown in table four, the results of the included studies were presented using a variety of between group differences and change from baseline scores. In order to pool these, the generic inverse variance must be used to combine the overall effect measure. However, this method cannot be used when different measurement scales have been used as any differences might reflect the differences between the measurement scales rather than between the groups. If the interventions were judged to be clinically comparable, and the risk of bias was low, then it would be possible to request the data in a different format from the authors in order to pool the results in a meta-analysis. However, based on the combination of these four factors a meta-analysis was not judged to be possible or appropriate; a narrative synthesis was therefore conducted.

Yet, overall, despite these differences and problems with the measurements

used, the majority of the studies suggested an effect in favour of the intervention group, four of which were significant. Thus, there is some indication that interventions provided to this user group can reduce dependency in activities of daily living.

2.4.5 Analysis of Secondary Outcomes

Data were extracted on the secondary outcomes measures, as specified in the methods section. These data are shown in Appendix 2. Of the 13 studies: 11 reported the number of deaths; eight reported quality of life; seven reported admissions (to hospital, nursing or residential homes); seven reported the amount of paid care worker input; six reported ability to perform extended activities of daily living; six reported participant mood/morale; five reported health economic outcomes; and one reported on participant satisfaction. None of the studies included data on falls, carer strain, or provider satisfaction with services.

These secondary outcomes were measured and reported in a number of different ways across the studies, and collected at a variety of time points. This is particularly so for extended activities of daily living and health related quality of life outcomes. Information on admissions also varied as some studies reported hospital admissions, whilst others reported nursing home or residential care admissions. Ongoing paid care worker input was also reported differently, sometimes as a reduced care package, or a discontinued service, or as a composite of overall social care service usage. Data for continuous outcomes was again reported using a variety of change from baseline and between group differences. Again, these differences complicate the process of synthesising the information, however, a summary of the main findings is provided below.

Seven studies reported on paid care worker input after intervention. All found a significant difference between the intervention and control groups, in terms of those requiring care, those requiring a reduction or discontinuation of care, or the costs of ongoing care (Feldman et al., 1996, Gottlieb and Caro, 2000, Glendinning et al., 2010, King et al., 2012a, Lewin et al., 2013, Lewin and

Vandermeulen, 2010, Zingmark and Bernspang, 2011). That is, users were being provided with less care or less costly care at the final follow-up point. This is an important finding, and strongly suggests that these interventions can reduce the amount of ongoing care required but whether or not this is associated with improvement in ADL independence is not known.

Five studies reported a significant effect in favour of the intervention group, in health related quality of life (Glendinning et al., 2010, King et al., 2012a, Parsons et al., 2012, Markle-Reid, 2002, Markle-Reid et al., 2006). One showed no effect (Markle-Reid et al., 2011), and two did not provide overall scores (Lewin et al., 2013, Zingmark and Bernspang, 2011). Thus, overall there is some evidence that these interventions can improve health related quality of life, although there are discrepancies between studies in how data has been analysed and reported.

Two studies showed significant effect in favour of the intervention group in ability to perform extended activities of daily living (Lewin and Vandermeulen, 2010, Tinetti et al., 2002); four studies did not show significant difference in this outcome (Feldman et al., 1996, Gottlieb and Caro, 2000, King et al., 2012a, Lewin et al., 2013). Three studies showed a significant reduction in depressive symptoms/improvement in morale in the intervention group compared to the control group (Lewin and Vandermeulen, 2010, Markle-Reid, 2002, Markle-Reid et al., 2006); three did not show a significant difference in this outcome (Marek et al., 2006, Markle-Reid et al., 2011, Feldman et al., 1996).

The proportion of death rates between the intervention and control groups was similar across all the eleven studies which reported this outcome. Thus, these interventions do not appear to have an effect on mortality.

Five of the seven studies which reported on admissions showed no differences between the groups (King et al., 2012a, Lewin et al., 2013, Lewin and Vandermeulen, 2010, Markle-Reid, 2002, Zingmark and Bernspang, 2011). Marek et al. (2006) reported that 4% of their intervention group were

admitted to a nursing home compared to 23% of the control group. However, the control group consisted of only 30 participants so this may be a chance finding which should be interpreted with caution. Tinetti et al. (2002) reported that participants in the intervention group were significantly more likely to remain at home by the end of the homecare episode (82% Vs 71%; OR, 1.99 1.47-2.69).

With regard to health economic outcomes, three studies reported that the intervention resulted in cost savings in subsequent heath, social care, or homecare service use (Feldman et al., 1996) despite the higher cost of the intervention in two of the studies (Glendinning et al., 2010, Markle-Reid, 2002). In two studies there were no differences in the costs of services used in the follow-up period between the two groups (Markle-Reid et al., 2011, Markle-Reid et al., 2006). The one study which reported participant satisfaction showed that participants in the intervention group were significantly less satisfied with services (Feldman et al., 1996). However, this intervention largely involved a reduction in care services and so this finding may not be surprising.

It is particularly noteworthy that none of the studies reported the number of falls. As part of a qualitative study conducted by Glendinning et al. (2010) it was reported that managers and staff believe re-ablement services are particularly effective for those recovering from falls or injuries. Thus, it would seem judicious to evaluate whether these interventions have an impact on the occurrence of falls in future research.

Overall, there is consistent evidence that these services can reduce the amount and/or the cost of ongoing care services required after the intervention has ended. There is also consistent evidence that these interventions do not affect the number of deaths. However, this evidence is subject to the same methodological biases discussed in the previous section. There is some evidence that these services can improve health related quality of life, though the findings between studies was somewhat mixed. The findings were also mixed for: admissions, mood/morale, and ability to perform

extended activities of daily living.

2.4.6 Occupational Therapy Input and Effect

The third and final objective was to evaluate whether it was possible to determine if interventions involving occupational therapists differed in their effects to those not involving occupational therapists. Seven of the 13 included studies had input from occupational therapists as part of the intervention (Glendinning et al., 2010, Gottlieb and Caro, 2000, Lewin and Vandermeulen, 2010, Markle-Reid et al., 2011, Tinetti et al., 2002, Zingmark and Bernspang, 2011, Lewin et al., 2013). This input is summarised in Table 5.

Only one study was identified which evaluated an intervention that was delivered solely by an occupational therapist (Zingmark and Bernspang, 2011), as described in section 2.4.3. In the other studies, occupational therapists were involved in providing training to those who delivered the intervention (Gottlieb and Caro, 2000), or as part of a multidisciplinary team (MDT) alongside nurses, home support workers, and physiotherapists (Lewin and Vandermeulen, 2010, Lewin et al., 2013, Tinetti et al., 2002, Markle-Reid et al., 2011). Where occupational therapists formed part of an MDT, the exact detail of their involvement in delivering these interventions is unclear. Furthermore, it appears that the occupational therapists were not involved with every participant, and indeed in several studies it is specified that they were not. In the study by Glendinning et al. (2010), which involved five sites, occupational therapy input varied across the sites. The authors reported that 29% of the 432 people in the re-ablement group had input from an occupational therapist as part of their re-ablement. However, they also reported that it was not possible to determine whether any outcomes differed for the people who had the occupational therapy input.

Table 5: Occupational Therapy Input to Interventions

Study	Involving OT	OT Input
(Lewin and Vandermeulen, 2010)	Yes	As part of Multidisciplinary team.
(Lewin et al., 2013)	Yes	As part of Multidisciplinary team.
(Markle-Reid et al., 2011)	Yes	As part of Multidisciplinary team.
(Tinetti et al., 2002)	Yes	OT delivered 'restorative care' as part of MDT. Specific OT role is not clear, nor whether OTs were involved with all users. The duration or frequency of involvement is not clear.
(Zingmark and Bernspang, 2011)	Yes	OT home assessment and intervention tailored to individual's needs. Graded/adapted activity, equipment provision and encouraging approach.
(Glendinning et al., 2010)	Partially	OT involved in 29% of re-ablement cases (five sites – some had no OT input at all). OT remit not clearly specified and varied between sites and individuals.
(Gottlieb and Caro, 2000)	Partially	OT provided training to care-managers on equipment assessment and provision prior to delivery of the intervention. OTs not directly involved in intervention.
(Feldman et al., 1996)	No	N/A
(King et al., 2012b)	No	N/A
(Marek et al., 2006)	No	N/A
(Markle-Reid, 2002)	No	N/A
(Markle-Reid et al., 2006)	No	N/A
(Parsons et al., 2012)	No	N/A

It was not possible to determine whether those interventions involving occupational therapists led to different outcomes to those that did not involve occupational therapists. It was not possible to combine the results from these studies and thus it was not possible to conduct the proposed subgroup analysis. However, all the studies that directly involved occupational therapists broadly demonstrated some improvement in ADL performance in the intervention group. In the study by Zingmark and Bernspang (2011), in which every user in the intervention group received input from an occupational therapist, both groups demonstrated an improved ability in performance of seven activities of daily living, and six activities demonstrated improvement only in the intervention group. There was also a significant between group difference in those who were allocated homecare after the intervention with

30% of those in the intervention group compared to 75% of those in the control group (P <0.001). The implications of these findings will be discussed in the next section of this chapter.

2.5 Summary of Results and Review Discussion

This section of the chapter will discuss the results of the systematic review, locate the findings within the context of other relevant research, and discuss the implications of the findings for practice in homecare re-ablement services. It will also outline the implications of the review for the proposed research, and the design of the intervention to be delivered in strand three.

On the whole, there is some evidence that interventions aiming to improve ability to independently perform activities of daily living are effective for a population of people using homecare services, in comparison to standard homecare services in which assistance is provided with personal care tasks. This evidence was drawn from: Australia, New Zealand, Canada, USA, Sweden, and the UK and incorporated the different homecare service structures within those countries. However, although there is evidence that these interventions may improve this outcome there is widespread variation in: the type and content of the intervention; the evaluation method used; and there is a risk of methodological bias within the majority of the included studies. The majority of studies showed an effect in favour of the intervention group but this was not statistically significant.

There is consistent evidence that these interventions can reduce the use of, and costs associated with, ongoing social care services particularly homecare. This finding is consistent with the wider literature (Francis et al., 2011, Ryburn et al., 2009). There is some evidence that these interventions improve health related quality of life, although there were differences between studies in the use of outcome measurements and the reporting and analysis of these. The evidence regarding effect on extended activities of daily living, mood/morale, and admissions to hospital, nursing or residential care was mixed.

The previous chapter raised the question as to whether re-ablement should

be considered an intervention in its own right or whether it should be considered to be a combination of different practices under the umbrella of re-ablement (Francis et al., 2011). Core components of interventions across the studies were: goal-setting; co-ordination of the homecare episode a by a qualified professional or MDT; provision of equipment (assistive devices); and the re-organisation of services to maximum efficiency. A combination of some of these components was delivered in the services classifying themselves as 're-ablement'. Whether they were classified as this appeared to be based on whether they were delivered as part of a team calling itself 're-ablement' or 'restorative care'; thus this definition may reflect the name of the service rather than the content of the intervention.

An important finding from this review is that different methods were used to measure the outcome of performance in personal activities of daily living in this population group. This was an important factor in the decision not to complete a meta-analysis in this review and is also an important consideration for further research in this area. Eligibility for homecare services is based upon the need for assistance from a person (a paid care worker) with personal care activities. Thus, level of ability to perform these tasks is an important baseline characteristic, and an important outcome of intervention. However, several studies focussed primarily on health related quality of life, using the EQ5D (Glendinning et al., 2010) or the Short- Form 36 (SF-36) (Markle-Reid, 2002, Markle-Reid et al., 2011, Markle-Reid et al., 2006, King et al., 2012a, Parsons et al., 2012) and some did not include a specific separate ADL outcome measure. Small changes in ability to carry out personal activities of daily living may translate into important changes in the amount of care and support that people need. While the Short-Form 36 Physical Component Summary may be used as a general indication for ADL ability (as this contains a physical functioning component), this measures gross levels of physical functioning (e.g. climbing several flights of stairs, walking 'one block'). This measure is unlikely to be sensitive enough to capture the important aspects of self-care ability which may be fundamentally important to this population group.

It is advocated that specific ADL measures should be used at baseline and all

outcome time points in order to capture the effect of the intervention on users' ability. This is consistent with the suggestion made by Ferrucci et al. (2004) who argued that "improvements in functional status may not translate into well-being and quality of life" (pg. 627) and postulated that secondary outcome measures should be used to actually capture these.

A further objective of this review was to determine whether interventions involving occupational therapists led to improved outcomes for users. Occupational therapists were involved in a number of interventions, primarily as members of a multidisciplinary team. Only one study specifically compared an occupational therapy bathing intervention with a control group (Zingmark and Bernspang, 2011). Key components of this intervention, such as activity grading and equipment provision, formed part of some of the interventions which were delivered in the other studies (e.g. activity grading by the MDT or equipment provision by trained assessors). Participants in this study did have improved ability to carry out certain activities of daily living, and also had a significant reduction in the use of ongoing homecare services. Thus, there is some indication that occupational therapy interventions can improve outcomes for people using homecare services. However, this was a small study, using a non-randomised design and involving only one intervention and one control site. The intervention was a 'stand-alone' occupational therapy service (i.e. it did not involve occupational therapists working as part of an integrated re-ablement/restorative homecare team) and further research is needed.

A designedly broad scope was adopted for this review. Based upon an initial literature scoping exercise, it was postulated that there would be little evaluative research completed with the homecare user population group and that there would be difficulties in defining a re-ablement intervention. Thus, the review included randomised and non-randomised study designs which had focussed on any intervention targeted at personal activities of daily living in the homecare user population. This was in order to identify all relevant intervention types which had been subject to an evaluation.

The broad scope is both a strength and a limitation of the review. It is a strength insofar as it has provided an overview of those interventions which might be considered under the umbrella of 're-ablement' and those aspects which could be extrapolated from single interventions (e.g. occupational therapy) to be used within a re-ablement service and to inform the design of the intervention for the RCT which will be delivered in strand three. These findings will also be useful for practitioners working in re-ablement who may wish to review the evidence for individual components of their practice (e.g. goal-setting) within this population group. However, this broad perspective is also a weakness of the review as the level of clinical and methodological heterogeneity meant that a meta-analysis was not possible. A narrower focus would have identified fewer studies but these may still have been unsuitable to pool due to the methodological differences and biases discussed above. Thus, on balance this broad scope led to the identification of an appropriate balance of studies to address the three overarching review objectives. A further strength is that this is the only review to collate these studies systematically and therefore provides the only synthesis of this type.

An extensive search strategy was employed in order to locate all the relevant information. Although this was believed to be comprehensive enough to identify all relevant studies, it is possible that some studies were not found during the search process. This is particularly so for non-randomised studies as searching is more complex and terms are less well defined for electronic databases. The Cochrane Collaboration has undertaken an extensive process of searching journals for randomised studies, which has led to a comprehensive electronic index of these (The Cochrane Library, 2014). However this process has not been undertaken, to the same extent, for non-randomised designs and thus there can be less confidence that all studies have been located. Additionally, all the searches were conducted in English and so studies without an English abstract were not identified. Four study reports were also excluded at the full-text screening phase as they had an English abstract but no English translations were available. Therefore this review has an English language bias, which is a limitation.

An additional limitation of the review was the difficulty in defining the homecare user population. In this review the definition "adults living in the community and receiving assistance from a paid carer for personal care" was used. However, there are widespread variations between countries in the service structures and organisation of homecare services (Thomé et al., 2003) and it was sometimes difficult to determine the exact components of the homecare service when screening the studies for inclusion at each stage of the review. Furthermore, in some studies the users may have received a mixture of assistance with personal and/or domestic activities of daily living, rather than all receiving assistance with personal care. The impact of these difficulties in definition was minimised by adopting an overly inclusive inclusion strategy between each review stage, and by having two reviewers screen the abstracts and full-text articles. However, it is possible that studies may have been overlooked, particularly if the homecare service was not well explained in the paper. It is also possible that some of the homecare services did not actually provide paid care worker assistance to all participants and included those who were eligible to have this assistance (particularly the studies from North America due to the differences in the health care system). Furthermore, there may be widespread differences within services themselves in terms of how the re-ablement intervention is delivered for individual participants. Thus, it is especially important that the content of re-ablement and restorative homecare interventions are adequately described in the literature in order to facilitate comparisons between services.

Although the mean sample size of the included studies was 372, only six included a power calculation. It was therefore not clear whether the significant or non-significance of these findings was based upon adequate or inadequate power. There was a high level of selection bias within the studies included in this review, which was expected due to the inclusion of non-randomised study designs, but it is an important factor in considering the results of this review as a whole. Furthermore, this review included both cluster randomised controlled trials and controlled before and after studies that were conducted at one research site. The EPOC Cochrane Review Systematic Group (Cochrane Effective Practice and Organisation of Care (EPOC) Group, 2014) guidelines

state that studies with only one site should be excluded in order to limit the biases that may be associated with the particular site, or the demographic characteristics of the participants at the particular site. This criteria was not applied to the current review because of the anticipated paucity of studies; indeed six before and after studies and two cluster randomised controlled trials would have been excluded if this criterion was applied. However, this is a potential source of methodological bias in the review, which should be noted. It further highlights the need for adequately powered, randomised controlled trials in this area.

Overall, these findings are consistent with the previous review carried out by Ryburn et al. (2009) and the wider summaries in the literature on re-ablement (Francis et al., 2011). In particular, the findings related to the impact on ongoing care and those related to health related quality of life are similar to those in the previous review. However, the present review is the first to analyse the outcome of ability to perform activities of daily living, which is a particularly important outcome for the homecare user population. It demonstrated that further research is needed which measures this outcome using standardised and validated measures.

2.6 Review Conclusion and Implications for the Feasibility RCT Intervention

Whilst the UK government has emphasised its commitment to re-ablement services (Department of Health, 2012) there are no current guidelines as to how such services should be configured or what the re-ablement intervention should consist of. This review has highlighted a number of components: MDT intervention, goal-setting, equipment provision, occupational therapy and nursing input, and reorganisation of services which can be incorporated into re-ablement interventions in order to improve outcomes. Current practice in homecare re-ablement services varies across the UK, particularly regarding the organisation and structure of services (Rabiee and Glendinning, 2011). The present review has highlighted that there are differences between those interventions that are delivered in other counties as part of 'restorative

homecare services'. The findings from the present review also suggest that interventions targeted at increasing independence for users of homecare services can improve their ability to manage their own personal care, and reduce the amount of ongoing care support that they require. Therefore, it appears that the homecare re-ablement ethos – a change from a homecare service that provides care, to one that aims to maximise users' independence (Pilkington, 2008) - is effective in doing this. However, this evidence is tentative and limited by methodological biases and therefore warrants further research.

The systematic review presented in this chapter has also highlighted implications for future research. Overall, there is a risk of methodological bias present within the literature and there is a need for adequately powered, well designed randomised controlled trials which demonstrate effectiveness in ability to manage personal care. However, such services are now well established in many areas of the UK and it may be ethically challenging to withdraw a 're-ablement service' in order to establish a control group. However, randomised controlled trials may be feasible whereby particular components of the re-ablement intervention are evaluated. That is especially the case for occupational therapy as part of re-ablement, highlighted as a research priority (Social Care Institute for Excellence, 2011a). It is also vitally important that further research focusses on those outcomes that are relevant and meaningful. Whilst health related quality of life is definitely an important outcome, ability to perform self-care (activities of daily living) is argued to be more meaningful.

To summarise, core components of the intervention across the included studies were:

1. Goal-setting at the beginning of the homecare episode
2. Repetitive practice and/or grading of activities
3. Co-ordination or case management of the homecare episode by an individual or team
4. Provision of equipment (assistive devices)
5. Re-organisation of services to maximum efficiency based on

approach, tasks, time or specialist knowledge.

The proposed intervention in the feasibility RCT therefore incorporated the first four of these components in the intervention arm. The fifth was beyond the scope of the intervention as it would require a service level change and a large-scale commitment for the provider of the re-ablement service.

Finally, the Short-Form 36 was included as an outcome measure in five of the included studies, measuring perceived physical and mental health. This was therefore included in the feasibility RCT in order to enable comparisons to be drawn with other similar studies. However, as this review has also highlighted, it is also important to measure ADL ability using standardised and validated measures. These measures were also incorporated in the feasibility RCT.

In this chapter ADL interventions, and components of interventions, delivered within homecare were identified. In the next chapter, the views and experiences of occupational therapists working in homecare re-ablement and people who use homecare re-ablement services will be explored. Also, in the next chapter contextual factors and processes, relevant to delivering the intervention, will be identified. These will be combined with the findings from the systematic review to inform the design of the intervention to be delivered in the feasibility RCT.

Chapter Three - How occupational therapists contribute to re-ablement outcomes and what people using re-ablement want from the service: A qualitative interview study

3.1 Introduction

In chapter one it was highlighted that the involvement of occupational therapists in homecare re-ablement services has been identified as a research priority by the Social Care Institute for Excellence (2011a). Of particular importance is whether outcomes are better when occupational therapists play a role in delivering re-ablement than when they do not. The systematic review reported in chapter two found that occupational therapists were involved in seven of the interventions in the thirteen included studies (54%). However, the nature of their involvement in these interventions varied and was most commonly described as being part of a multidisciplinary team. It was not possible to determine whether outcomes were better for users who received direct occupational therapy input than for those who did not. Only one of the studies involved a standalone occupational therapy intervention (Zingmark and Bernspang, 2011). This study showed improved ADL outcomes and a reduction in homecare service usage for those who received the occupational therapy intervention, but this intervention was not delivered as part of a homecare *re-ablement* service, focussed only on bathing, and did not include other activities of daily living. Furthermore, the controlled before and after design entailed a high risk of selection bias because treatment and control groups were derived from separate sites and were selected using non-random methods. Based on the findings from the review, it was concluded that high quality research was needed. Therefore the aim of this research was to conduct a feasibility randomised controlled trial of an occupational therapy intervention for people using homecare re-ablement services. The randomised controlled trial will be described in the next chapter.

In preparation for the randomised controlled trial, issues that were pertinent to delivering occupational therapy interventions within the context of a homecare re-ablement service were explored qualitatively. This approach is recommended by the Medical Research Council (2008) when developing and evaluating complex interventions, as detailed in Chapter One. Qualitative methods can be used in preparation for an RCT to: inform intervention design; ensure the intervention represents and is transferrable to current practice; and ensure outcomes are relevant and meaningful to stakeholders such as

clinicians, people using services, and service commissioners (Williamson et al., 2012). Furthermore:

> "The use of multiple, integrated approaches may be particularly useful in the evaluation of the effects of complex health and social care interventions as these involve social or behavioural processes that are difficult to explore or capture using quantitative methods alone" (Lewin et al., 2009: 1).

Therefore the aim of this research programme was to combine a qualitative approach with the planned feasibility RCT.

On the whole, there is a paucity of literature on what occupational therapists actually do in homecare re-ablement services, what outcomes they think are important, and how they believe they can best facilitate successful re-ablement. A position paper on re-ablement published by the College of Occupational Therapists (2010), collated evidence from studies that were not conducted in homecare re-ablement settings; moreover this evidence was extrapolated from studies conducted within other service settings. The literature directly related to occupational therapy and homecare re-ablement consists of an opinion paper (Petch, 2008) a newspaper article based largely on opinion (Skelton, 2013), and a qualitative study which has reported on the views of other social care staff as to the value of occupational therapists within re-ablement (Glendinning et al., 2010). Whilst the opinion pieces argue that occupational therapy skills are essential to successful re-ablement, the qualitative study suggests that other members of the re-ablement team do not think occupational therapists need to be embedded directly within re-ablement teams. To date, no research has examined the views and opinions of occupational therapists themselves as to how they view their core remit within re-ablement services and how they might best contribute to successful re-ablement outcomes.

Moving from evidence about occupational therapy to the perspectives of people using re-ablement services, again there is very little evidence

published. The evidence to date comprises Wilde and Glendinning (2012)'s study of the views of 34 service users and 10 carers, conducted as part of a larger study (Glendinning et al., 2010). Their findings were that service users and carers valued the re-ablement intervention, but service users perceived that there were several barriers to successful re-ablement including: failure to understand the aims of the re-ablement service; failure of the service to attend to activities particularly important to the person using the service; and lack of involvement and negotiation in the initial goal-setting and service content.

Given the limited evidence, preliminary, exploratory research was conducted to investigate views and perceptions of occupational therapists and people using homecare re-ablement services. This chapter reports this qualitative study and findings. Firstly, the aims and objectives will be outlined. This will be followed by the methodological approach that was taken. The method is then described, followed by the presentation of the findings. The findings are then discussed. Finally, the important factors of relevance to the conduct of the randomised controlled trial are outlined.

3.2 Aims and Objectives

The aim was to ascertain the role, interventions and practices adopted by occupational therapists working in re-ablement and to investigate the views of people using services. Specific objectives were thus to gather clinicians' and service users' perspectives on:

1. The re-ablement service as a whole
2. The interventions delivered by occupational therapists in homecare re-ablement services and the rationale for these interventions
3. The specific modalities that were employed in delivering the occupational therapy contribution
4. Factors that affected the delivery and effectiveness of the occupational therapy intervention and the re-ablement service as a whole (i.e. facilitators and barriers).

In doing this, the intention was to model the design of the intervention delivered in the randomised controlled trial based upon descriptions of occupational therapy practice in homecare re-ablement. An additional purpose was to ensure that the outcomes measured in the trial had meaning and relevance for clinicians and service users and were consistent with their wishes and preferences. These objectives are consistent with the recommendations of The Medical Research Council (2008) for the development phase of complex interventions: modelling processes and outcomes.

3.3 Methodology

3.3.1 Rationale for a Qualitative Approach

> "The quantitative research determines what is happening on a population level, and qualitative research can be used to determine why and how that phenomenon is occurring." (Stuckey, 2013).

Qualitative methodologies are most commonly used when the aim of the research is to explore something which is not currently well understood or characterised. These methodologies are often used to answer 'why' or 'how' questions (Hansen, 2006). Whilst qualitative methods are often considered to be inferior for evaluating the effects of particular treatments, they are conversely valued for their potential to evaluate how such treatments are interpreted and experienced. They are thus the approach of choice when experimental methods are not appropriate to the research question (Green and Britten, 1998).

3.3.2 Qualitative Studies 'nested' within Randomised Controlled Trials

Qualitative studies are increasingly being combined with – or 'nested' within – larger scale quantitative evaluation studies. A review by Lewin et al. (2009) included 100 randomised controlled trials published between 2001 and 2003. Thirty percent had qualitative research studies associated with them. Of these, approximately half (47%) used qualitative research before the trial to: explore issues related to the intervention; generate hypotheses; develop and refine

the intervention; or to develop and select appropriate outcome measures. A more recent review included 296 qualitative studies undertaken with randomised controlled trials between 2008 and 2010 (O'Cathain et al., 2013). It found that most of these studies (78%) focussed on the interventions being trialled and a minority of all the qualitative research (28%) was conducted at the pre-trial phase. O'Caithain and colleagues concluded that qualitative investigations conducted before an RCT increased impact of the research as a whole. They argued that researchers should make explicit the 'lessons learned' from the qualitative research and their impact on the design and conduct of the trial.

The findings from these reviews are consistent with the rationale for this strand of the research. The aim is to inform the design of the intervention to improve the impact and generalizability of the randomised controlled trial. Lessons learned will be explicitly outlined at the end of this chapter. In designing the intervention, these findings will be synthesised with the findings from the systematic review in order to maximise the design of the intervention that will delivered in the feasibility randomised controlled trial.

3.3.3 Philosophical Perspective

As outlined in chapter one, the qualitative strand was based on an ontological premise of realism. It adopted a realist perspective as it accepted the existence of a universal reality that can be studied, researched, and adequately represented through various means of observation and measurement. When adopting qualitative methodologies, realist perspectives can be problematic insofar as the analysis will always involve a high level of interpretation on the part of the researcher. This means that the findings represent an interpretation of reality, rather than reality itself. For the qualitative component, a critical realist perspective informed the analysis. This means that, in analysing the findings, it was not the intention to problematize whether they could be considered to be a true reflection of a person's experiences and perceptions (Silverman, 2006), and that analysis largely accepted what people said as straightforwardly representing reality. Thus, analysis will largely accept the content of the research. Maxwell (2012) argues

that the basic premise of critical realism is compatible with such an approach to data collection and analysis and that an understanding of the 'real world' is shaped by the particular perspective ("lens") that is brought to the research. This is unavoidable in interview based studies, but this need not undermine the ontological position of realism.

3.4 Method

3.4.1 Selection of Method

One-to-one semi-structured interviews were selected. However, before deciding on interviews, two other qualitative methods were considered in terms of their potential to fulfil the aims and objectives of the qualitative investigation. These are outlined below, with an explanation of why they were not used in the actual study.

1. Observation: direct observation of interactions between occupational therapists and their service users in a homecare re-ablement setting would enable direct evidence to be drawn about what they do, how they do it, and how this appears to be received. A strength of observation is its capacity to gather direct information on what people actually do in particular situations because it negates the need for them to recount, recall or describe their actions. It is reasonable to expect discrepancies between what people say they do and what they actually do; observation can be a way in which to avoid this discrepancy (Mays and Pope, 1995). Also, it has been suggested that people may have difficulties in accurately articulating the detail of what they do. How people articulate what they do might be due to memory and being able to accurately recall and recount what is done, and/or be shaped by social norms and expectations about what people might be expected to do (Parry et al., 1999). Observed behaviour may therefore be more constant than expressed attitudes and opinions (Gobo, 2011). Therefore observation would be a potentially useful method to employ.

There are two broad categories of observation. The first is ethnography: a defining feature of ethnography is participant observation (Savage, 2000). In conducting participant observation, the researcher is present in the scene whilst making observations, sometimes participating in the actual event (DeWalt and DeWalt, 2010). The second type of observation involves the researcher making recordings – audio or audio-visual – of the scene, but not becoming involved in the actual event (Heath, 2004).

Conducting any type of observational research is expensive in terms of time and resources for both data collection and analysis (Henninck et al., 2011). To conduct rigorous observational research on the content of occupational therapy in re-ablement would have required lengthy periods of observation in multiple settings, and resources were not available to do this. Use of observation within healthcare research has been limited, in part due to the reluctance from funding bodies to commission research which may be perceived to be relevant only to the area in which it was conducted (Savage, 2000). Furthermore, whilst observation is consistent with the aim of describing occupational therapy practice in homecare re-ablement, it is not consistent with exploring the reason and rationale for what is done, or for gathering views and perspectives on what is done. Observation was therefore discounted as the method for this strand because it was not feasible within the study timescales and was not pertinent to all of the aims and objectives of this qualitative component.

2. Group interviews or focus groups: these are advocated as a convenient method by which to gather data from multiple participants in one interview (Kitzinger, 1995). They enable a researcher to facilitate a discussion which focuses on a particular issue, topic or area and allow the researcher to focus the direction of the discussion. Proponents also argue that the interactions between group members can stimulate discussion and generate ideas which may operate more

dynamically than in one-to-one interviews as new ideas may spark through the group discussion (Acocella, 2012). Thus, the group nature of the discussion forms a key aspect of the method.

On the other hand, group interviews may be critiqued as they are less predictable than one-to-one interviews. Where the aim is to gather information on a range of issues, this may not be possible in a group interview if the discussion veers off topic. Furthermore, in a group interview one or more group members may dominate the discussion and all members of the group are unlikely to contribute equally (Goering and Streiner, 2013). The group may therefore appear to reach a consensus of opinion which may not accurately represent the views or opinions of all the group members. Furthermore, it may be difficult to organise a group interview bringing individuals together from different areas of the UK and gaining a geographical spread of participants from homecare re-ablement services in different areas of the country may be problematic. For the above reasons, group interviews were discounted for this study.

Individual interviews were chosen: these are the most commonly used method in qualitative health research (Britten, 2006, Green and Thorogood, 2014). Interviews are considered to be convenient to conduct, resource efficient, and enable the researcher to gather information about a range of issues related to the research topic. They are considered to be a particularly useful tool because they consist of a directed conversation which allows the researcher to focus directly and specifically on the topic of interest (Green and Thorogood, 2014) and explore issues which arise during the course of the discussion (Merriam, 2009). Furthermore, the purpose of this strand was to inform the RCT intervention, and thus an aim was to identify components of ideal practice – what occupational therapists and service users think *would* be effective - rather than just actual practice. This can be best ascertained by asking participants directly within the context of a purposeful interview discussion.

The convenience and advantages of interviews may also be considered to be

disadvantageous. For example, the contrived nature of the interview situation is likely to affect what people say as both researcher and participant are seeking to present themselves in a particular way during the course of the interview (Silverman, 2006). Furthermore, Silverman (2006) has argued that interviews cannot offer a direct 'window' into a person's views, perceptions and experiences; instead they may reveal a somewhat one-dimensional representation of that person's views or the way that they are seeking to present themselves in that particular situation. It has also been argued that interviews on the context of clinical practices do not accurately reflect the observed clinical practices and therefore there may be some discrepancies between the two (Murphy et al., 1998).

Interviews were thus selected as the method of choice for this strand of the research because they fulfilled the objectives of gathering occupational therapist and service user perspectives on aspects of actual and ideal homecare re-ablement service delivery that would impact upon the subsequent RCT intervention. They were considered to be an appropriate method to meet the aims of the research due to the benefits of the convenience and the direct approach in accessing a number of participants and questioning them about a range of relevant aspects of service delivery, including: the content of intervention; how that content is delivered and experienced; and elements of ideal practice.

3.4.2 Type of Interview

There are two commonly used types of interviews within qualitative health research, these are: semi-structured and in-depth interviews (Hansen, 2006, Britten, 1995). Semi-structured interviews follow a pre-prepared interview schedule, often incorporating a series of additional optional prompts, but allow the researcher the freedom to deviate from the schedule accordingly when items of interest arise in the discussion (Britten, 2006). In-depth interviews do not follow a pre-determined schedule and are predominantly based on one or two questions only which lead into a discussion. It is intended that the discussion flows freely from the initial question (Britten, 2006).

Semi-structured interviews were selected for the occupational therapist and service user interviews because a pre-specified topic guide would ensure that all relevant areas of interest were covered. However, this would not restrict the researcher who would be able to explore issues of particular interest or unexpected issues that were highlighted in the discussion. In-depth interviews might not have allowed sufficient coverage of the range of issues of interest; therefore, semi-structured interviews were selected.

3.4.3 Interview Topic Guides

The topic guides (Appendix 3) were developed to match the aims and objectives (Section 3.2). The occupational therapist topic guide was designed to encompass a range of areas and included general overview questions about the service and occupational therapy input and requests for specific examples. The guide was developed with reference to the methodological literature, and in consultation with local occupational therapists working within re-ablement services. It included a combination of background and demographic questions, experience and behaviour questions, and opinion and value questions (Maykut and Morehouse, 1994). The topic guide began with basic descriptive questions in order to establish the interview style and build rapport before moving onto the main topics of the interview (Miller and Crabtree, 1999). It was piloted with an occupational therapist with experience of re-ablement who was a member of the project advisory group. The topic guides covered a range of areas related to day-to-day practice in homecare re-ablement including:

- Their professional background;
- The structure of the service;
- Their role within the service;
- Examples of users they had worked with;
- Facilitators and barriers to successful service delivery.

They were also asked to describe their 'ideal world' re-ablement intervention. Asking participants to describe an 'ideal world' scenario (Schatzman and Strauss, 1973; cited in Miller and Crabtree 1999) is purported to be effective at getting them to think freely and avoids curtailing their answers to what

they assume may be practical and achievable. The purpose of this question was to gather information to direct the design of the RCT intervention. To inform the potential design, it was important to explore what they would like to do (and why) as well as what they actually do.

The service user topic guide was developed with reference to the literature and with specific reference to a previous study in which users were interviewed about the homecare re-ablement service (Glendinning et al., 2010). The topic guide used in this previous study was adapted for this research. The service user topic guide covered:

- The reason for their referral to the re-ablement service;
- How the service was set-up, including how goals were identified and agreed;
- How the support workers assisted them;
- What the occupational therapist did and how they felt about this;
- Whether they were provided with any equipment or minor adaptations and how they managed with using these.

Users were also asked whether they would have liked anything else to be provided through the re-ablement service in an 'ideal world' scenario. The rationale for this question was as for the occupational therapists' topic guide.

3.4.4 Identification of Participants

A combination of snowball sampling and theoretical (or purposive) sampling was used to identify participants. For the occupational therapists, the initial intention was to use 'snowball sampling' only. This term describes a method of obtaining a convenience sample for hard to reach groups (Handcock and Gile, 2011). In a snowball sample, one participant refers one or more new participants to the researchers; subsequent interviewees are identified by those who have been previously interviewed (Atkinson and Flint, 2001). The rationale for snowball sampling was the anticipation that it would be difficult to identify occupational therapist interviewees because service structures and staffing were experiencing rapid change at the time of the study, with services

being reconfigured and staff moving locations. Thus the aim was to begin by interviewing two local occupational therapists: one from a service with limited occupational therapist input and another with extensive input and ask them to provide the names of other potential interviewees. As a new and emerging area of practice it is likely that occupational therapists maintain an informal network of professional contacts.

Theoretical sampling "ensures that an initial sample is drawn to include as many as possible of the factors that might affect variability of behaviour" (Mays and Pope, 2000: 52). This helps to enhance the relevance of the research and the confidence that it can be generalised beyond the setting in which it was conducted. One of the principal disadvantages of snowball sampling is that it violates some of the principles of theoretical sampling in that researchers have less ability to select their sample and ensure that the key characteristics are represented. Participants may be more likely to refer those holding similar views, limiting the diversity of viewpoints. Therefore, an advertisement was also placed in *OT News* (a monthly publication which is mailed to all members of the British Association of Occupational Therapists) in the August 2013 issue, asking for occupational therapists, currently working in homecare re-ablement, to volunteer if they were willing to be interviewed.

Occupational Therapists

For the occupational therapists the aim was to achieve a sample encompassing:

- A range of therapists from different UK homecare re-ablement services;
- NHS employed and local authority employed therapists;
- Newly qualified and experienced therapists;
- Experienced and novice homecare re-ablement therapists.

It was considered important to include occupational therapists from a range of different services in order to identify aspects of practice which differed between locations. It is already known that the occupational the level and type of occupational therapy input varies between sites (Social Care Institute for

Excellence, 2011a) and it was thus necessary to incorporate this into the sample. It was also anticipated that NHS and local authority employed occupational therapists may have differing approaches – perhaps based on the medical or social models of disability respectively – and the aim was to include both. It was also considered to be important to encompass a range of levels of experience since qualification and level of experience in re-ablement since this might affect occupational therapists' practice, but moreover their views and explanations on how and why they do what they do, and their views on 'ideal-world' practice.

Service Users

The service user interviewees were purposely selected to encompass:

- Males and females;
- Those who lived alone and those who lived with support;
- Those who were discharged from re-ablement with and without an ongoing homecare service.

It was considered important to select the key aspects that might affect participants' responses. Due to the small sample size it was not possible to purposively select participants to encompass a wider range of characteristics than those listed above. It was considered important to include both males and females in the interviews as there may be differences between their experiences. Independence is a particularly important concept within re-ablement services and is a fundamental outcome for service providers. Therefore those who lived alone and those who lived with support, and those who did and did not have an ongoing care package were chosen as broad indicators of level of independence.

Service users were identified from two local authority sites by the occupational therapists who were working with them within the respective services. The occupational therapist gave potential participants a leaflet which briefly outlined the study and asked whether a researcher could contact them.

The aim was to include up to 12 occupational therapists and up to 12 service

users in the interviews. In a review conducted with qualitative research experts and early career researchers, Baker and Edwards (2012) concluded that the optimum number of interviewees to include in a particular study depends primarily on aims of the research. A further consideration is the time and resources available to conduct the research. Thus, the proposed maximum of 12 occupational therapist and 12 service users was, in part, due to practical considerations as to how much time was available to conduct and analyse the interviews. However, it was also based on the rationale that 12 interviews in each group would be sufficient to generate the information needed to inform the intervention for the RCT. Similar sample sizes have been reported in other studies that have successfully informed the development of interventions that have been used in RCTS (e.g. Murphy et al. (2008)).

3.4.5 Consent

Participant Information Sheets (PIS) were developed (Appendix 4) in accordance with guidance from The Health Research Authority (2014), to meet the regulations of the Research Ethics Committee (REC), and to provide a plain language summary of the aims and remit of the research. Potential participants were given a copy by the researcher and had the opportunity to ask questions. They had a minimum of 24 hours, following receipt of the Participant Information Sheet, to decide whether they were willing to participate. For those who agreed, a date was arranged for interview.

Consent forms were completed with all participants before the start of the interview and were signed by the participant and the researcher. Audio consent was also obtained at the start of each interview.

3.4.6 Interviewing Procedure

Occupational Therapists

The occupational therapists were offered a choice between a face-to-face and a telephone interview and this was conducted at a time arranged to suit the interviewee. The occupational therapists were provided with a copy of the interview topic guide in advance of their interview so that they could consider their responses and the particular examples they might wish to provide.

Service Users

All service user interviews were completed face-to-face. The interviews were arranged at a time to suit the interviewee. They were not given a copy of the topic guide prior to the interview.

At the start of the interviews, the researcher reiterated the purpose of the study and gave the participant an opportunity to ask questions. The topic guide was adhered to within the interview and all aspects were covered, however, the interviewer did deviate from the guide to explore particular issues of interest if they arose in the discussion. All interviews were audio recorded using a digital voice recorder.

3.4.7 Transcription

The interviews were transcribed verbatim; this is usual practice for qualitative interview data. It is important that interviews are reliably and accurately transcribed as inaccuracies will affect the reliability of the analysis and findings (Stuckey, 2014). Bailey (2008) stated that transcription "involves close observation of data through repeated careful listening… and this is an important first step in the data analysis" (pg. 129). Therefore, the interview recordings were listened to several times in full and listened to in conjunction with reading the written transcripts in order to gain a clear overview of the specific emphasis and meanings that were attributed by the interviewees in their interviews.

3.4.8 Data Analysis

Demographic information was collected at the start of each interview. Information was also collected from the occupational therapist regarding the re-ablement service in which they were working. This information was collected and collated in order to provide descriptive information.

The occupational therapist and service user interviews were initially treated as separate datasets for analysis purposes. The occupational therapist interviews and analysis were conducted first. However, as the data from the

service user dataset were analysed, it became apparent that there were multiple instances where they described the same aspects of the service albeit using different language. In some instances, they were reporting that those aspects of the service were delivered in the same way and in other instances they were describing differences. Therefore, the decision was taken to amalgamate the findings from the occupational therapist and service user datasets and present these concurrently. This was felt to be the most appropriate way to synthesise and present the data in order to understand the findings, and to highlight the nuanced differences between the two. Presenting two similar sets of themes consecutively would have not allowed for such clear presentation of the similarities and differences between occupational therapist and user descriptions, and would have added length and extraneous text to the thesis.

An inductive data-led approach was used to carry out the analysis. This means that the intention was to be led by the data (Robson, 2011). The overall focus of the research was exploratory and although the intention was to generate data that would inform the design of the intervention, no specific predetermined hypothesis was used to inform the analysis. The dataset was analysed using thematic analysis as described by Braun and Clarke (2006) and Rapley (2011). Thematic analysis is a suitable method of analysing data when the aims are exploratory and an inductive perspective is adopted (Pope et al., 2006).

Thematic analysis was conducted in six stages, in accordance with the process outlined by Braun and Clarke (2006). The first involved becoming familiar with the data by listening to the audio recordings and reading the transcripts several times in full. All recordings were listened to several times and each transcript was read several times. During the first stage, initial notes were made as ideas emerged and particular sections of interest were highlighted for close attention and scrutiny. In the second stage, the data were coded and all items that were relevant to the aims and objectives were given an initial code. In the third phase, items were grouped together based on the initial codes. At this stage codes were amalgamated or re-named in order to form

initial patterns based on groups of codes; the groups formed the initial themes. In the fourth stage, the themes were checked and cross-referenced to the initial coded extracts. In the fifth phase, the themes were defined and named. The sixth and final stage involved writing up the findings and refining the content and names of the themes.

3.4.9 Presentation of Findings

The findings are presented in Section 3.5. They have been organised into themes and sub-themes. Each is presented in the form of a narrative description and explanation of the focus and content of the theme. Exceptions and negative cases are highlighted throughout. Quotations from interviewees have been selected to illustrate and support the themes and sub-themes. The quotations included were chosen because they represented clear and succinct examples of the main content and were also selected to include a range of all the interviewees. The majority of the quotations represent matters that were recurrent within the data. Those which represent exceptional or opposing cases are labelled as such.

In order to aid the understanding of the data, and to increase the precision of its description, some numbers have been included in order to illustrate frequencies with which issues were reported and discussed by the sample. The use of numbers in qualitative research in this way is considered controversial as it may be viewed as reducing the depth of qualitative analysis to numbers and variables (Maxwell, 2010). However numbers can also be considered complimentary to the findings as they can add to the precision about the statements made about the dataset itself; this can increase the confidence of the reader in the trustworthiness that the report is reflective of the data (Maxwell, 2010, Sandelowski, 2001). As Maxwell (2010) argued:

> "If participants in a study repeatedly make a particular claim... presenting this fact in numbers isn't necessarily conceptualizing it in terms of variables but can be seen as describing the occurrence and distribution of the claim or action in that... set of individuals" (pg. 478).

The decision to include such numbers in the present study is consistent with the above argument. The purpose is to make representations about the sample's views and to indicate when something was true for 'many', 'some', or 'a few', adding detail to these statements in the written findings. This is relevant to the research aims and objectives which are to determine usual practice amongst the therapists and user experiences. It is important to note, however, that this sample was not designed to represent all occupational therapists and users of re-ablement services and therefore issues which were reported by all participants should not be understood as necessarily reflecting service user and occupational therapist views as a whole. Moreover, the aim was to demonstrate issues that were particularly prevalent within this dataset.

At the end of each theme a summary is provided; this also identifies how the service user's voice has contributed to that theme.

3.4.10 Research Ethics and Governance Approvals

Ethical approval was obtained from the Social Care Research Ethics Committee (Ref: 13-IEC08-0002). In accordance with the research governance procedures for social care research, management approvals were obtained from the sites at which service users were recruited prior to the commencement of the research at each site.

There were particular ethical considerations in the qualitative study in relation to the selection and identification of both occupational therapist and service user participants. This related to the initial approach of those who were referred by a third party (another occupational therapist); the referring occupational therapist sought prior consent from the potential participant to pass their details onto the researcher. The potential participants were then provided with the information about the study but were free to consent or decline to take part and were given a minimum of 24 hours to make this decision, so that they were not placed under undue pressure to do so. There were also ethical considerations in relation to the collection and storage of voice recordings and transcripts. This was carried out in accordance with the

Data Protection Act (1998), research governance protocols and data were stored securely, encrypted on a password protected server. Any information which could identify participants was removed from the transcripts and has not been included in the written report. Participants were made aware of these aspects through the Participant Information Sheets (Appendix 4 and 5) and agreed to this by signing the informed consent forms.

3.5 Findings

3.5.1 Interview Participants

Twelve occupational therapists were interviewed, three face-to-face and nine over the telephone. The interviews ranged in duration from 36 to 85 minutes, with a mean of 46 (SD 14) minutes. The length was not associated with whether the interview was conducted face-to-face or by telephone. Characteristics of the occupational therapists are displayed in Table 6. They ranged in length of time since qualification from 1 to 38 years, mean 14 (SD 12) years. Eight were local authority employed, three were NHS employed and one was a locum. In terms of geography, four were based in London Boroughs, four were from the Midlands of England, two were from the South of England, and 1 each from the North of England and Scotland.

Table 6: Characteristics of Occupational Therapists

Qualified (Years)	NHS/LA	Length of Time in Current Team	Other Qualified Staff in Team (in addition to OT)
1	LA	1	No
8	LA	5	No
2	LA	1	Yes
23	LA	3	No
38	NHS	13	Yes
5	NHS	Not given	Yes
3	LA	3	No
28	NHS	3	Yes
10	LA	3	No
28	LA	3	No
17	Locum - LA	2	Yes
7	LA	2	Yes

Table 7 shows the characteristics of the re-ablement service in which the occupational therapists were working. Eleven had a six-week time-limit on the service and one had flexibility. Four services involved a blanket referral to occupational therapy (meaning all service users would be seen by an OT); four had a process whereby the support workers made referrals; and four adopted a selective process in which the team decided whether an occupational therapist would become involved. Occupational therapists were the only qualified staff members within six teams; the other six also had qualified staff members (physiotherapists, nurses or social workers). In all teams the support workers (non-professionally qualified staff) were key team members who carried out the regular visits to the service users.

Table 7: Characteristics of Re-ablement Services

Service Provider	Number of OTs	Users	Service Time Limit	Referral Method to OT
Local Authority	1	Adults 18 +	6 weeks	Support workers
Local Authority	7	Adults 18+	6 weeks	Blanket
Joint NHS/LA	2	Adults 18+	Flexible	Team decide
Local Authority	Not given	Adults 18+	6 weeks	Blanket
NHS	2	Adults 18+	6 weeks	Team decide
Joint NHS/LA	3	Adults 18+	6 weeks	Not given
Local Authority	12	Adults 18+	6 weeks	Support workers
Joint NHS/LA	Not given	Adults 18+	6 weeks	Team decide
Local Authority	Not given	Adults 18+	6 Weeks	Blanket
Local Authority	6	Adults 18+	6 weeks	Team decide
Joint NHS/LA	7	Adults 18+	6 weeks	Blanket
Local Authority	Not given	Adults 18+	6 weeks	Support workers

Ten service users were interviewed. The interviews ranged in duration from 11 to 60 minutes, with a mean of 30 (SD 15) minutes. The characteristics of the service user interviewees are shown in Table 8. There were six females and four males. Ages ranged from 57 to 94 years, with a mean of 81 (SD 11) years. Three lived with their spouse, seven lived alone. Only one had an ongoing care package (this was possibly because the occupational therapists were less likely to refer people to the study who had ongoing homecare as opposed to what might be seen as a 'successful' service outcome). The service user sample therefore over represents people who were 're-abled' so that they no longer required a homecare service. It has been reported that 63% of

people do not need an ongoing homecare service after a period of re-ablement (Social Care Institute for Excellence, 2011b).

Table 8: Service User Characteristics

Gender	Age	Living Arrangement	Ongoing Care Package
Female	78	With spouse	No
Female	87	Alone	Yes
Female	90	Alone	No
Male	84	Alone	No
Female	94	Alone	No
Female	81	Alone	No
Male	57	Alone	No
Female	83	With spouse	No
Male	85	With spouse	No
Male	69	Alone	No

3.5.2 Themes and Sub-Themes

The findings were categorised into three themes reflecting the aims and objectives: *Content of Re-ablement – Tasks and Activities*; *Content of Re-ablement – Modalities and Strategies for Delivery and Experiences of Delivery*; and *Facilitators and Barriers to Successful Re-ablement*. Each theme was further categorised into sub-themes which will be described in the respective sections. There was some overlap between sub-theme themes, for example delivering a graded re-ablement programme overlapped with confidence building; positive relationships with support workers was part of the users' experience of re-ablement and was also believed to be a facilitator and a barrier. Similarities and differences between themes and occupational therapist and service user views will be described in the text.

Table 9 shows how many participants spoke about aspects related to each of the themes and sub-themes. All the interviewees contributed to each of the main three themes. The information in Table 9 enables the reader to identify which sub-themes were largely derived from the occupational therapist dataset, which from the service users, and which were distributed across both groups. Furthermore, it enables the reader to discern which aspects were prevalent across all the services and all the user experiences (in this sample) and which were varied. This is highly relevant to the aim of the research which

is to ensure that the intervention delivered in the RCT reflected usual practice.

As reported in the systematic review in the previous chapter, a variety of terms was used for the services and for those who provided them. The occupational therapists used different terms to describe the service including: re-ablement, enablement and re-enablement. They used different terms to describe the support workers including: carers, care workers, re-ablement workers, social support workers and re-ablement support workers. They used different terms to describe the service users including: citizens, clients, patients, and customers. For consistency, and to aid confidentiality, extracts have been changed to use only the terms: re-ablement, support workers and service users.

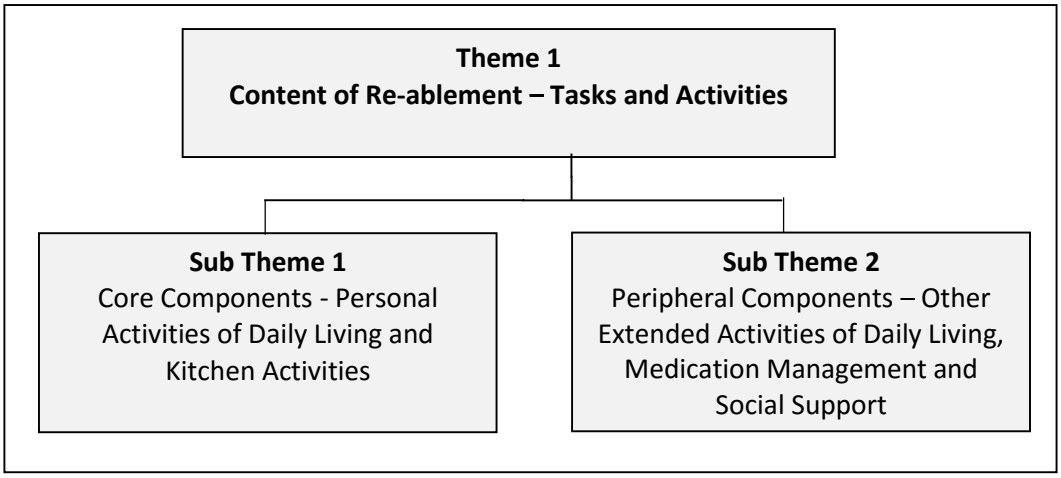
Table 9: Number of Interviewees Contributing to Each Theme and Sub Theme

Theme	Number of OTs	Number of Service Users
1: Content of Re-ablement – Tasks and Activities	**12**	**10**
1.1: Core Components – Personal Activities of Daily Living and Kitchen Activities	12	10
1.2: Peripheral Components – Other Extended Activities of Daily Living, Medication Management and Social Support	7	5
2: Content of Re-ablement – Modalities and Strategies for Delivery and Experiences	**12**	**10**
2.1: Delivering a Graded Re-ablement Programme	12	7
2.2: Teaching Aquisitional or Compensatory Techniques and Equipment Provision	12	8
2.3: Confidence Building and Emotional Support	8	7
2.4: Training and Supporting the Team	10	0
3: Facilitators and Barriers to Successful Re-ablement	**12**	**10**
3.1: Re-ablement versus Homecare	12	10
3.2: Motivation, Re-ablement Potential and Loneliness	12	9
3.3: Time Limit and Timings	10	9
3.4:Communication, Team Working and Administration	12	1

3.5.3 Theme 1: Content of Re-ablement - Tasks and Activities

This theme concerned the tasks and activities that were provided within the re-ablement service as a whole, and the occupational therapy element specifically. The theme was divided into those activities which the occupational therapists described as being core components of the service and those which were peripheral components (i.e. those that were not routinely conducted). The two sub-themes were labelled as: *Core Components – Personal Activities of Daily Living and Kitchen Activities*; and *Peripheral Components – Other Extended Activities of Daily Living, Medication Management and Social Support* as illustrated in Figure 4 below.

Figure 4: Overview of Theme 1



Each service user had a different experience of the re-ablement service and it was therefore not possible to determine whether an activity was a core or peripheral component from their responses. Their reports of the tasks and activities have been amalgamated with the occupational therapists' reports, and extracts are interspersed. Varied content was described by both occupational therapists and service users. This is consistent with the findings from the systematic review in Chapter Two.

Sub Theme 1: Core Components – Personal Activities of Daily Living and Kitchen Activities

The principal focus of the re-ablement service centred on activities of daily living, primarily those carried out within the home environment. These included: indoor mobility; toileting; chair, bed and toilet transfers; bathing and showering; washing; and dressing. Kitchen activities were also included as core components which are extended ADL activities. The occupational therapist below described a typical overview of the activities that she might focus on:

> *"So we'll assess their transfers, find out how they do their washing and dressing, how much assistance they need around meal preparations... You know just basically like their mobility, if they've had any falls, how much assistance they need around toileting"* OT12

Personal Care: Washing, Showering and Bathing

The main activity was personal care with the principal activities being: stripwashing, showering or bathing. Some occupational therapists believed that these were the main components due to the link between re-ablement and traditional homecare services (i.e. eligibility for homecare is often connected with the need for assistance with personal care) and also the Fair Access to Care Services (FACS) criteria of social care services. The link between re-ablement and homecare is discussed further in theme three. All ten service users reported that assistance with washing or using the bath or the shower formed a part of the service which they received or were offered. This encompassed practical assistance and/or motivating them to participate in personal care activities. The example below is of a service user who was feeling low in mood due to a significant deterioration in his physical abilities. This was impacting on his motivation to maintain his personal care, and the extract illustrates that 'getting washed' was a 'big' part of the service:

> *"...and then there was getting me washed, like I say that was a big thing. You don't feel like it and they was really pushy with*

getting me washed, you know, and keeping you clean. So that was another big thing." SU7

Two of the service users declined the help that they were offered with washing or showering, stating that it was not needed. These service users preferred to manage the activities themselves without input from the support workers or the occupational therapists. For one male service user this was due to his embarrassment at showering in front of the support workers.

"because they says 'oh no we'll give you a shower if you want' I says 'no you're aright'... I says 'the reason I'm saying that is because I think I'd be embarrassed by some total outsider giving me a shower like, you know, I tell you that's no problem'" SU10

This suggests that although washing and bathing were core components of the service, it was questionable whether all of the help and assistance that was offered to re-ablement service users was actually required. This point will be expanded further in theme three.

Dressing

The occupational therapists linked "washing and dressing" when reporting on the activities they targeted. However, although all the service users spoke about washing, they did not all report having or needing assistance with dressing. Some of them stated that they were able to manage their dressing independently at the beginning of the re-ablement episode. However, three service users reported having assistance with dressing. For two this was delivered only at the start of the re-ablement episode.

"[It] started that they come with er, helping me to wash and take my clothes off, and then I had to put my clothes on after I'd had the wash" SU8

Mobility, Transfers, and Accessing Facilities within the Home

Assistance with mobility and/or transfers was reported by the occupational

therapists as a further key component. The service users who took part in the interviews were all able to transfer independently, so this was a smaller component of the findings from their interviews. The example below, given by a service user's wife, illustrates the assistance provided by the occupational therapist with indoor mobility which encompassed the provision of equipment and then practising using it:

> *"They shown him how to walk proper like and, you know, but apart from that he wouldn't have been able to walk. But while they were here* [occupational therapist name] *let him walk around a bit on it* [a walking frame]*."* SU9, wife

Three service users were unable to access particular parts of their property due to the presence of steps or stairs, or having a downstairs existence on a temporary basis following discharge from hospital. The support workers were reported to assist with fetching items from the inaccessible parts of the house, and the occupational therapists assisted by making those parts of the home accessible. Two service users were temporarily unable to access the toilet in the home and therefore had to use a commode; commode emptying was a core part of the service, enabling these users to return to and remain at home.

> *"I couldn't get upstairs, all my clothes were upstairs so if I'd done some washing they'd take them up. We made it eventually another part in the house downstairs for my clothes, but they was fetching my clothes for me as well from upstairs, and washing, things like that."* SU7

> *"Well of course that blessed commode you know doing that commode out every day, dear. That was the one essential... big essential"* SU5

Kitchen Activities

Kitchen activities, which primarily comprised meal and drink preparation and cleaning-up afterwards, were routinely incorporated into service provision.

The service users reported that kitchen tasks were often completed by the support workers in the first few days of the service, after which they gradually took on more responsibility for these. The two examples below indicate that the occupational therapists believed that kitchen activities were an area in which people might be able to regain independence more quickly, or more easily, than with personal care. This suggests that they believe that people may be able to be independent in the kitchen even though they needed assistance with personal care.

> *"I may get a separate referral for someone who's got a care package for personal care but somebody has identified that they want to be able to cook their own lunch, or go in the kitchen. We may go in for a week or two just to support them with rehab practice with that specific area."* OT5

> *"We started on looking at meal preparation first because that's the area she felt that she could be independent the quickest."* OT3

Sub Theme 2: Peripheral Components – Other Extended Activities of Daily Living, Medication Management and Social Support

This sub-theme incorporated those activities which were described as part of the re-ablement and/or occupational therapy intervention but were not considered, by the occupational therapists, to be core components. Notwithstanding this, particular activities might be important to individual service users. Indeed, in the outdoor mobility examples they were especially important to the service users who described these activities.

Outdoor Mobility

Findings in relation to outdoor mobility, and associated access to community facilities such as shops, were mixed. Six occupational therapists spoke about outdoor mobility; two concentrating on it routinely whilst four stated that it was only carried out in exceptional circumstances. The following two examples demonstrate the disjunction between different services in this aspect. The first stated that travel training was a core component of her service whilst the

second implied that it was regrettable that she was not able to do more outdoor activities:

> *"We do a lot of social skills training as well so we will take people out and do travel training with people if they've lost confidence going out, that sort of thing."* OT2

> *"Everything is mostly around indoors. Indoors we did and only a very few cases we did outdoors. I think for one particular service user he went to his family who lived on the same road, for his meals... So we did some outdoor stuff with that, but we don't do any shopping or anything like that unfortunately" OT6*

This was also a smaller component for the service users, with three of them describing a process where they were supported by the occupational therapist to regain their confidence and ability to mobilise outdoors. Service user one described a 'carer' doing this activity, though it was clarified with her husband that this was the occupational therapist. She described this as a significant, positive event in her recovery. Service user three reported that regaining her ability to mobilise outdoors was a signal that she had regained her complete independence and confidence, such that the support workers were not needed after this point. Again, this signalled a key event in the re-ablement process.

> *"And I still couldn't get out so, one of the lady's, carers, they got me a walker. And as soon as I got that that walker and I could..* [husband's name] *could get it out for me, and the carer took me a walk with it, and I was outside and it was brilliant... then, nearly running!"* SU1

> *"And so we went to Boots* [a UK high street shop]*, did the shopping and came back. And that was my first trip out, you see? And so she was quite pleased that I'd got to that stage. And from then, I haven't needed them since then."* SU3

Often extended activities (other than kitchen activities) appeared to be peripheral to the main remit of the services and were thus not incorporated because of a perceived (by occupational therapists) lack of time and resources, and a remit directed towards personal care. For some occupational therapists once a person had achieved independence with personal ADL (to a point where they no longer needed support workers), the scope of the service did not allow the time to work on extended activities of daily living. Nevertheless, the occupational therapists believed that occupational therapy skills could impact positively on outdoor mobility, with three stating that this was an area which they would focus on more frequently if they had more time and resources. They believed that improving service users' ability to mobilise outdoors would impact positively on their motivation in other areas by providing them with a 'reason' to get up, washed and dressed as the example below illustrates:

> *"Yeah, outdoor mobility, community access because all of those things lead on from getting up in a morning. Yeah. And we have this conversation day-in day-out. You know if only we could do a bit more, we would achieve more... because* [people] *would feel far more motivated if they've got the reason to do things."* OT4

Domestic Activities

Domestic activities of daily living, such as cleaning and laundry, were reported to be rarely included in the re-ablement episode. Activities, such as bed making, washing the dishes and bin emptying were stated to be completed by the support workers on the service user's behalf, perhaps whilst the user concentrated on regaining their independence with other activities. There was much less focus on the occupational therapists supporting service users to regain their independence with domestic activities than with those activities described in sub-theme one. As the example below illustrates, these might occasionally be incorporated if they were especially meaningful to individual service users, but this was the exception rather than the rule:

> *"I do do some stuff, if it's appropriate, around cleaning. Especially*

if someone... if that was their thing in their house. I think for one particular service user, for her her main role when she was... to clean and lightly dust. So we did some work around that." OT6

Medication Management

Two service users also highlighted that they were supported to manage their medication, particularly after the initial return from hospital. This took the form of the support workers reminding them to take their medication at particular times or preparing the food that was required to accompany the medication. Three occupational therapists highlighted that medication prompting was part of the service which the support workers would provide and two of them stated that they would become involved with equipment provision to help service users manage their medication.

Social Support and Signposting

Signposting on to other services was noted as a further activity by the occupational therapists. It was considered to be an important part of their duty if they identified needs that were outside the remit of the re-ablement service to refer people onto other appropriate agencies. This tended to occur at the end of the re-ablement episode. These mainly consisted of befriending or day centre services to reduce the impact of social isolation (discussed further in theme three), but may also have included community physiotherapy or community nursing.

Theme 1 Summary

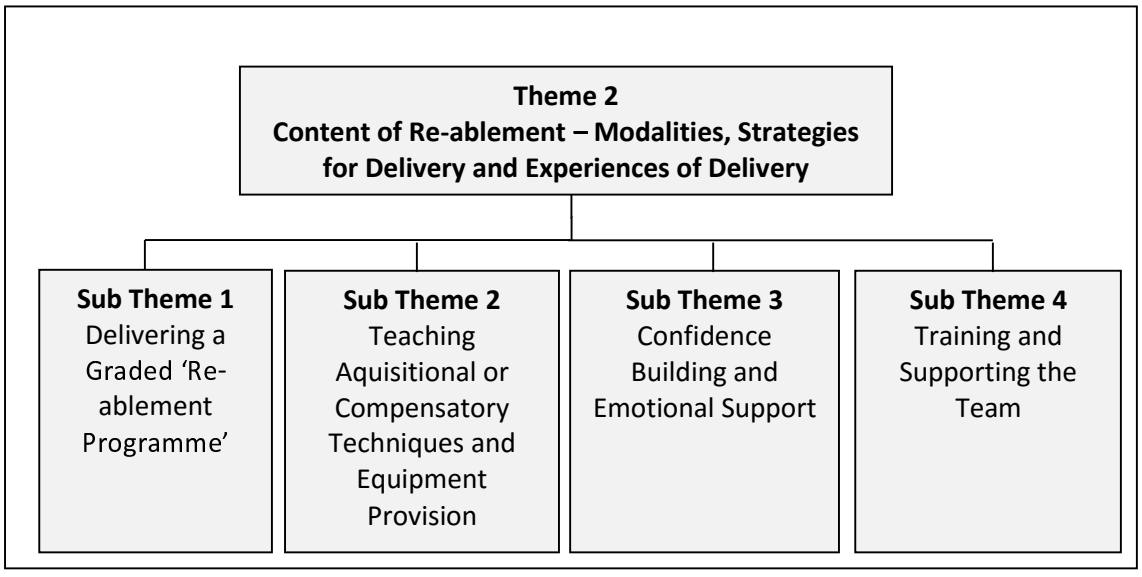
The findings from this theme suggest that re-ablement services focus mainly on activities of daily living within the home. This was evident in both the occupational therapist and service user reports. The principal activities were personal care: washing, bathing or showering. Domestic activities, and those outside the home, were incorporated less routinely but were valued by both occupational therapists and service users for the positive impact they could have on the ability to maintain independent living. Descriptive accounts of the activities were provided in the service users' voice, and also emphasised that these were primarily ADL within the home. Additionally, some service

users highlighted that activities outside of the home were especially important to them. This accentuated the shortcomings of services that did not focus on activities and goals which were important to the user.

3.5.4 Theme 2: Content of Re-ablement – Modalities, Strategies for Delivery and Experiences of Delivery

This theme concerned the way in which the occupational therapy intervention was delivered within the re-ablement service. Specifically, the focus was on how the occupational therapists delivered their treatment, including the skills that they reported using and the rationale for particular approaches. Additionally, this theme encompassed how users experienced the service, specifically how they reported being helped and their understanding of this. Similarities and differences between occupational therapist and service user reports are highlighted. The theme has been categorised into four sub-themes: *Delivering a Graded 'Re-ablement Programme'*; *Teaching Acquisitional or Compensatory Techniques and Equipment Provision*; *Confidence Building and Emotional Support*; and *Training and Supporting the Team*. These are illustrated in Figure 5 below.

Figure 5: Overview of Theme 2



Sub Theme 1: Delivering a Graded 'Re-ablement Programme'

The intervention described by the occupational therapists comprised an overall

'programme' or 'package' of separate but interrelated components. These components were:

1. Functional assessment
2. Goal setting
3. Implementing a graded re-ablement programme
4. Reviewing ongoing programmes.

The first two components were reported to be completed principally by the occupational therapists, whereas the second two were often conducted in collaboration with the support workers. In multidisciplinary teams, where the occupational therapists worked alongside other qualified professionals, all components were shared amongst the qualified staff. The discussion emphasises those components which were considered to be core/sole occupational therapy roles and those that were shared with the support workers (this is relevant to the RCT which will take place in a team with occupational therapy and support workers only).

Therapists stated that they began with a functional assessment, usually focusing the core activities of daily living outlined in theme one. This was carried out face-to-face, by the occupational therapist, and routinely involved observation of service users carrying out ADL activities within the home. However, in some services a specific 'occupational therapy assessment' was not conducted and instead a multidisciplinary assessment tool was used. Risk assessments were also described by five occupational therapists as forming part of the assessment process. There was also a division between those who used specific cognitive assessments and those who assessed cognition during functional observation. A small number of services which had more of a health-led focus or where there was a multidisciplinary focus used generic assessments which incorporated physiotherapy and nursing components (n=3). The main aim of the assessment process was to establish a baseline starting point in order to create the goals for the re-ablement episode. Establishing whether someone had 'potential' and the extent of this potential was also a key part of assessment. The concept of 'potential' is explored further in theme three; however, it also formed a key part of the assessment

process.

> *"... we're doing the functional assessments. So we're actually going in and establishing exactly what someone can and can't do, what the baseline is to start off with, and from that we can actually devise, erm, a therapy plan."* OT8

> *"Basically my role at the moment is to assess... the rehab potential and then assess service users' needs and whether we can erm... work with our care providers to achieve goals to make people, or maintain people's independence."* OT11

The occupational therapists reported that goal setting was a core component of the intervention. Following the initial assessment one or more goals were established for the re-ablement episode. Goals were usually documented in a re-ablement plan, where the occupational therapists highlighted they could be communicated to the service user, the family, and the support workers who would be delivering the plan. These were reported as being agreed in collaboration with the service user. However the service users, on the whole, reported that they were unclear about what was agreed at the beginning of the re-ablement episode. Several stated that it was decided for them and one described it as being "just automatic". Although they reported having little choice or control over the initial content of the service, none of the service users complained about this and they provided matter-of-fact explanations that it was decided for them. This was a noteworthy divergence between the occupational therapist and service user accounts of the service. The occupational therapists were very clear that goals were set in conjunction with users but the users reported little recollection of this. Although the service users reported little input into the *initial* set-up, they described having clear input into the service as it progressed and that the service was largely responsive to their needs and wishes.

> *"We actually... agree goals with the person themselves. So once we've done our assessment and established that, you know,*

there's potential to improve, whether that's a little bit or we feel, you know, that they're going to get their independence back again, we will actually document some goals with the person themselves on the therapy plan and say "this is what we're working towards"" OT8.

"Interviewer: So the first time they came to see you when you'd got back home... Can you remember how it was decided what they were going to do?
SU5: Ooh they'd already decided it I think! I think the three well the two people that had decided practically everything what it should do"

Based upon the goals, a re-ablement or therapy programme was then implemented by the occupational therapist. This programme was usually 'graded' meaning that the activities were progressed in their level of difficulty as the user became more able to complete them. A graded process was also evident in the service user experience, most of whom described a similar process.

"We will put in like a graded OT programme for the support workers to follow and then we just make it more, almost more difficult as we go along. With the idea for the service user to be independent before, you know, following re-ablement." OT12

"SU1: And as the time went by you got a little bit better all the time until you got to the point when you could cope yourself...
Interviewer: And is that how it worked then? So, every week they were doing a little bit less?
SU1: Yes. Then they said I'd got independent, I could manage by myself."

In order to implement a graded programme the occupational therapists reported on drawing on their skills in activity analysis. Activity analysis places

an activity within a cultural and environmental context, and analyses its generic properties and unique characteristics (Creighton, 1992). This identifies both environmental and user barriers to participation in the activity. Four occupational therapists reported that activity analysis informed the design of the re-ablement programme. These occupational therapists believed that activity analysis was a central occupational therapy skill, allowing the activity to be *"pulled-apart"* (OT10) and to identify the particular aspects that need to be worked upon or modified. This might entail increasing stamina, tolerance or confidence to perform the particular activity. The skill of activity analysis and its role in activity grading were considered to be central to the occupational therapy role in re-ablement and were considered unique to the occupational therapists.

> *"What we do is we spend a lot of time analysing what people are doing at home and like, activity analysis. And we look at what parts of... what component parts are actually missing or problematic for service users and we work on that"* OT2

A re-ablement plan, documenting the activities to be completed and the approach to be implemented, was usually written by the occupational therapist. It documented the goals to be worked on by the service user, the occupational therapist and the support workers; feedback between these three parties was also a part of the intervention and a function of the re-ablement plan. The way in which the goals were worked upon, i.e. the particular modes and strategies employed, are outlined in the next sub-theme. In all services, regular reviews (of the programme and written plan) were reported to be a characteristic feature of the intervention. Some services had formal timescales for review such as at two and four weeks, at least once per week, or particularly following the delivery of pieces of equipment. However, it was reported that the frequency of the reviews could be varied depending on the particular needs of the service user.

> *"I: How often would you be reviewing people, would you say?*
> *OT8: Er, well, definitely on a weekly basis. It depends really on*

how involved and complex their, erm, their case is. I mean some people we see on a daily basis if we can. Other people it might be we would see once a week."

The occupational therapists stated that they had a role in completing reviews and inputting into the decision around the need for ongoing homecare, based on their overview of that person's functional and social situation. Within the process of reviewing the service users' progress throughout the re-ablement episode the occupational therapists reported adopting a 'case management' or 'key worker' role whereby they took an overview of the person in the re-ablement process and co-ordinated: referrals to other services; the amount of service during the re-ablement episode; and the amount of on-going care required. The case management approach was described by the occupational therapist below:

"I think, without sounding grand, we tend to case manage. We tend to have an overview. We tend to determine when, when we're going reduce. We take that responsibility, or if we're going to stop the service, you know if we're going to... if we feel the person's reached their potential or if they're reabled we take that decision to do that." OT4

Sub Theme 2: Teaching Acquisitional or Compensatory Techniques and Equipment Provision

Core components of the treatment intervention were teaching or practising techniques and equipment provision. Previous research has classified strategies employed by occupational therapists as 'acquisitional' or 'adaptive' (Zingmark and Bernspang, 2011). Acquisitional strategies are those in which the person is assisted to acquire or re-acquire the skills and abilities to complete an activity. Adaptive strategies (may also be termed 'compensatory' strategies) are those in which the task or activity is adapted to compensate for the disability of the person. This may or may not involve equipment provision. The techniques described by the occupational therapists could broadly be categorised into these two areas. The occupational therapist below

spoke about an acquisitional strategy – teaching the "correct technique" – being the preferred option, and equipment provision, a compensatory strategy, was avoided unless necessary:

> *"So… with the washing and dressing if someone can't reach their feet we might just provide something that will help them, or maybe they're not using the correct technique so we'd teach them the correct technique… we don't always compensate with equipment, we try and avoid equipment because it compensates."* OT2

The acquisitional strategies described were principally training and practising activities of daily living such as teaching techniques described above. Alternatively occupational therapists reported teaching adaptive technique: a different method of completing the activity to compensate for the impairment. These were completed either by the occupational therapist or delegated to the support workers. These techniques particularly applied to washing and dressing activities, especially where people had impairments which affected their upper limb function. Techniques were also demonstrated for managing household activities where mobility or range of movement was impaired. Such techniques were particularly valued by services users because they were based on knowledge as to how other people had fared in a similar situation.

> *"So we looked at specific transfer techniques... you know, counting, certain techniques that you use for people with Parkinson's to help them get up... Over that period of time I went in once a week and also passed on to the carers to practice stair mobility and to practice standing and sitting in the way that I practiced it with her: getting to the front of the chair, using a counting technique to get up, pushing on the right places on the chair, you know, the normal standing and walking."* OT11

> *"It was helpful when she showed me to take this arm out first and then take your bad one and then she learned me the other way*

which was quite helpful because me I'd have been you know, trying to get everything... yeah it is a good technique what they do" SU8

"Believe it or not they taught me things that I wouldn't have thought of. They taught me things, because they're on the front line... so they'd come across all of this with [people] *in a wheelchair."* SU7

Equipment provision, an adaptive strategy, was a core component of the occupational therapists' role. All the occupational therapists spoke about equipment and its provision to facilitate independence within the home. This ranged from small pieces of equipment such as simple bathing aids or raised toilet seats, to complex special order equipment to facilitate assisted transfers from one carer instead of two, or specialised seating. Adaptations to the environment were also completed in order to facilitate independence. Most often these were minor (e.g. grab rails and adaptations to steps) which would be provided by the re-ablement occupational therapist. In circumstances where major adaptations (e.g. level access showers) were required, these were passed over to a long-term occupational therapy team. Equipment and adaptations were provided within the context of that person's re-ablement package, to be practised with support from the support workers, as in the example below:

"... so I put the [bath]*board in place and then showed her how to transfer and then a lot of the work then did come from the support workers… using the bathboard and built her confidence up and then she didn't need… any more support workers."* OT1

A range of equipment and adaptations were reported by the service users encompassing grab rails and stair rails; bathing and showering equipment; kitchen equipment; commodes and raised toilet seats; wheelchairs and ramps. All the equipment was related to activities of daily living, primarily within the home environment, with a minority relating to access to property

or outdoor mobility. Equipment was valued because it enabled the service users to complete an activity independently or to feel safe and confident to do so. When asked to describe the most helpful aspect of the re-ablement service, several responded by outlining equipment or rails that had been provided. Several service users commented that they would not be able to manage without the equipment or described it using other positive language, for example 'a godsend' (SU1) and:

> *"Yes, I couldn't do without it* [the equipment]*. Especially coming up the steps from the garden and from the side of the house, I've got two steps to come up which I need those helps* [grab rails] *either side."* SU2

The occupational therapists believed that the selection of the particular approach (for example, acquisitional or compensatory) was a unique occupational therapy role within the team. They reported that they drew on their medical knowledge and understanding of the impact of medical conditions on functional ability in order to select an approach and design a programme that was appropriate to each individual service user. Within teams this skill was often unique to the occupational therapists which the other team members (principally non-qualified support workers) were reported not to have to the same extent. This knowledge and understanding was therefore a unique occupational therapy contribution to services. The ability to identify re-ablement potential was believed to be a key skill employed by the occupational therapists which informed the particular strategy to be adopted.

> *"I suppose first and foremost we bring our clinical knowledge and so we bring that sort of medical understanding of people's conditions, which the rest of the team perhaps don't have to the same level that we do." OT8*

> *"I mean it'll be a combination of approaches depending on the actual situation. Sometimes the emphasis is very much on the compensatory approach. But if we've got somebody who's had a*

very new CVA we might be working with the community stroke team and using a more neuro approach. We might use a more bio-mechanical approach like with the last gentleman I mentioned when we were working with his mobility... That is the primary occupational therapy role and there isn't really anybody else within the team that takes on that role." OT9

"Some cases it's so obvious from day one that they're not going to reach re-ablement potential. And those sorts of people, I think because we're experienced, we kind of know… fairly soon… how people are going to do." OT4

Sub Theme 3: Confidence Building and Emotional Support

Seven of the service users described a process of confidence building to explain how they regained their ability to complete activities of daily living throughout the re-ablement episode. This appeared to involve either a process of adjustment to their new situation or a process whereby they gradually regained their abilities. Some described how this was facilitated by the support workers who monitored and supervised them, others described feeling reassured by the presence of the support workers during the initial stages. Whilst this was described by occupational therapists as a graded process, the service users largely experienced this as confidence building.

"When it got to the end I thought no the carers have given me what I want to do, I don't want to go on anymore [with a care package] *because they've given me the confidence to do my own* [ADL]*..."* SU6

"I didn't feel capable of manoeuvring in and out of the shower and washing myself, but I had to do it obviously so er.. well that was pretty much it… I er… once I'd taken the plunge and started using the shower again, I was concerned that I might fall in the shower and the presence of these people, really, er was my safe guard. After a few showers... I was on top of it" SU4

Seven of the occupational therapists also spoke about confidence building being essential to the service user experience. This was often believed to be facilitated by the consistent approach and positive relationships adopted by the support workers on their routine visits:

> *"The fact that we had the ability to be able to go in on a daily basis and get the care staff involved so that at each of their calls they were able to build her confidence by getting her to stand, and then eventually to be able to walk a little bit. It was that intensity of support that made all the difference. And just gaining this lady's trust and confidence, that was the biggest thing"* OT8

All of the service users described positive aspects of their relationship with the support workers, this is outlined further in theme three. This was an important aspect of the way in which they were supported to regain their independence and confidence. As well as being a 'facilitator' to successful re-ablement it was also evidently a strategy for delivery, and is therefore also categorised in this theme. Relationships with support workers were described in supportive terms and users reported being willing to engage with the service and participate, because they felt comfortable with the workers who were coming into their homes. Three of the service users described how the support workers "became friends" which was a highly valued aspect of the service. Additionally, the provision of emotional support and simply 'talking' and 'listening' were regarded as being beneficial; in some instances, this was more important than the physical rehabilitation.

> *"I've always got on very well with all the people that have come and we've ended up friends, you know?"* SU2

> *"The first thing was to help me with this emotional disturbance that I had. And then of course it was to get me working, although my hand wasn't better... to manage everything. They built me up physically and mentally really. Gave me confidence. Because they*

listened to me, you see? They were marvellous at listening." SU3

Sub-Theme Four: Training and Supporting the Team

The occupational therapists reported that part of their remit and role was assisting in the training and competency development of the support workers (non-qualified team members) within the team. This training role encompassed education and advice about the re-ablement approach or re-ablement ethos, and also supporting the support workers to become skilled in using techniques and approaches fitted to re-ablement. Although this was not deemed to be the principal component of their role, the occupational therapists spoke about it being an important aspect of their work. However, one occupational therapist was keen to highlight that the occupational therapy role should be seen as being more than just a training role.

> *"We have a big role to play in a kind of consultancy type of role to the support workers, so constantly developing them... their professional development."* OT7

> *"But a lot of them say that the OTs are more trainers, which is true because we do use training as well for support workers, but it's not the only thing that we can do in a re-ablement service there's a lot more."* OT12

In addition to directly training support workers the occupational therapists were also involved in overseeing other staff, such as assistants, or sometimes supervision of those doing complex manual handling work.

Theme 2 Summary

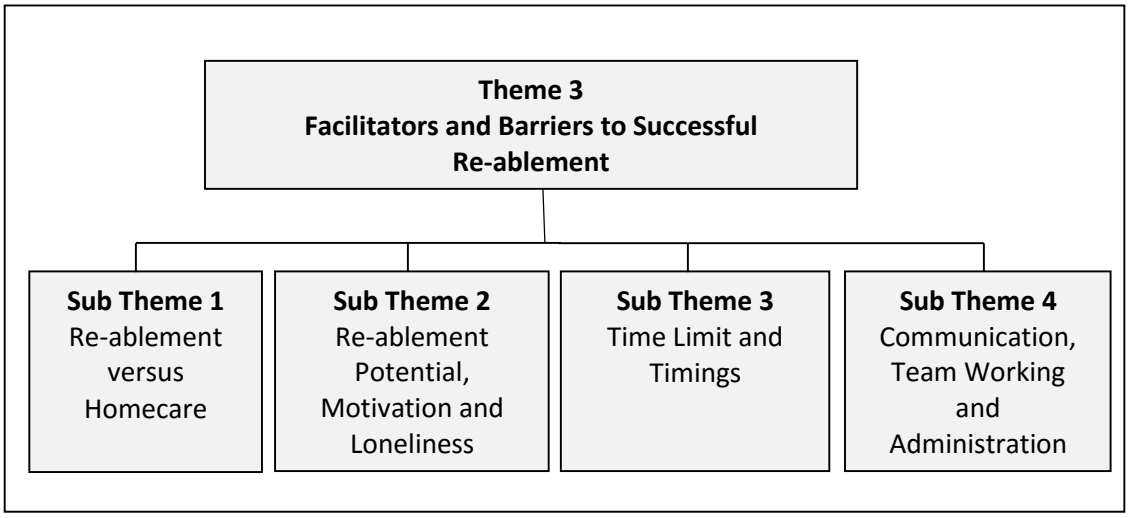
This theme indicated that the core responsibilities of the occupational therapists within re-ablement services were delivering graded programmes directly to service users, with the development and supervision of other staff forming a secondary component. The occupational therapists employed their skills in activity analysis, their medical knowledge and understanding, and their assessment of re-ablement potential in order to select a particular

approach for the re-ablement episode. These approaches were largely either: acquisitional or adaptive. Service users experienced re-ablement episodes as building their confidence to manage activities, valuing the support, presence and positive relationships with the support workers as helping them to achieve this. They also valued the equipment and education of techniques which the occupational therapists provided. The service users, on the whole, described similar modalities and strategies but used different language to the occupational therapists. For example, they spoke about confidence building and "doing a little bit less each time" rather than using the term "graded programme".

3.5.5 Theme 3: Facilitators and Barriers to Successful Re-ablement

The third theme encompassed the facilitators and barriers: aspects that were described as either enhancing the service, or being difficult or problematic. This was divided into four sub-themes: *Re-ablement versus Homecare*; *Re-ablement Potential, Motivation and Loneliness*; *Time Limit and Timings;* and *Communication, Team Working and Administration*. Figure 6 shows the theme as it has been defined. The four sub-themes each represent a feature of the service which could be both a facilitator and a barrier. Where these aspects worked well they were considered to be facilitators. However, problems in any of these areas were believed to be barriers.

Figure 6: Overview of Theme 3



Sub Theme1: Re-ablement verses Homecare

The occupational therapists commonly used the term 're-ablement ethos' to refer to the principles on which the service was based. This involved a change in philosophy from a traditional homecare service where activities were completed for the service user, to one whereby people were encouraged to do things for themselves. The occupational therapists implied that there could be a tension between the need to provide care and the need to re-able or rehabilitate. Services that had evolved from traditional homecare were believed to be particularly difficult or challenging to implement a re-ablement ethos within the team. These difficulties were believed to especially apply to the support workers if they had previously worked in a traditional homecare service. This was believed, by the occupational therapists, to be challenging and act as a barrier to the implementation of a re-ablement ethos. The occupational therapists spoke about how the support workers needed to step back - "sit on your hands" – and resist the temptation to do something for a service user.

> *"I think it's been hard to actually bring in a re-ablement ethos into the team. And so I think it's been called a re-ablement service but I think there's still a bit of work that can be done. It's still very much homecare in some ways."* OT1

> *"If you've got staff who traditionally worked in homecare where you do go in and do things for somebody it's really difficult to get them to say "well hang on a minute you've got to stop and sit on your hands and not do that""* OT8

This was also evident in some users' descriptions of the service they received. As highlighted in theme one, some users suggested that the support workers completed more activities than were necessary during their visits. The two examples below illustrate this. Service user two reported that the support workers prepared her meal and hot drink during the morning visit, even though she was able to manage these activities independently at other times during the day. Service user four reported that the support workers would get

his clothes ready for him in the morning, laying these out for him, but that he did not consider this to be necessary:

> *"Well they seem to do everything in the morning, but then the rest of the time I look after myself."* SU2

> *"...the laying out of my clothes lasted until they went, it wasn't necessary but er, they did it"* SU4

The occupational therapists also reported that continuity, i.e. the same support workers visiting particular service users, was important in facilitating a re-ablement rather than a homecare ethos. This was in respect of observing what a service user was able to do for him or herself and then carrying that through onto the succeeding visits. This was believed to lead to better outcomes. The occupational therapists also believed that this was important to enhance service users' motivation and confidence by building rapport with the service users and adopting a consistent approach to the re-ablement episode. This was congruent with service user reports whereby 'seeing the same people' was believed to be beneficial.

> *"Trying to get consistency of the same group of support workers supporting the same individual for their journey through* [re-ablement] *is problematic. But when that does happen, we often get better outcomes."* OT9

> *"And you see I saw the same person such a lot. There were two particular people. One who went off for her days off and the other one took over. And so it was just two main people I saw, really, who played the most important part."* SU3

The occupational therapists believed that it was sometimes difficult to manage the expectations of service users and their families in relation to the type of service that would be received. This was also linked with preconceived,

traditional expectations regarding homecare amongst the service users and sometimes the people referring them to the service. This was often compounded because a free service was offered for a six-week period, which might be considered to be an 'entitlement' on the part of the users. This was an essential point for several of the occupational therapists. In some circumstances there was no free alternative homecare service for people who did not want to take part in a re-ablement programme. This could lead to users coming into the service who did not wish to or were not able to participate in re-ablement. In addition, it was reported that families often expected their relatives to be "looked after" by the re-ablement team with a focus on homecare rather than re-ablement. Families were reported to be nervous or concerned following the event that led to the re-ablement episode, and that their main concern would be that the person would be safe and managed at home. This was believed to impede the attempts by the re-ablement team to adopt a 're-ablement ethos' and a positive risk taking was not always congruent with the aims of family members.

> *"People often had expectations that they would have a service for six weeks and didn't understand that there would be an approach whereby the service users themselves would be encouraged to do what they could"* OT9

> *"Because it's a free service as well I also think that there is a general belief with some of the service users that they should be getting their six weeks free service regardless of whether they want to… participate in re-ablement."* OT3

> *"Yes, because often relatives have different goal. Or they're quite nervous about leaving them on their own and will they manage? You know, people are at risk in their own homes. And I think it's understanding that but making it as safe as we can."* OT5

> *"Also service user's families, sometimes that is actually very difficult for our support workers to manage because families are*

very understandably concerned and looking at risk and wanting their family member to be safe and cared for, can actually put a lot of pressure on support workers to work in a more traditional homecare model as opposed to a reabling way" OT9

The successful implementation of a re-ablement ethos involved a combination of a service user understanding and cooperating with the remit of the re-ablement service, and a commitment on the part of the support workers to implement such an approach. Where these components were reported to work well they were considered to be valuable facilitators. However, difficulties in distinguishing between traditional homecare and re-ablement (for service users, families and support workers) were believed to be significant barriers to successful re-ablement.

Sub Theme 2: Re-ablement Potential, Motivation and Loneliness

This sub theme embodied a combination of the service users' potential and their motivation being optimal to regain their independence or make improvements in their functional abilities. However, loneliness or social isolation was often believed by the occupational therapists and service users to conflict with the motivation to be independent and to cease input from the support workers.

Potential, or 're-ablement potential', appeared to be a complex and nebulous concept that differed between the occupational therapists. Potential was linked to the service user's level of ability prior to the re-ablement episode. Whilst some occupational therapists gave examples of highly impaired users who returned to independence, these were predominantly people who had been independent prior to re-ablement. A key difference amongst the occupational therapists was in whether they viewed every user as having 're-ablement potential'. The first occupational therapist quoted below stated that her service employed a non-selective referral criterion, a perspective which she endorsed. Another occupational therapist also argued that small gains could be made for service users without the potential to regain their independence. Although some of the occupational therapists believed that gains could be made for

most service users, there were differences in whether every person should be considered an appropriate 're-ablement case' and some highlighted a split between 're-ablement' and 'non-re-ablement' cases. This distinction was between those people who were believed to have potential to regain some or all of their independence with their activities of daily living, and those who had less potential to do this.

> *"...everybody can be referred to us. There is no inappropriate referral. And as an OT I have to say that I agree that everybody has potential... even the small steps that we do take with some of the service users, I'm confident that it's made a difference to their quality of life." OT7*

> *"Because it doesn't really matter how small of an accomplishment you help a service user to get, that is re-ablement. So if someone couldn't turn in bed and following re-ablement they can, they might still need a package of care but we've enabled them in that way, you know?"* OT12

> *"some of the people are quite elderly and they're always going to need a care package and the... re-ablement potential isn't there really."* OT1

In highlighting examples of re-ablement cases that had proceeded well through the service, the occupational therapists highlighted examples of service users who were 'well motivated'. Being motivated to participate in the re-ablement episode and to regain independence were believed to be important factors in the success of the service. Being motivated was inextricably linked to having 're-ablement potential' in the occupational therapist examples. Motivation and having the 'right attitude' were also evident as facilitators in the service user dataset.

> *"...why that case worked so well it was a combination of the extreme motivation of the service user and his wife"* OT9

> *"I mean the community people they were surprised because I'd got it in my mind I thought 'well there's no way I'm going to be stuck being here the rest of my life... there's no way I'm stopping' and that's she says you've got the right attitude"* SU10

On the whole 'the right sort of service user' – with re-ablement potential - appeared to be one who had recently deteriorated in their ability to manage activities of daily living but was previously independent, was motivated to regain their previous level of ability, and whose social situation meant they were unlikely to become dependent on the regular social contact provided by support workers. Again, possessing these characteristics was seen as a facilitator, and deviations from them were viewed as barriers. One occupational therapist summed up the ideal type of service user as comprising both motivation and ability to participate:

> *"I think if we get the right sort of service user who's able to participate and is motivated, it works well"* OT10

Social isolation was perceived, by the occupational therapists, to be a barrier to re-ablement potential. They described a complex relationship between motivation to be independent with ADL and the feelings associated with social isolation. Some occupational therapists believed that some users could become accustomed to the regular social contact provided by the support workers and that their loneliness and absence of regular social contact may conflict with the ethos of regaining independence.

> *"I do think that a lot of service users like having the support workers going in because it's like, sort of social contact for them"* OT1

This was also prevalent within the service user dataset; all service users commented on the positive relationships with the support workers and other re-ablement team members. Most described their relationship and/or the

contact with the support workers as the best things about the service. The example below, illustrated that towards the end of the service, the user found the company to be more important than any practical help, support or assistance that was being offered:

> *"I: how did you feel about the service ending?*
> *SU4: Neutral, as far as I was concerned at that point they could come or not come... at that point their being here was more important than what they were doing… because I see very few people."*

In the above example the service user suggested that "being here" (social contact) was more important than "what they were doing" (i.e. he no longer needed practical assistance). As the example below demonstrates, the service user was 'pleased' to have arrived at the point where the service could end (without ongoing care), but felt the loss of the support workers who had become 'friends':

> *"I: How did you feel about it* [re-ablement service] *coming to the end?*
> *SU3: Well I was quite pleased that I'd got that point. Yes, very pleased! And very thankful for all they'd done for me... And you feel lost once they've gone because they've been such a friend, you know?"*

Three other service users also described how the support workers became 'friends' indicating the complex interpersonal relationships and the dissonance between the desire to be independent and the desire to maintain the relationships and contact. This applied not only to those who lived alone: one married service user described the enjoyment provided by the company and regular visits of the support workers. Thus, social isolation was perceived by the occupational therapists to be a barrier to re-ablement; the service users also reflected this in the sentiments they expressed regarding their relationships with the support workers.

Sub Theme 3: Time Limit and Timings

Seven of the 12 occupational therapists reported that the imposition of a six-week time limit was a barrier to successful re-ablement. Six of them believed that this led service users and their families to expect that they would receive the six week service regardless of their needs or circumstances; they believed this could prevent people from progressing through the service more quickly. This was also linked with the provision of a free service (described in sub-theme one) in which six weeks free 'homecare' might be considered an entitlement by some service users. Conversely, four occupational therapists highlighted that it was not always possible to achieve people's goals within six weeks. This might be due to unforeseen social circumstances within the re-ablement episode, or simply requiring a little extra time to reach their potential. They believed that some people may achieve independence if they were able to extend the time period, as highlighted below:

> *"You know and sometimes we can't get people reabled in that six-week time, sometimes another couple of weeks would be good. So that, I think more flexibility with time, would be better"* OT4.

However one occupational therapist, although questioning the evidence for a six week time frame, did highlight that a time frame was required. This occupational therapist argued that having a particular time frame helped to focus the re-ablement episode, to keep it on-track and enable the therapist to prioritise:

> *"I actually do think a time limit... works well. It really helps you focus on what you're wanting to achieve"* OT11

Seven of the service users reported that they were aware that the service had a time limit of six weeks. For example:

> *"Well I knew when they started that it was a six-week thing"* SU4

> *"I was definitely told six weeks, that stuck in my head, you know? That was something that they put across "we can only do it for six weeks and that's if you need the six weeks... if you don't then please let us know, you know and we'll finish the time" but er, you know, I did have them for the six weeks."* SU7

Service user seven described that he did not feel the full six weeks had been necessary and that he could have ended the service sooner. This comment is consistent with two other service users who felt that the service went on for longer than necessary, although it is not clear whether they considered this to be a barrier to their re-ablement.

On the whole, it appeared that the therapists felt that a six week 'one-size fits all' was inappropriate and that there should be flexibility to allow them to use their judgement to adjust this in accordance with their assessment of a service user's needs. In some services, there was the flexibility to do this, whilst in others this was non-negotiable. As highlighted in theme one, the occupational therapists stated that they felt there was insufficient time to work on extended activities of daily living and once a service user had been 're-abled' within the home there was a move towards discharging them from the service. The findings in relation to the time limit and the impact of those activities of daily living that could be incorporated are important for the intervention which will be delivered in the RCT in this research programme.

A further barrier, highlighted by the service users and the occupational therapists, was the timing of the support workers' visits. This was a particular barrier for four of the service users and especially applied to evening or bedtime calls. These were stated to be too early to be compatible with the service user's usual routine or habit. Although this was mainly a complaint about the timing of the evening visits, it was evident at other times of the day too. This was perceived to be a barrier as it was not consistent with the usual routine and therefore not meaningful to the individual.

"... and then about half past six to seven another carer came and she said 'I'm here to help you to get into bed' and I said 'I don't go to bed at six o'clock in the evening I'm a late bird'… I can sleep in the day and stay up all night you see... I said 'I'm not ready to go to bed!'" SU5

"It would be nice if [the service] *didn't have the time constraints so that we could actually deliver a service that was responsive to individual's needs... That the support that goes in is actually convenient to them, at their normal... You know to try and fit into the service user's usual routine as far as possible"* OT8

Seven of the occupational therapists also highlighted that the timing or an early 'first visit' by an occupational therapist was important. This was in terms of managing service user and family expectations about the service, and with setting up an appropriate re-ablement package as early as possible.

"The early point of contact by the occupational therapist... if not in at the first visit we will be in the next 24-48 hours later, and that makes a really big difference" OT9

On the whole, it was believed by the occupational therapists that greater flexibility with the time limit and the timing of visits would improve outcomes for service users. Service users reported that timings of visits were not always suited to their routines although the overall length of input was satisfactory to them.

Sub Theme 4: Communication, Team-Working and Administration

Effective communication within the re-ablement team, with service users and with outside stakeholders was believed, by the occupational therapists, to be a key facilitator. Conversely, poor communication, particularly from higher management, was the main barrier highlighted by occupational therapists. The quotations below are representative of the occupational therapists' beliefs that positive communication occurred within teams, but communication with

management (outside the team) was often deemed to be problematic. This sometimes referred to changes which were taking place to the team structure with therapists complaining they were "the last to know anything":

> *"I mean I think to me that's the main thing. Because we're quite a small team within a team, we see each other we speak to each other a lot. I think everybody is involved in everybody's care."* OT5

> "*We're kind of the last know anything so* [laughs] *it would help sometimes if it was clearer if the goalposts were set for us a little bit more clearly as to exactly what we're meant to be doing"* OT8

Communication of the aims and remit of the re-ablement service to users was believed to be vital. The occupational therapists reported that sometimes by the time they visited, a service user already had a preconceived, incorrect viewpoint as to what the service would offer. It could then be difficult to manage their expectations and this was believed to be important from the outset:

> *"I think it's managing expectations of service users and families, because one of the key things that I often find when people come into the service and, well understandably service users if they've been in hospital, if things have been explained to them they haven't registered what's been told to them."* OT9

The service users had differences in their opinions about how the initial set-up was communicated to them and how they understood this. Those who had a previous experience of the service reported being clear about the aims and scope based upon their previous experiences (3 users had the service before, 1 user's husband had). Those who had no previous experience were less clear about the type of help that would be provided and the content of the service.

The composition of the team and how the team worked together was also a

key facilitator. Those working in multidisciplinary teams highlighted this as a particular strength. In particular, physiotherapy support was believed to be beneficial. A number of those occupational therapists that did not have physiotherapists within their teams believed that this would enhance the service. Sometimes other professionals, particularly physiotherapists and social workers, were based outside the re-ablement team but would accept referrals. In these cases, effective joint working, collaboration, and communication with such individuals was also believed to be important.

The occupational therapists reported that collaboration and the development of close effective working relationships with the support workers was essential to the success of the re-ablement service, particularly because support workers visited service users more frequently. This meant that they could provide the occupational therapists with feedback about service users' abilities and progress. Also, the occupational therapists delegated various aspects of the re-ablement package to them; effective working relationships were essential to enable them to do this. Occupational therapists were often involved in providing the training to these workers in re-ablement techniques and approaches (as described in theme two) and being based at the same location with other members of the team was also considered to enhance collaboration and communication. This was particularly the case for the support workers, but also social work and other therapy staff too.

> *"I think.... the support workers. They... that works well... them being in the same... on the same site. Their base being on the same site where we're at, where our main office is. That's helped in terms of communication."* OT6

The amount of administration work required, particularly the documentation of assessments and documentation within the re-ablement plan within the users' homes, was highlighted as being a particularly time consuming aspect of the occupational therapy role, with some occupational therapists suggesting that less administrative burden would improve their effectiveness.

"I think for every service user that I see I reckon that I do two to three hours of paperwork [laughs]" OT11

Theme 3 Summary

The main facilitator was believed to be the successful implementation of a re-ablement ethos encompassing: service users, families and support workers. Service users' motivation to participate in re-ablement was seen as important. Good communication and effective working relationships were believed to be important to manage user and family expectations and to aid the implementation of the re-ablement ethos. This was believed to be best facilitated with a visit by the occupational therapist early in the re-ablement episode. Barriers to re-ablement were preconceived expectations and experiences of traditional homecare services. Social isolation was perceived to be problematic and conflict with the motivation to be independent. The occupational therapists, on the whole, believed that a six-week time limit was inflexible and not suited to all service users. However, the service users reported that six weeks was adequate for their needs. The service user voice has contributed to this theme by emphasising how they were often provided with homecare as opposed to re-ablement; this was consistent with occupational therapists' reports of difficulties in incorporating a re-ablement ethos into services. Service users also particularly emphasised the complex interplay between the motivation to be independent and the feelings associated with social isolation.

3.6 Discussion

This section of the chapter provides a discussion of the findings from the qualitative strand. It begins by summarising and interpreting the findings from the qualitative research. The findings are then discussed in relation to previous research. Limitations are discussed along with suggestions for further research. The implications for the feasibility RCT and wider re-ablement practice are highlighted.

The purpose of this chapter was to describe the content of the occupational therapy input in re-ablement services as portrayed by occupational therapists,

in particular exploring the reasoning and explanations given by occupational therapists for their contribution to the service. Additional objectives were to identify facilitators and barriers to successful re-ablement from the perspectives of occupational therapists and service users and to explore service users' experiences of the service. In summary, the findings were that the main occupational therapy remit consisted of delivering a graded re-ablement programme to service users focussing on activities of daily living within the home. The purpose of services was to build the confidence and ability of service users to manage independently; service users valued this stepwise approach and the provision of equipment and education in techniques. Less commonly, services incorporated activities outside the home; although these were not delivered routinely, they were valued by occupational therapists and service users for their potential to improve quality of life, independent living and reduce social isolation. Training of non-qualified staff was a secondary component of the occupational therapy role.

The application of a 're-ablement ethos' was believed to be the most important facilitator; this was primarily based on effective communication of the principles of re-ablement to all parties. Timing of visits and time-limit of the service were often believed to be too inflexible to respond optimally to service users' needs. Positive relationships with support workers were believed to be vital to both occupational therapists and service users, however, reliance on the company provided by the support workers was believed, by the occupational therapists, to be a significant barrier to re-ablement.

The findings in relation to the content of the homecare re-ablement service are consistent with what is already known about occupational therapy and what is already known about traditional homecare. As highlighted in chapter one, occupational therapists' primary remit is providing interventions that are focussed on activities of daily living. Furthermore, traditional homecare services provide users with assistance with activities in the home. Thus, the findings are consistent with the assertions and assumptions made in chapter one regarding the aptness of the link between occupational therapy and homecare re-ablement. Although the findings are consistent with prior

expectations they are nevertheless important as they are the first to describe the practice of occupational therapy in homecare *re-ablement* in this way.

No previous research was identified in which occupational therapists were interviewed about their role in homecare re-ablement. The existing literature in relation to their contribution to such services is either opinion-based or has been extrapolated from other areas of occupational therapy practice and service settings. Therefore the findings from this strand form a significant addition to the literature and a starting point for further research on occupational therapy in homecare re-ablement.

The findings about the application of occupational therapy skills to homecare re-ablement are a particularly notable addition to the literature. Other studies have asked professionals, particularly senior social care managers, to describe the contribution of occupational therapists to re-ablement teams (Glendinning et al., 2010). This work has not highlighted the specific skills that the occupational therapists themselves described in this study. Other re-ablement team members have suggested that occupational therapists do not necessarily need to be based directly within the teams (Rabiee and Glendinning, 2011). However, it is likely that other team members are not fully conversant with the remit of occupational therapy practice (and the skills described in theme two) and therefore it is crucial to highlight the views of occupational therapists on this. These findings are highly relevant to the aim of the research and indicate a clear role that is considered, by occupational therapists, to be based on their unique skills and approaches.

The occupational therapists described a consistent framework for the intervention delivered. Although the specific content is tailored to the needs of each individual service user, the overall configuration of the intervention was evident across the interviews. This involved: a functional assessment of ADL within the home; collaborative goal-setting with service users; the implementation of a graded re-ablement programme to be adopted by the service user in conjunction with the support workers; regular progress reviews during the six-week programme. This framework, drawing on the skills

described, will be adopted for the intervention delivered in the feasibility RCT in the succeeding chapter. It is also consistent with occupational therapy defined as a complex intervention, as described in chapter one.

There were some noteworthy differences between the occupational therapists on the issue of 're-ablement potential'; this applied particularly to whether *all* service users should be considered to have such potential. This is perhaps indicative of a lack of consensus or consistency amongst the occupational therapists as to what the primary outcome of re-ablement should be: i.e. whether it should target every individual in order to attain their maximal functioning, or should only target people who have the potential to be 're-abled' (so that they no longer require a care package). This finding has implications for the design of the feasibility RCT, and in particular a definitive RCT, as to whether a primary outcome should measure ability to manage activities of daily living; quality of life, or a reduction in the number or cost of care packages. Furthermore, this has implications for eligibility criteria for re-ablement services and whether they should operate an inclusive or selective referral criterion. In this study, eleven services in which the occupational therapists worked were inclusive, accepting all people with a new need for care. Only one service selected the people who they felt were most appropriate, this was National Health Service-led. Further research on re-ablement should explore whether inclusive or selective strategies facilitate better outcomes.

The findings also suggest that occupational therapists believe that 'better' outcomes are achieved when occupational therapists, service users and support workers collaborate in putting together and implementing a programme that is graded, teaches techniques and provides appropriate equipment. Such programmes are commonly led by occupational therapists (or other professionals if the team is multidisciplinary) and implemented by support workers. The service users reported that such programmes, and the stepwise approach, were effective in building their confidence to manage ADL independently and remove the need for ongoing homecare. Relationships between service users and the occupational therapists with the support

workers were believed to be a crucial component of the delivery of such programmes and therefore to successful re-ablement.

Based on the findings on the importance of the role of the support workers it would have been advantageous to include interviews with them. However, it was not possible within the scope of the current research. Previous research conducted with paid support workers in a restorative homecare service in New Zealand revealed greater job satisfaction, improved working conditions and reduced staff turnover for the restorative workers in comparison to workers from traditional homecare services (King et al., 2012b). However, there is a need for further exploration of issues related to their delivery of re-ablement interventions, their understanding of re-ablement and their perspectives on effective service delivery. It would also be worthwhile to examine their understanding of the occupational therapy role and remit and whether they believe this can improve outcomes for service users. This seems a valid area for further research and it suggests that developing and evaluating strategies to assist support workers in re-ablement techniques would likely be fruitful.

Qualitative research has been conducted with re-ablement service users by Wilde and Glendinning (2012). There are a number of key similarities between their findings and the findings from the present study. Service user reports of limitations in understanding the aims and scope of the re-ablement service and limited involvement and understanding in the initial set-up and goal setting are consistent across both studies. This has implications in terms of the accessibility of the information which is provided at the start of services and suggests that users may not always understand what re-ablement encompasses. It also suggests the 'client-centred' process described by the occupational therapists may not be received by the service users in the collaborative way in which it was intended. It is not clear whether or not this is a barrier to successful re-ablement. Although the service users in this sample did not complain about this, the occupational therapists believed that limited user understanding could be problematic and hinder the re-ablement process.

Findings in relation to social isolation are also largely comparable with those of Wilde and Glendinning (2012). They found that the re-ablement services did not focus on all activities that were important to service users, particularly in relation to social needs. This finding is only partially consistent with those of the present study. Although social isolation was identified to be a problem, the service users did not connect this to criticisms of the service that they received. Furthermore some services did link people back to the community, sometimes through a focus on outdoor mobility, and some service users reported being helped in this regard. Those who received this help described it as being particularly meaningful to them. Therefore, although the findings are unequivocal that social isolation is a significant issue for this population group, the findings are mixed as to whether this is adequately addressed by re-ablement services. This may vary between services and between individual service users.

An issue which was particularly relevant to social isolation was the focus on outdoor mobility and community access. This was believed to be especially significant to service users and occupational therapists but was often not included due to service level constraints on time and resources. However, due to the positive emphasis that was placed on these activities they were incorporated into the RCT intervention whenever it was feasible to do so.

Some facilitators and barriers were identified which are important for wider re-ablement practice but were beyond the scope of the RCT. Flexibility with the time-limit of the service and the timing of visits was believed to enhance the effectiveness of services. Whilst there might have been some scope within the RCT intervention to adjust the timing of the occupational therapy input, alterations to the timings of the service as a whole would require large scale changes, with associated funding implications, which were outside the scope of this project. However, further research could explore this and evaluate whether greater flexibility with regard to the length of the intervention and the timing of specific visits within the intervention leads to improved outcomes for users.

The difficulties in effecting a change in emphasis from a traditional homecare service to a homecare re-ablement service, reported in this study, were also emphasised by Rabiee and Glendinning (2011) in their research conducted at five re-ablement sites. They highlighted that difficulties in facilitating a re-ablement 'approach' amongst former homecare workers were problematic. This was also a prevalent theme amongst the occupational therapists in the present study; they emphasised the importance of the support workers embracing and understanding the re-ablement ethos and how this was different to traditional homecare. This would necessitate a widespread organisational change.

The interviews and analysis were conducted by a researcher who was also an occupational therapist; this is both a strength and a limitation. This is a strength insofar as the researcher had a particularly detailed and nuanced understanding of occupational therapy practice, re-ablement services and social care systems and procedures. This enabled him to engage in discussions in interviews and undertake analysis based on prior knowledge and understanding. It also placed him on a level with the occupational therapists when carrying out the interviews, so that they may have been more able to speak knowledgably about their practice. However, this was also a limitation in that the researcher may have been more likely to overlook issues or seek less detailed explanations, based on his own prior knowledge and assumptions. Also, the service users may have been less likely to provide criticisms or negative comments about the occupational therapy input to a person from the same professional background.

There are also limitations in regard to the occupational therapists and service user samples. Although the occupational therapists were selected from different sites and services they were either identified by other occupational therapists or self-selected through national advertisement. Therefore they may represent occupational therapists with particular viewpoints – those who volunteered, and those with similar views to one another, i.e. those that identified other occupational therapists may have referred those with views similar to their own. It is therefore possible that there are occupational

therapists with significantly different viewpoints that were not identified or included in this study. The findings should therefore not be considered to represent the views and perspectives of all re-ablement occupational therapists.

Service users were selected from two re-ablement services with different styles of occupational therapy input (one with extensive occupational therapy led input and one with limited input). Additionally, only one service user in this sample was discharged from the re-ablement service with an ongoing care package; this is in contrast with reports that 37% of recipients are discharged with an ongoing care package after re-ablement (Social Care Institute for Excellence, 2011b). Therefore this sample over represents those discharged without an ongoing care package and those with lower levels of disability and those who perhaps had greater 're-ablement potential'. It is likely that service users who are discharged with an ongoing care package will have different views which are not represented in this study. Further research could explore any differences in views and experiences of service users who are and are not 're-abled'.

A limitation of the present study is the sole use of interviews. Previous studies that have included observations or recorded observations of actual healthcare episodes, and interviews with clinicians and patients about them have shown discrepancies between the interview reports and the observations of what actually happens. A seminal study by Stimson and Webb (1975) and subsequent studies have reported similar findings (Murphy et al., 1998). Although interview studies about experiences of actual healthcare episodes should be interpreted with caution, this is mitigated in the current study by the degree of consistency in the reports of the occupational therapists and the service users. This consistency was in relation to descriptions of the core content of the service and the ways in which the content was delivered. Although based on subjective reports and recollections, this should enhance the reader's confidence in the accuracy of their descriptions.

3.7 Qualitative Study Conclusion and Implications for the RCT Intervention

In conclusion, the main finding was that occupational therapists delivered graded programmes which focussed primarily on ADL within the home. Activities outside the home were incorporated less routinely. The occupational therapists used their skills and medical knowledge in order to set goals and select an approach (acquisitional, adaptive or compensatory) on which to base the intervention. Selecting a suitable approach for the re-ablement episode was believed to be a key, unique, occupational therapy contribution. Specific tasks and goals were then handed over to the support workers to work on with the users. Service users reported that working on ADL goals alongside the support workers and occupational therapists increased their confidence and ability to manage. They particularly valued the step-wise, graded approach and respected advice which was based on experiences of working with other service users. Additionally, a visit by the occupational therapist early in the re-ablement episode, with their clear explanation of the aims and objectives of 're-ablement' was believed to be important. This was followed by the involvement of the service user in the goal-setting at the beginning of the episode and regular reviews of their progress at weekly intervals. These strategies were employed in the feasibility RCT.

Furthermore, the emphasis on personal activities of daily living within the home and kitchen activities suggest that performance in activities of daily living are key outcomes for this population group. Thus, outcome measures which capture these activities were included in the feasibility RCT. Whilst outdoor mobility and community access were also valued, these activities were not routinely incorporated into the majority of the services in which the occupational therapists worked. However, as these were especially important to the occupational therapists and service users, the intervention in the feasibility RCT incorporated outdoor mobility work (and outcome measurement of this).

There were a number of issues which were identified that were outside the remit of what could be delivered in the RCT in this study but which are

potential areas for further research and important for the future development of re-ablement services. These were:

1. The optimal time limit and timings of the service
2. Difficulties between delivering re-ablement versus traditional homecare services and whether occupational therapy, in a broader role, can facilitate a successful re-ablement ethos within teams
3. The effect of social isolation on people's wishes to be independent and re-ablement outcomes
4. Differences in occupational therapists' views on 're-ablement potential'.

Despite these issues, the 'model' occupational therapy intervention that was implemented in the feasibility RCT was based upon the views of the majority of the occupational therapists and service users in this study. The findings were synthesised with the findings from the systematic review in the previous chapter. The feasibility RCT is reported in the next chapter.

Chapter Four - Occupational Therapy in HomEcare Reablement Services (OTHERS): A feasibility randomised controlled trial

4.1 Introduction

This chapter presents the third strand of the research: a feasibility randomised controlled trial. The chapter begins by defining randomised controlled trials, outlining why they are needed in healthcare interventions, and why this method was selected for the current research. The chapter also describes the method used and presents and discusses the results. This chapter has been written with reference to the Consolidated Standards of Reporting Trials (CONSORT) statement (Schulz et al., 2010) which was developed to ensure that randomised controlled trials are reported adequately and consistently.

4.1.1 What is a Randomised Controlled Trial (RCT)?

Well conducted randomised controlled trials (RCTs) are widely purported to be the most robust research method for evaluating both the efficacy and effectiveness of healthcare treatments when compared to alternatives (Concato et al., 2000, Schulz et al., 2010). In healthcare the term 'efficacy' means the capacity of an intervention, treatment or therapy to cause a beneficial change under ideal conditions (Dorland, 2007). 'Effectiveness' refers to how the intervention may operate under 'real world conditions' (Glasgow et al., 2003). In an RCT, participants are prospectively allocated, using random assignment, to different groups. The purpose of the random allocation is to break the association between known and unknown factors which may affect the response to treatment and distribute these evenly amongst the groups (Davidson et al., 2003). This means that any difference between the groups following the treatment can reasonably be deemed to be due to the alternative treatment received.

Randomised controlled trials of drug treatments are well established as it is mandatory that the safety and efficacy of medications must be demonstrated before they can be prescribed. However, RCTs of therapy interventions are less common. One reason for this may be that therapy interventions may sometimes be implemented in routine practice before efficacy is demonstrated. For example, home visits are often completed by occupational

therapists with patients before they are discharged from hospital; however, there is no robust evidence of their effectiveness (Drummond et al., 2013). As in the case of home visits, this can lead to regional, national and international differences in practice which tend to be based on opinion, available resources and local policies rather than the best available evidence. This is also the case with occupational therapy in homecare re-ablement which is subject to national variations in provision (Rabiee and Glendinning, 2011).

There are inherent difficulties when conducting an RCT of a therapy intervention. For example in clinical trials it is routine to 'blind' or 'mask' participants, clinicians and outcome assessors to the treatment group allocation (Friedman et al., 2010). In a drug trial this may take the form of a placebo drug being offered to the participant not receiving the trial intervention drug and all individuals involved in the research do not know whether the placebo or experimental drug has been given. However, when delivering a therapy intervention it is not possible to blind participants or therapists to the treatment allocation and they must necessarily be aware of this. This impacts upon the robustness of the method, but is unavoidable in a therapy trial. Furthermore, there may be difficulties in standardising the treatment that is received as therapy treatments are often, and indeed should be, adapted and tailored to the individual needs of particular patients. Therefore there are difficulties in standardising timings and doses of therapy. Notwithstanding such difficulties, where an RCT is feasible, possible and ethical, it is still considered to be the most robust method by which to evaluate the efficacy of therapy.

Other methods were considered for their suitability to answer the research question. A controlled before and after study is one in which observations are made before and after an intervention in a group that received that intervention and in a control group that did not (Cochrane Effective Practice and Organisation of Care (EPOC) Group, 2014). At the time the present study was designed, Nottinghamshire County Council routinely provided occupational therapy input within its homecare re-ablement service; in contrast Nottingham City Council did not. Therefore it would have been

possible to compare outcomes for users before and after the re-ablement episode in each local authority area. It could then be postulated that any differences between the groups were due to the occupational therapy intervention. However, there would also be possible alternative explanations for any differences, for example the socio-demographic difference between the population in the two areas which could likely result in selection bias (Grimes and Schulz, 2002). In addition, there are likely to be unknown factors which could affect outcomes and therefore there are always limitations with such a research design. Other studies such as case-control designs or cross-sectional surveys increase the risk of selection and information biases and were therefore not selected for the present study.

A key question posed by the Social Care Institute for Excellence (2011b) in relation to homecare re-ablement is whether outcomes are better for individuals who have occupational therapy input during their re-ablement compared to those who do not. The most robust way to evaluate this is to prospectively randomise individuals to receive an occupational therapy intervention as part of the re-ablement service and compare them to those who do not. Randomised controlled trials are considered to be the "gold standard" by which to evaluate effects of interventions (Concato et al., 2000). Thus, the plan for this strand of the research was to determine whether it was feasible to conduct an RCT in the first instance.

4.1.2 What is a 'Feasibility' Randomised Controlled Trial?

> "Feasibility studies are… done before a main study. They are used to estimate important parameters that are needed to design the main study." (Arain et al., 2010: 4).

Randomised controlled trials are expensive to conduct because they are highly time intensive for researchers and for participants. It is therefore important that they are appropriately designed and conducted in order to maximise the efficient use of time and resources and to minimise unnecessary participant burden. Feasibility RCTs are used to determine the optimum components which inform the design of a larger, definitive study. 'Feasibility studies' may

or may not be randomised (Arain et al., 2010). However, often one of the important parameters to establish is whether or not randomisation is feasible and acceptable to both participants and staff. Randomised trials are rare in social care settings (Pawson, 2003, Woods and Russell, 2014) and therefore the feasibility and acceptability of randomisation was one the important considerations in this research. Due to the limited number of randomised trials in social care settings it was important to determine whether randomisation would be possible in this setting; there were a number of possible reasons why this may not be the case such as unfamiliarity of staff and service users with randomisation processes; lack of standardised research governance procedures; and contamination of treatment and controlled groups. Therefore a feasibility randomised controlled trial was justified.

4.2 Aims and Objectives

The aim was to evaluate whether it was feasible to conduct a randomised controlled trial of an occupational therapy intervention in homecare re-ablement services. Specific objectives were to determine:

- Whether the eligibility criteria were realistic (i.e. was it possible to recruit the target number of participants to the trial);
- Whether service users were willing to be randomised;
- The willingness of the social care staff to engage with the research;
- The attrition rate over the course of the study;
- The content and scheduling of the occupational therapy visits;
- The acceptability of the occupational therapy intervention;
- The most appropriate primary outcome measure for the main trial;
- The feasibility of collecting data on costs.

4.3 Methodology

As highlighted earlier in this thesis, a quantitative method was selected because the aim was to evaluate outcomes in different treatment groups. This involved the comparison of measured outcomes for those in one group compared to another. Therefore the design of this study was based upon the

selection of particular methods for their suitability and appropriateness to address the research question and objectives. Thus the methodological and philosophical perspectives have been largely determined by pragmatic rather than ideological factors; this is becoming an increasingly common approach in health research (O'Cathain et al., 2007). The present study is enveloped within an epistemology that is consistent with the philosophical tenets of pragmatism, which advocates the combination of mixed methods and approaches based on an evaluation of "what works" in a particular context to answer a particular research question (Kroll and Morris, 2009, Johnson and Onwuegbuzie, 2004, Baert, 2005).

4.4 Method

4.4.1 The OTHERS trial Method and Recruitment Procedure Introduction

This section describes the method used to conduct the feasibility randomised controlled trial. It begins with background detail of the research site and the criteria for the homecare re-ablement service. It then outlines the specific inclusion and exclusion criteria for the study, the procedure for obtaining informed consent, the data collection process and the data analysis procedure.

4.4.2 Research Site and the Homecare Re-ablement Service

The feasibility randomised controlled trial was conducted within the Nottingham City Council Intake Homecare Re-ablement Service. According to the 2011 Census, Nottingham City had a total population of 305,680 with 12% of the population aged 65 and over (Nottingham City Council, 2013). The homecare re-ablement service was operated and staffed by the Adult Social Care department of the City Council. The service operated on an Intake basis[2] which means that it had a non-selective referral criterion. The homecare re-ablement service accepted referrals from any adult aged over 18, living in the community in Nottingham city, with a need for assistance from a care worker

[2] Since the conclusion of this research the service now operates a more selective inclusion criteria.

to assist with an activity of daily living or medication management. Those with a confirmed diagnosis of dementia were not accepted onto the service as there was already a specialist dementia homecare service which was the main provider within the area.

Across the city, the homecare re-ablement service was organised into six geographical patch teams each covering a defined regional area. Each patch team was managed by a Care Team Leader (CTL) who monitored each user's progression through the service and provided line management to the support workers. Each CTL managed a team of support workers and a senior level care worker. The senior care workers were responsible for setting up and writing the initial care plan. Cases were reviewed at weekly team meetings which involved input from all support workers.

At the time of commencement of the RCT there was one occupational therapist working within the service within one of the geographical teams. Thus, users within the other patch teams did not routinely receive input from an occupational therapist during their time with the service, and the RCT was conducted in these other patch teams.

4.4.3 Inclusion and Exclusion Criteria

The Interventions on Frailty Working group has recommended that inclusion criteria need to quickly exclude people who are too well or unwell to participate in research, because they will affect the reliability and transferability of the research findings (Ferrucci et al., 2004). Furthermore, exclusion criteria should remove individuals who would be unable to participate in the study for practical reasons (Ferrucci et al., 2004). It was considered that it was not necessary to exclude people who were 'too well' to participate in the research, as anyone who was accepted onto the service would be experiencing a new or increased difficulty in managing activities of daily living within the home (hence the requirement for the homecare service).

The inclusion criterion for the trial was: being referred to the re-ablement service and the ability to provide informed written consent. The exclusion

criteria were:

- being unable to speak English
- being on an end-of-life care pathway
- receiving other community rehabilitation services
- requiring assistance from two or more people to transfer.

The rationale for these criteria was that resources were not available for interpreters and that arranging and liaising with interpreters would interfere with the scheduling and flow of the occupational therapy treatment visits. Individuals on an end of life care pathway were excluded because they would be likely to deteriorate rapidly and would experience a different outcome to other individuals in the study. People receiving extensive rehabilitation services, such as those provided by multidisciplinary community teams, were excluded as this would be a possible contamination of the study intervention. Those who needed assistance of two or more people to transfer were excluded for two reasons. Firstly, the occupational therapist was working alone and for practical reasons was not able to provide treatment to these individuals. Secondly, people with very high levels of physical dependency were likely to require a different, more intensive, intervention than those who had more moderate levels of dependency. Including such individuals would be likely to dilute any potential treatment effect.

Individuals who were unable to provide informed consent due to impaired mental capacity were also excluded. Although it would have been possible to seek ethical approval to get a consultee opinion as to whether they would want to take part in the research, there would likely be ongoing issues in relation to delivering the treatment intervention and ascertaining ongoing consent to continue and deliver the treatment.

4.4.4 Identification of Potential Participants

A trial screening and recruitment log was maintained throughout the study. An example of this is shown in Appendix 5. The log was maintained by the Care Team Leader (CTL) for the particular patch team who logged each

referral as it came into the team. The CTL screened each referral against the inclusion and exclusion criteria. If the participant appeared to be eligible for the study the CTL liaised with the care worker who was responsible for completing the initial visit and setting up the re-ablement care plan. This care worker then informed the potential participant about the study and sought consent for the researcher to make contact. This procedure was in accordance with the guidelines from the National Research Ethics Committee which state that potential participants should not be approached directly by the research team until they have consented for their contact details to be passed to researchers.

4.4.5 Informed Consent

Those who agreed were contacted by the researcher and a visit was made to the potential participant's home where they received an initial consultation about the study. This involved a discussion about the study that focussed on the Participant Information Sheet (example in Appendix 6), and potential participants were encouraged to ask questions at this stage. They were then given a minimum of 24 hours to decide whether they wished to take part in the study. The process for obtaining informed consent was conducted in accordance with the Research Ethics Committee (REC) guidance, and Good Clinical Practice (GCP) (Health Research Authority, 2014, European Medicines Agency, 2002). Those who consented completed the consent form (see Appendix 7) which was signed and dated by the participant and the researcher.

4.4.6 Baseline Assessments

Demographic and medical details were collected and baseline assessments were completed prior to randomisation. The assessment measures are described below in section 4.4.10. In addition to the assessment measures that were also completed at follow-up, the Mini-Mental State Examination (MMSE) (Folstein et al., 1975) was completed at the baseline time-point only, in order to provide descriptive information about the cognitive abilities of the participants. This was to enable comparisons to be drawn between the participants in this study and other similar studies primarily comprising of frail

older people. Furthermore, it enabled comparisons between the treatment and control groups at baseline in terms of their cognitive abilities as differences between the groups may affect responses to the occupational therapy (i.e. ability to engage in the therapy intervention).

4.4.7 Randomisation

Randomisation was generated online by the Nottingham Clinical Trials Unit (NCTU). The allocation sequence was known only to the NCTU and was concealed from the researcher. The randomisation sequence used random varying block sizes. Blocked randomisation was used because completely random sequences can result in long sequences of allocations to one particular group which could lead to imbalances between the numbers in each group (Friedman et al., 2010). In order to be able to deliver the occupational therapy intervention appropriately, it was important to maintain an approximate balance of intervention to control participants. This also allowed greater control over the delivery of the treatment intervention, in ensuring that there were not too many participants at one time in the treatment group. Thus, blocked randomisation was used. However, in order to prevent the researcher from becoming aware of the forthcoming allocations the size of each block was randomly varied.

4.4.8 Control Group

Those randomised to the control group received the usual routine care provided by the homecare re-ablement service. This was a six-week period of homecare re-ablement provided by re-ablement care workers, under the direction of a re-ablement care team leader. The care workers worked with the service users to monitor their skills and abilities and to monitor the level of care that was required (Nottingham City Council, 2014). Where possible, it was intended that this entailed a progressive reduction in the amount of homecare as the service user became better able to manage.

The control group did not routinely receive specialist ADL assessment and intervention, routine access to community equipment, or minor adaptations provided by an occupational therapist as part of their re-ablement care

package. This was routine practice within the sub-teams at the trial site. If participants in the control group were identified as requiring specific occupational therapy input then they were referred to the mainstream community occupational therapy team (which had a waiting time exceeding the six week re-ablement period). Referrals to occupational therapy were not routinely made.

4.4.9 Intervention Group

Those randomised to the intervention group received the routine homecare re-ablement services and, in addition, an enhanced programme targeted at activities of daily living (ADL), delivered by an occupational therapist. This programme was designed based upon the findings from the systematic review (chapter two) and the qualitative interviews (chapter three). In particular, the focus on personal ADL and the key component stages of the intervention were based on the findings from previous chapters. These are outlined further below.

Aim of the Intervention

The aim of the enhanced programme was to maximise independence in ADL activities including (but not limited to): washing, dressing, bathing and showering, feeding, indoor mobility, transfers, stair mobility, toileting, meal preparation and kitchen activities, and outdoor mobility and community access (as appropriate to the needs of individual participants).

Content of the Intervention

A systematic assessment was completed by an occupational therapist as soon as practicable after randomisation. This aimed to identify difficulties the service user was having with ADL due to physical impairments, psychological difficulties, or a combination of both. The assessment formed a basis to set one or more ADL related goals for the re-ablement episode, using the Towards Achieving Realistic Goals in Elders Tool (TARGET) (Parsons et al., 2012). A programme was then agreed with the participant which was tailored to the needs of each individual but included components such as: practicing activities, and/or a graded process of re-learning and building the skills to

manage ADL independently; equipment provision; and environmental or activity modification. A case management approach was adopted by the occupational therapist involving a minimum of weekly reviews and the co-ordination of the re-ablement episode and other services. Advice and information was also provided to family members or informal care givers if appropriate.

The occupational therapist completed regular reviews of the participant's function and progress during the re-ablement episode. Visits were completed on a minimum of a weekly basis. This enhanced input continued for the duration of the re-ablement episode (up to six weeks) and ceased when the participant was discharged from the re-ablement service.

Theoretical Basis of the Intervention

The principal tenet of occupational therapy is that engaging in occupations – or activities – is both beneficial and essential to health and wellbeing (Law et al., 1998). The definition of the principal aim of occupational therapy, given by Creek (2003), is consistent with the basis of the occupational therapy intervention provided in this RCT:

> "The main aim of occupational therapy is to maintain, restore, or create a match, beneficial to the individual, between the abilities of the person, the demands of her/his occupations and the demands of the environment, in order to maintain or improve the client's functional status and access to opportunities for participation." (pg. 14).

The intervention adhered to the occupational therapy process defined by Hagedorn (2001) as a "sequence which a therapist undertakes in order to provide services to patient or client… it is a systematic method of organizing practice" (pg. 35). The process encompassed: referral, information gathering, decision making, implementation of an action and then reviewing the outcome. The intervention utilised the occupational therapist's core skills in activity analysis where an activity is broken down into its distinct component parts in order to identify the specific element(s) of the task which the

individual is unable to perform (Creighton, 1992). The occupational therapist combined his medical knowledge of prognosis with the assessment of functional ability in order to select an appropriate approach for the re-ablement episode (for example, a compensatory or a bio-mechanical approach). Timely provision of community equipment and/or minor adaptations (such as grab rails, half-steps, or threshold removal/replacements) formed a core component of the intervention.

Further detail of the content of the intervention as it was delivered, and further discussion of the theoretical basis of the intervention is provided in Chapter Five – Content and Acceptability of the Occupational Therapy Intervention.

4.4.10 Outcome Measures and Assessment

The primary outcome was determination of the feasibility of conducting a definitive randomised controlled trial. The assessment of feasibility was a composite measurement of: recruitment, retention, acceptability and the viability of delivering the intervention. Key aspects addressed were: whether the eligibility criteria were realistic; whether service users were willing to be randomised; the attrition rate; the content and scheduling of the occupational therapy treatment visits; the acceptability of the occupational therapy intervention; the most suitable primary outcome measure for the main study; the feasibility of the cost data collection. The participant outcomes to be assessed in the trial were: personal and extended activities of daily living, health and social care related quality of life (including perceived physical and mental wellbeing), number of care support hours, health and social care service usage. The outcome measures used were:

- Barthel Index (BI) (Collin et al., 1988),
- Nottingham Extended Activities of Daily Living (NEADL) (Nouri and Lincoln, 1987)
- Short-Form 36 (SF-36) (Ware and Sherbourne, 1992),
- Adult Social Care Outcomes Toolkit (ASCOT) (Netten et al., 2012),
- EuroQuol EQ5D (EuroQol Group, 1990).

The primary objective was to evaluate the impact on personal activities of

daily living because difficulties with these are most closely linked with the need for homecare services. Therefore, the Barthel Index was selected as a basic, validated and commonly used measure (Collin et al., 1988). However, the BI is known to have both a floor and ceiling effect wherein people may be expected to achieve the minimum or maximum score on the scale (Wade and Collin, 1988). It was hypothesised that the participants in the study who were likely to regain their ability to manage the personal ADL would then be likely to focus on extended ADL as part of the treatment intervention. Therefore, the Nottingham Extended Activities of Daily Living (NEADL) measure was also included which encompasses: outdoor mobility, kitchen activities and leisure. The use of both a personal and an extended ADL measure was thought to be sufficient to identify changes across a broad range of activities.

It was also important to include measures of health and social care related quality of life. Quality of life measures are used in health economics to calculate Quality Adjusted Life Years (QALYs) which combine information about length and quality of life (Sampson et al., 2014). In the UK, The National Institute for Health and Clinical Excellence (NICE) recommends that the EQ5D, a preference based measure, should be used in all clinical studies (Longworth and Rowen, 2013). As the current study was funded by the UK National Institute for Health Research (NIHR) it was necessary to include the EQ5D in order to ensure comparability with other clinical studies and facilitate cost utility analysis in line with UK policy. However, when conducting the systematic review, presented in chapter two, a number of the included studies used the Short-Form 36 (SF-36), an alternative measure of health related quality of life, or perceived health, which is based upon self-reported health status (Ware and Sherbourne, 1992). Therefore, it was considered important to also include this measure to ensure that this study would be comparable with other similar studies in homecare. This would enable the results to be combined in subsequent meta-analyses, if appropriate. Finally, as the RCT was delivered within a social care service setting, it was considered important to include a measure of Social Care Related Quality of Life (SCRQoL). "Social care is primarily about compensating for impairment, so people who have problems doing things for themselves can be personally clean and groomed,

get all the food and drink they want and need, see people enough and so on" (Netten, 2011); this is different to HRQoL which is primarily based on the ability to manage independently. The Adult Social Care Outcomes Toolkit (ASCOT) (Netten et al., 2012), a social care related quality of life measure, was also included.

Additionally, information was collected on: falls, number of homecare hours, admissions to acute and residential services, and use of health and community services. This information was required in order to examine whether the occupational therapy intervention had an effect on falls and subsequent health and social care usage. In line with The Care Act (2014) and current social care policy, there is a strong emphasis on services that prevent and/or delay the need for the use of other services; thus, it was important to collect information on these outcomes.

Outcomes were assessed at two weeks, three months and six months post-discharge from the re-ablement service. The Social Care Institute for Excellence (2013b) suggested that outcomes should be collected at 3, 6 and 9 months after the end of re-ablement to observe whether outcomes are sustained. However, as this was a feasibility study, follow-up was limited to six months as the main aim was to ascertain the feasibility of the research mechanisms. In a definitive trial a longer follow-up period would be indicated. Furthermore, information about health and social care service usage forms a key component of health economic analyses. It is recommended that this data should be collected at intervals not exceeding three months if the data is being gathered directly from participants' self-reports (Evans and Crawford, 1999); this is due to the reliability of their recall. It was decided that outcomes should also be collected two weeks after the re-ablement episode because any treatment effect should be apparent early.

Outcome data were collected by a research assistant masked to the treatment allocation of the participant. Masking – or blinding - is a common feature of randomised controlled trials. In drug trials all parties – researchers, healthcare providers, participants, and outcome assessors - are likely to be masked

(Schulz and Grimes, 2002). However, in trials of therapy interventions it is usually not possible to mask the treatment allocation from participants or healthcare providers. However, it is good practice to mask those researchers who are assessing outcomes wherever possible (Siemonsma and Walker, 1997). Therefore, the outcome assessors were masked to the treatment allocation of the participants. Participants might have directly or indirectly revealed their treatment allocation to the research assistants during the outcome assessment visits. Thus, the assessors were asked at the end of each follow-up visit to report whether they had been "un-masked" and, if not, to make their best guess as to whether they were a control or intervention group participant. This aspect formed part of the assessment of feasibility; if outcome assessors were able to identify the treatment allocation of the majority of participants then a masked outcome assessment would not be feasible in a definitive RCT.

4.4.11 Acceptability of the Occupational Therapy Intervention

Acceptability of treatment was ascertained using a purposely designed questionnaire, sent to each participant in the intervention group after the occupational therapy input had ended. This questionnaire included questions on their views of the occupational therapy intervention covering: content, frequency, delivery, timing and intensity. Additionally, interviews were completed with five participants who received the treatment intervention – identified as key informants - in order to explore their views and experiences of the intervention. The post-intervention interviewees were purposively sampled to encompass: those who lived alone and those who lived with support; those who were discharged with and without ongoing homecare packages; and those for whom the intervention was delivered as outlined in the protocol and those for whom the delivery was problematic. The findings regarding the acceptability of the occupational therapy intervention are presented in Chapter Five.

4.4.12 Planned Sample Size

Formal sample size calculations are not required for feasibility studies (Arain et al., 2010). However, as a precursor to an appropriately powered trial, one

of the main aims of a feasibility study is to determine the sample size that would be required. A sample size calculation is in part determined by the amount of variance in the outcome of interest in the population (Israel, 1992). A minimum of 50 participants is commonly considered sufficient to determine this variability. Although there is disagreement on the ideal number for sample size estimates, the target for this study was to recruit 50 participants as this is usual. Based on preliminary work it was anticipated that approximately three service users per week would be eligible at the trial site. It was planned that a maximum of ten participants would be recruited per calendar month, in order to keep the number of participants, particularly in the intervention group, at manageable levels. Potential participants were approached in the order in which they were referred to the re-ablement service. If ten participants consented during a calendar month, recruitment would cease until the first new referral of the next calendar month. If the maximum of 50 participants were recruited before the end of the eight-month period, recruitment would cease.

4.4.13 Data Entry, Data Quality and Missing Data

Baseline data were entered by the researcher who collected these data. Outcome data were entered by a research assistant masked to the treatment allocation of the participants.

Following the completion of data collection, prior to analysis, a data quality check was carried out in duplicate by two researchers. This involved checking of a 20% sample of the database against the original paper Case Report Forms (CRFs). Throughout the study steps were taken to minimise missing data by personal contact throughout the study period from the investigator. Attempts were made to locate participants for follow-up, for example by contacting their next of kin. The collection of outcome data by a face-to-face visit by a research assistant was a deliberate strategy to minimise the amount of missing data overall and to maximise full completion of individual outcome measures. Postal responses are known to have much lower response rates (Edelman et al., 2013) and a personalised approach is believed to increase response (Sahlqvist et al., 2011).

For each outcome measure used where data was missing, an imputed average was used for items where less than 10% of the overall measure was missing. Where more than 10% of a measure was missing, the entire measure was coded as missing. This strategy was specified *a priori* in the published protocol (Whitehead et al., 2014).

4.4.14 Adverse Events

Serious adverse events were defined as an event which resulted in any of the following outcomes:

1. Death
2. A life-threatening adverse event
3. Inpatient hospitalisation or prolongation of existing hospitalisation
4. A disability / incapacity
5. A congenital anomaly in the offspring of a participant

These serious adverse events are included as standard in clinical trials (Clinical Trials Transformation Initiative, 2015); however, it was anticipated that any such events would not be related to the treatment intervention. For the current study, falls were included as an additional adverse event which required monitoring until stabilisation. This was due to the possibility that those in the treatment group may be more active and therefore potentially at increased risk of falls. All serious adverse events and falls were recorded and closely monitored until they were resolved or until it was shown that the study treatment was not the likely cause. The principal supervisor was informed immediately of any serious adverse events and determined seriousness and causality (in conjunction with the medical practitioner steering group representative, if necessary).

4.4.15 Study Approvals, Registrations and Trial Management

The study was sponsored by the University of Nottingham. Ethical approval was obtained from The Social Care Research Ethics Committee (ref: 13/IEC08/002). Management approval was obtained from Nottingham City

Council prior to the commencement of the trial in accordance with their local governance procedures. The study was registered on the ISRCTN database on 31st March 2014 prior to the commencement of recruitment (ISRCTN21710246). The protocol was also published (Whitehead et al., 2014).

The trial management committee consisted of the supervisory team who met monthly during the trial. A trial steering committee (TSC) was in place and included experienced health and social care researchers, social care staff, an experienced geriatrician, and public and patient representatives. The trial steering committee met four times throughout the duration of the project.

4.5 Results

4.5.1 Participant Recruitment

The trial opened for recruitment on 1st April 2014 and closed on 30th November 2014. The final follow-up visit was completed on 21st July 2015. From 1st April to 16th October 2014 recruitment was conducted in one geographical sub-team, from 26th May 2014 to 1st September 2014 in an additional team, and from 31st July 2014 to 30th November 2014 in a third team. The number of geographical sub-teams used for recruitment was initially expanded to try to increase the recruitment rate. However, logistical reasons meant that different teams had to be used at different time points due to changes within the service. The number of teams eventually had to be reduced due to changes within the service structure; this is discussed later in the chapter.

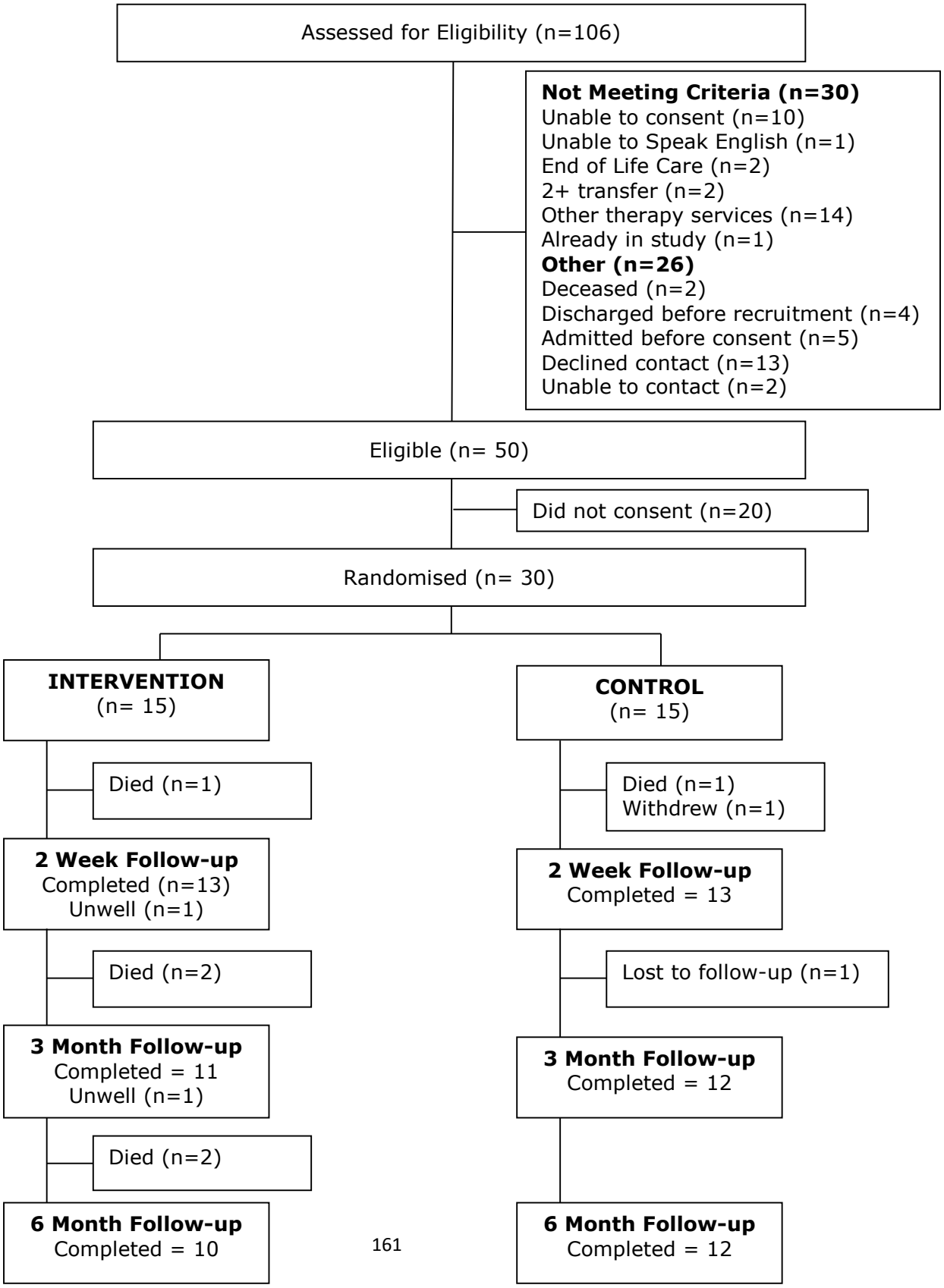
Figure 7 shows the recruitment figures and the flow of participants through the study. One hundred and six people commenced care within the sub-teams and were screened for eligibility. Thirty (28%) were excluded because they did not meet the criteria. The principal reason for exclusion was: being in receipt of other community rehabilitation services (for example, the community stroke team) (n=14). Other reasons included: being unable to consent (n=10); being on an end of life care pathway (n=2); and needing two

or more people to assist with transfers (n=2). Some people were also discharged from the service (n=4) or readmitted to hospital (n=5) before recruitment could take place. Thirteen people declined to be contacted by the researchers and did not receive a consultation; it was therefore not possible to confirm whether they met the eligibility criteria.

A total of 50 people met the criteria and were approached. Thus, approximately half of those screened were confirmed to be eligible. Of these, 30 (60%) provided informed consent and were randomised: 15 to the intervention group and 15 to the control group. Due to ethical guidelines it was not possible to ask the 20 people who did not consent about their reasons for declining to take part. However, reasons that were volunteered included: having too many people visiting their homes, believing that occupational therapy was not required, and not wanting "to be bothered".

Figure 7 also shows attrition throughout the study period. Twenty-six (87%) participants were followed up at two weeks, 23 (77%) at three months and 22 (73%) at six months. The main reason for attrition was death; 6 (20%) participants died during the follow-up period. Of these, in the occupational therapy intervention group, two participants were admitted to hospital within a week of randomisation; both subsequently died in hospital and did not receive any OT treatment. A further participant in the control group was lost to follow-up in that he was not contactable and one participant withdrew from the study immediately upon his allocation to the control group. Two follow-up visits were not completed because the participants were unwell/in hospital.

Figure 7: Flow of Participants



4.5.2 Demographic Characteristics and Medical Details

The demographic characteristics and medical details of the participants are shown in Table 10. There was a preponderance of men in the control group compared to the OT intervention group and there were also more neurological conditions in the control group compared with musculo-skeletal conditions in the OT intervention group. The groups were well matched on other variables. The mean age overall was 82 years (SD 11) and 28 (93%) participants were retired. None of the participants was in employment.

Table 10: Participant Demographic & Medical Details

	OT Intervention (n=15)	Control (n=15)
Gender		
Male	4 (27%)	9 (60%)
Age		
Mean (SD)	82.93 (SD 9.02)	81.93 (SD 12.96)
Lives Alone		
Yes	9 (60%)	11 (73%)
Ethnicity		
White British	12 (80%)	14 (93%)
Other	3 (20%)	1 (7%)
Property Ownership		
Owner Occupier	10 (66%)	12 (80%)
Local Authority	3 (20%)	2 (13%)
Housing Association	1 (7%)	1 (7%)
Privately Rented	1 (7%)	0 (0%)
Employment Status		
Retired	15 (100%)	13 (87%)
Unemployed	0 (0%)	2 (13%)
Hospital/Community Referral		
Hospital	12 (80%)	10 (67%)
Community	3 (20%)	5 (33%)
Informal Carer		
No	4 (27%)	5 (33%)
Within household	6 (40%)	4 (27%)
External to household	5 (33%)	6 (40%)
Primary Medical Category		
Neurological	0 (0%)	5 (33%)
Musculo-skeletal	11 (73%)	5 (33%)
Frailty	1 (7%)	3 (20%)
Mental Health	0 (0%)	2 (14%)
Other	3 (20%)	0 (0%)

4.5.3 Baseline Measures

Table 11 shows the details of the measures used at the baseline time-point. For all measures higher scores indicate better outcomes. The data for some measures was not normally distributed and, due to the small sample size, outliers had the potential to skew the means; therefore the measures have been presented using medians and inter-quartile ranges which is appropriate for non-normally distributed data (Field, 2009). The median in the OT intervention group was lower on all baseline measures than the control group. The exception was the mini-mental state examination (MMSE) which is used as a baseline descriptor only. This indicated that the OT intervention group had greater impairment in activities of daily living, worse health and social care related quality of life, and worse perceived physical and mental health/wellbeing.

Table 11: Participant Baseline Measures

Measure	OT Intervention Median (IQR) (n=15)	Control Median (IQR) (n=15)
BI	16 (14-17)	17 (16-18)
NEADL	19 (12-28)	20 (16-28)
EQ5D	0.27 (0.08-0.59)	0.59 (0.08-0.64)
ASCOT	0.72 (0.55-0.84)	0.77 (0.56-0.84)
PCS	27.01 (20.28-33.02)	29.33 (20.4-39)
MCS	48.50 (33.98-54.03)	52.36 (45.23-55.26)
MMSE*	27 (24-28)	26 (23-28)

*MMSE was completed with 14 intervention participants and 13 control participants. One declined to complete it, one could not complete in the allocated time, and one was unable due to speech and language impairment.

For all measures higher scores indicate better outcomes.

4.5.4 Participant Outcome Measures Data

This section presents the participant outcome data. All data were plotted on a histogram to check distribution. On each measure the data were not normally distributed for at least one time-point; both positive and negative skew was observed. This is likely due to the small sample size and, for most measures, the skew was minimal. Table 12 shows the median and IQRs for all measures,

at all time-points, in the occupational therapy intervention ("OT") and control ("control") groups.

Table 12: Participant Outcomes – Medians and Inter-Quartile Ranges

	Median (IQR)					
Measure	**2 Weeks**		**3 Months**		**6 Months**	
	OT (n=13)	**Control (n=13)**	**OT (n=11)**	**Control (n=12)**	**OT (n=10)**	**Control (n=12)**
BI	17 (17-18)	17 (16-20)	17 (16-18)	18 (17-19.5)	16.5 (15-18)	16.5 (16-19.5)
NEADL	26 (20-38)	33 (24-41)	28 (16-42)	27.5 (19.5-41)	25 (16-32)	28 (17-36)
EQ5D	0.59 (0.26-0.59)	0.64 (0.19-0.75)	0.55 (-0.16-0.69)	0.57 (0.08-0.71)	0.60 (0.59-0.64)	0.52 (0.26-0.69)
ASCOT	0.80 (0.72-0.91)	0.71 (0.58-0.84)	0.85 (0.62-0.96)	0.70 (0.57-0.85)	0.76 (0.63-0.95)	0.79 (0.67-0.90)
PCS	32.81 (30.95–34.98)	29.05 (24.17-38.63)	30.94 (29.13-36.22)	30.59 (25.80-40.17)	27.05 (22.74-38.46)	32.8 (23.37-39.32)
MCS	57.1 (56.43-60.61)	51.7 (46.28-55.62)	55.55 (52.63-57.19)	53.09 (46.55-56.61)	54.57 (40.87-58.79)	51.76 (42.93-56.26)

The data in Table 12 is variable. On some measures the OT intervention and control group medians are the same, whilst on others there are higher medians for either group at various time-points. Nevertheless, the medians on all measures have increased from baseline at all time-points in the OT intervention group, compared to 9/18 in the control group. However, it is important to note that the groups were different at baseline, both in relation to their scores on the measures and the preponderance of men and people with neurological conditions in the control group. In a larger randomised controlled trial it is unlikely that such differences would occur as randomisation should distribute all baseline characteristics evenly between groups; however, it is possible that differences between groups can occur by chance. Due to the small numbers in this study between group differences at baseline have occurred. It was therefore necessary to explore whether adjustment of the results was necessary in order to take account of these baseline differences.

Firstly, it was necessary to examine whether the results differed according to

gender and/or medical condition. If there were no differences between the scores at baseline then it would be unlikely that this would affect the outcomes. The baseline measure scores were compared for men and women, and for people with neurological and non-neurological conditions. It was found that there some differences on some measures for gender. Thus, it was considered necessary to adjust for this in the analysis in order to account for gender and the between group difference in baseline scores. In relation to medical conditions, on visual inspection there were no differences between the baseline scores for people with neurological compared to non-neurological conditions. Furthermore, there were very small numbers in these categories and therefore it was not appropriate to adjust for these in the analysis.

Two possible methods were considered in order to adjust the results to account for the differences in baseline scores and gender:

1. The first was an Analysis of Covariance (ANCOVA). This is a statistical technique in which multiple independent variables (covariates) can be incorporated to examine the effect on an interval (scale) outcome; the technique can incorporate both interval and categorical independent variables (Katz, 2011). This would allow examination of the outcome data in relation to the baseline values, incorporating (adjusting) the categorical variables 'gender' and 'treatment allocation'. The effect of the treatment could then be calculated. However, one of the principal assumptions is that the outcome data are normally distributed for every value of the baseline data (Bowers, 2014). ANCOVA was therefore not appropriate due to the non-normal distribution of the data at some time-points.
2. The second alternative was to calculate the change from baseline 'score' in each group, by subtracting the baseline score from the outcome score at each time point. If the data for the change score was found to be normally distributed, then it would be possible to carry out a linear regression using these scores to further adjust for the gender imbalance and identify a treatment effect. Using change from baseline should not be necessary in an RCT with sufficient

numbers as the assumption is that the randomisation will have distributed these characteristics evenly (Friedman et al., 2010). Analysing change from baseline scores may therefore be considered to be controversial as it can be argued that it does not fully account for the groups being different at baseline.

It was decided that, on balance, presenting change from baselines was the most appropriate method to use in this study given: the small sample; the non-normal distribution of the data; and that the intention was to give a broad indication of the possible trends, and the possible treatment effect which might be noted in a definitive trial, rather than to provide a definitive result in this study.

Change from baseline scores were calculated for each of the measures at each time-point. The data were then plotted on a histogram to check whether the distribution was normal. The distribution of change scores was normal, with the exception of the MCS at 3 months. This was due to one extreme outlier who had been admitted to a nursing home at the three-month time-point and had a change score of -35.81 on the MCS which led to a skew of the data. This outlier was therefore removed and the data were re-examined and found to have a normal distribution. An alternative to removing the outlier would have been to present change from baseline scores using medians. However, confidence intervals for median scores are less accurate than for mean scores and this would have meant presenting the data inconsistently between measures and/or time-points. Furthermore, it is not possible to incorporate other variables (i.e. gender) into median change scores and it would not have been possible to adjust these results. Therefore it was decided that removing the outlier in this one instance was appropriate.

Table 13 shows the change from baseline in the intervention group minus the control group change. The results are that the OT group had greater change from baseline on all measures except the NEADL at two weeks and the EQ5D at 3 months. All confidence intervals are wide, reflecting the small sample size. The difference was particularly apparent for social care-related quality of

life (ASCOT) and mental health/wellbeing (MCS). Overall, the trends are stronger at two weeks than at three months and six months, with the exceptions of the EQ5D and the NEADL.

Table 13: Participant Outcomes – Change from Baseline

	Change from baseline OT – Control (SE) 95% CI		
Measure	**2 Weeks (n=26)**	**3 Months (n=23)**	**6 Months (n=22)**
BI	1.00 (1.00) -1.07 to 3.07	0.11 (0.97) -1.99 to 2.22	0.45 (0.87) -1.40 to 2.30
NEADL	-0.69 (4.27) -9.51 to 8.13	5.02 (4.23) -3.89 to 13.92	2.78 (4.84) -7.31 to 12.88
EQ5D	0.03 (0.15) -0.29 to 0.34	-0.04 (0.12) -0.30 to 0.22	0.15 (0.14) -0.14 to 0.44
ASCOT	0.09 (0.08) -0.06 to 0.25	0.06 (0.08) -0.11 to 0.22	0.03 (0.08) -0.13 to 0.20
PCS	4.09 (3.27) -2.71 to 10.89	2.48 (3.99) -5.84 to 10.80	0.84 (3.43) -6.31 to 7.99
MCS	6.83 (4.37) -2.21 to 15.86	5.28 (3.05) -1.17 to 11.73*	1.60 (3.93) -6.63 to 9.82
*1 outlier removed			

A linear regression was then carried out to adjust for the between group differences in gender. When carrying out a linear regression, in addition to checking the data are normally distributed it is also important to check that the variance of the residual values (the difference between the observed and predicted values in the model) is approximately equal in both groups. Residual values were calculated and plotted on a scatterplot to examine the variance in both 'treatment allocation' and 'gender' groups. For the majority of measures, the variance was similar but for some measures there were differences; this is known as heteroscedasticity. The presence of heteroscedasticity in linear regression does not lead to biased treatment effect estimates, but may lead to errors in calculations of standard errors and confidence intervals (Long and Ervin, 2000). Where heteroscedasticity is confirmed or suspected, it is possible to carry out a more robust analysis as advocated by Davidson and MacKinnon (1993), to take account of the heteroscedasticity. This will produce more conservative confidence intervals. This technique was therefore used in this analysis (using the 'vce(hc3)' command in Stata (Stata, 2013)). The adjusted results are shown in Table 14.

Table 14: Participant Outcomes – Change from Baseline Adjusted for Gender

	Change from baseline OT – Control (SE) 95% CI		
Measure	**2 Weeks (n=26)**	**3 Months (n=23)**	**6 Months (n=22)**
BI	0.7 (1.08) -1.52 to 2.93	-0.13 (1.33) -2.91 to 2.65	0.28 (1.12) -2.06 to 2.61
NEADL	-2.43 (4.59) -11.92 to 7.07	3.72 (4.58) -5.83 to 13.27	1.58 (5.28) -9.47 to 12.64
EQ5D	0.06 (0.17) -0.30 to 0.42	-0.03 (0.15) -0.35 to 0.28	0.23 (0.22) -0.23 to 0.69
ASCOT	0.07 (0.08) -0.09 to 0.23	0.06 (0.11) -0.18 to 0.30	0.04 (0.10) -0.17 to 0.25
PCS	3.63 (3.38) -3.36 to 10.64	1.52 (4.75) -8.43 to 11.47	0.09 (5.33) -11.06 to 11.24
MCS	6.60 (4.53) -2.80 to 16.00	7.84 (3.17) 1.17 to 14.51*	3.39 (4.90) -6.88 to 13.66
Adjusted for gender *1 outlier removed			

The direction of the change was the same in the adjusted analysis as in the unadjusted, with the exception of the Barthel Index at 3 months. The adjusted results show smaller treatment effects and wider confidence intervals for most measures; although in general the changes were small. Conversely, the adjusted results showed bigger estimates of effect for the OT groups on the EQ5D at six months and the MCS at three and six months; it also increased the effect for the control group on the NEADL at 2 weeks. Additionally, the adjusted confidence interval for MCS at three months does not cross 0. However, clearly this has been interpreted with caution given the small sample size and the size of the confidence interval.

Table 15 shows the number of participants who reported having one or more falls during follow-up and the mean falls reported in each group. More participants reported falls in the control group at all time-points; the mean number of falls was also higher in the control group at all time-points. Across all time points, five participants reported falls in the OT group compared to eight participants in the control group.

Table 15: Number of Reported Participant Falls

	Group	2 Week	3 Month	6 Month
Participants with 1 or more falls	OT	2/13 (15%)	2/11 (18%)	2/10 (20%)
	Control	4/13 (31%)	3/12 (25%)	6/12 (50%)
Number of falls per participant (with a fall) Mean (SD)	OT	1 (0)	1 (0)	1 (0)
	Control	2.75 (1.70)	1.67 (1.15)	1.5 (1.22)

Table 16 shows the number of participants that had an ongoing homecare package at each of the time-points (NB it also notes those who were in residential/nursing care, indicated by *). At two weeks and three months there were fewer participants with ongoing homecare packages in the OT group compared to the control group and slightly more (proportionately) at six months. The mean number of care hours per day varied over the course of follow-up, and between the groups, but was the same at six months.

Table 16: Participant Use of Homecare Services

	Group	2 Week	3 Month	6 Month
Participants with homecare package	**OT**	6/13 (46%)	2*/11 (18%)	6/10 (60%)
	Control	8*/13 (62%)	6/12 (50%)	6/12 (50%)
Number of care minutes per day Mean (SD)	**OT**	79.17 (57.05)	30 (0)	103 (50.57)
	Control	45 (33.54)	67.5 (42.16)	103 (50.70)
*Plus 1 residential care				

Table 17 shows the number of contacts with other health and social care services during the follow-up period. There were slightly more hospital admissions in the OT intervention group compared to the control group. Hospital admissions were classified as Adverse Events in accordance with the study protocol. These were reviewed by the primary supervisor at regular intervals throughout the duration of the RCT. None of the hospital admissions was deemed to be obviously related to the intervention. Overall, the numbers on the use of follow-up services are very small and no differences between groups should be inferred. Information on the time spent on each contact was

also collected, but numbers are very small and this information is not presented here.

A point of particular interest is that none of the OT intervention group saw an occupational therapist during the follow-up period, compared with three participants in the control group (one of whom saw an occupational therapist at all three time-points). It would be interesting to examine this in a larger study and explore whether the OT intervention within the re-ablement episode led to less use of other OT services during follow-up. Should this be demonstrated then the cost savings of follow-up OT services could be offset against the cost of the OT re-ablement intervention.

Table 17: Number of Participants who had Contact with Other Health and Social Care Services

Outcome	Group	2 Week	3 Month	6 Month
Hospital Admission	**OT**	1/13 (8%)	3/11 (27%)	4/10 (40%)
	Control	0/13 (0%)	2/12 (17%)	2/12 (17%)
Residential/Nursing Admission	**OT**	0/13 (0%)	1/11 (9%)	0/10 (0%)
	Control	1/13 (8%)	0/12 (0%)	0/12 (0%)
Outpatient Health Services (including GP)	**OT**	4/13 (31%)	6/11 (55%)	6/10 (60%)
	Control	7/13 (54%)	6/12 (50%)	12/12 (100%)
Occupational Therapist	**OT**	0/13 (0%)	0/11 (0%)	0/10 (0%)
	Control	1/13 (8%)	2/12 (17%)	2/12 (17%)
Health Professional at Home (other than OT)	**OT**	8/13 (62%)	7/11 (64%)	6/10 (60%)
	Control	5/13 (38%)	9/12 (75%)	6/12 (50%)
Meals at Home	**OT**	0/13 (0%)	0/11 (0%)	1/10 (10%)
	Control	2/13 (15%)	2/12 (17%)	3/12 (25%)
Day Centre	**OT**	1/13 (8%)	0/11 (0%)	1/10 (10%)
	Control	0/13 (0%)	1/12 (8%)	1/12 (8%)

4.5.5 Feasibility

This section presents the results on the feasibility of the study; these are described and discussed, along with their implications, in section 4.6.

Eligibility, recruitment and attrition

With regard to eligibility, as shown in Figure 7, just under half of those assessed met the eligibility criteria (50/106). The main reason as to why people were not eligible was they were in receipt of other therapy services (13%). Thirty out of 50 eligible participants were recruited, a consent rate of 60%. Six participants (20%) died during the follow-up period. This reflects the vulnerable and frail nature of the population group. Two participants (7%) were lost to follow-up at the final (6 month) time-point. Therefore, 92% percent of surviving participants were followed up at the final time-point.

An unanticipated issue which affected the recruitment rate, and therefore feasibility, was the incorporation of new, additional, occupational therapists into the re-ablement service during the course of the study. At the start of the study there was one occupational therapist within the service working within one specific geographical patch team. This meant that there were service users from five geographical patch teams who did not have occupational therapy input as part of their re-ablement episode and could potentially be approached to take part in the trial. However, in August 2014, mid-way through the recruitment period, an additional four occupational therapists were employed to work within the re-ablement service. This was a potential threat to the feasibility of the study insofar as it threatened the maintenance of the control group without occupational therapy input. However, even with the additional occupational therapists, there was still insufficient capacity within the service as a whole for the occupational therapists to work with every service user and they were each allocated to a geographical patch team from which they were selectively taking referrals. The study team therefore negotiated that two geographical sub-teams would remain for the duration of the study to allow recruitment to continue (this was later reduced to one sub-team). Nevertheless, this issue did have an effect on the recruitment rate as

recruitment had to be curtailed to two and then one patch team which meant that fewer users could be screened for eligibility.

An additional issue was that there was, periodically, limited throughput within the homecare system as a whole. At times, the private sector homecare providers were unable to accept any new referrals for people being discharged from the re-ablement service who needed an ongoing homecare package. This led to "blockages" in the homecare system whereby the Intake Re-ablement team was unable to transfer people waiting for homecare and therefore was unable to accept new referrals. This led to reduced throughput within the service meaning that there were fewer people available to be screened for eligibility. The combination of these two issues meant that the recruitment target of 50 was not reached.

Suitability of outcome measures

All the outcome measures showed a change from baseline to two weeks in the sample as a whole indicating that these were responsive to change in this group of people. Therefore the measures appeared appropriate and relevant to the study population. Furthermore, there were some differences between the groups, particularly at the two-week follow-up, which suggests that these measures should have the potential to show a difference between groups, if such a difference exists. However, the Barthel Index was particularly negatively skewed at the two-week and three-month follow-up time points. This is due to four (15%) participants scoring the maximum of 20 on the measure. When analysing skewed data one option is to attempt to transform the data to achieve a normal distribution (Manning, 2012). However, the ceiling effect in this data meant that it was not possible to ameliorate the skew by transforming it.

With regard to completeness of data collection, the BI and NEADL were completed in full by every participant at every time-point. One participant was unable to complete the ASCOT and the SF36 due to having aphasia. A further participant did not answer every question on EQ5D, or SF36 at three months resulting in missing scores for these outcomes. Otherwise, all measures were

completed in full meaning that missing data was minimal and within acceptable limits.

Masking of outcome assessors

The outcome assessors reported only one incident where they became definitely aware of the treatment allocation of a participant and this was during a two-week outcome assessment. They reported possible un-masking on a further five outcome assessments (two at two-weeks and three at six-months). Of the six cases where they reported being definitely or possibly un-masked, five (83%) were intervention group participants.

After each assessment, the outcome assessors were asked to make their "best guess" as to the treatment allocation of the participants. At two weeks they correctly guessed the allocation of 19/26 (73%) participants – all the control participants and six intervention participants. This was statistically significant X^2 (1, n= 26) = 7.80, $p<0.01$. There were no statistical differences at three and six months.

Content and scheduling of the occupational therapy intervention

On the whole, it was possible to schedule treatment visits and deliver the intervention in a way that was consistent with the protocol. All participants were able to set one or more ADL related goals. However, there were some barriers to delivering the intervention to some participants. In addition to the two participants who were admitted to hospital and received no treatment, two others became unwell during the re-ablement episode so were unable to participate fully in therapy. Another had an ongoing social/housing issue which took priority for the service user over the ADL goals and the occupational therapy treatment. This aspect of the study is discussed in detail in the next chapter (Chapter Five), along with the presentation of the results on the acceptability of the intervention.

Feasibility of the cost data collection

It was possible to collect the required data on the costs of delivering the intervention. This was recorded on a visit pro-forma which was completed

electronically after each treatment visit to participants in the intervention group. This is also discussed in further detail in Chapter Five. The other data in relation to costs was the participants' use of follow-up services. On the whole, participants were able to report whether or not they had used these services, however, there was some missing data (8%) for the duration of contact with health professionals and services, suggesting that participants were not always able to reliably recall this information. Nevertheless, this level of missing data was considered acceptable and indicated that the vast majority of participants were able to provide this detail.

4.6 Discussion – Feasibility RCT

The purpose of this study was to determine whether it was feasible to conduct a definitive RCT of an occupational therapy ADL intervention in homecare re-ablement. With regard to feasibility, there were aspects which worked well and those which were problematic. The principal issue was that the recruitment target was not reached. Nevertheless, approximately 50% of those screened were eligible and 60% of those who were eligible provided informed consent. These figures are comparable with other rehabilitation trials and those which have been conducted as feasibility or pilot studies and gone onto be funded as full RCTs. For example, a recent multi-centre RCT of an occupational therapy intervention in care homes (Sackley et al., 2015) was preceded by a pilot RCT in which 46% of those screened were eligible, and 62% of those eligible provided consent (Sackley et al., 2006).

The main problems in relation to recruitment in the present study were: 1.) the addition of new occupational therapists to the re-ablement service across Nottingham City, and 2.) the blockages in the homecare system which led to reduced throughput of service users. Both these factors curtailed recruitment insofar as there were fewer people available to screen for eligibility; however, both these issues may be peculiar to Nottingham and not necessarily representative of other re-ablement services. During the design of the study it had been anticipated that 104 people would be eligible during the eight-month recruitment period. If this had been the case, a consent rate of 60% would have allowed the recruitment target to be exceeded. A 60% consent

rate demonstrates that participants were willing to take part in the study. Attrition to the study, other than death, was extremely low which further suggests that participants were willing to engage and remain engaged with the research.

The new occupational therapists also posed an additional problem in relation to establishing and maintaining a control group without routine or specialist occupational therapy input. When the study was set-up most service users within the service did not receive occupational therapy input as part of their re-ablement episode, therefore there was no issue in relation to randomising consenting participants to have additional, extra therapy treatment. However, as the new occupational therapists came into the service there was more capacity for input with users. Within the timescale of this feasibility RCT, the new occupational therapists did not have sufficient capacity to cover the full service geographically or to work with every service user therefore it was possible to negotiate a geographical patch team in to allow the research to continue. However, if they had had the capacity to cover the city-wide service (thus becoming 'routine service provision' or 'usual care') then it would have been unethical to continue with the RCT as people would potentially have been denied access to routine care. This is an important issue which would need to be considered when planning for any future RCT in this area as this could undermine the feasibility of the study.

An additional threat to the feasibility was that the masking of the outcome assessors to the group allocation at two weeks did not work as anticipated. Although they reported only one definite case of un-blinding, they were able to correctly guess the allocation of 73% of participants at the two-week follow-up. Whilst it is possible that this is a chance finding, it was statistically significant. This might be related to having only one occupational therapist delivering the treatment with whom the intervention participants and researchers both worked closely. This may have revealed treatment allocation to the researchers as discussion with the participants may have revealed how well they knew the therapist, who was also acting as the lead researcher and so was also known to the outcome assessors. It is possible that this could be

avoided if there were more occupational therapists delivering the treatment. Further piloting of this might be necessary prior to a definitive trial.

The outcome measures appeared sensitive to change and the overall differences were favourable for the occupational therapy intervention group compared to the control group. Although this was particularly the case for mental wellbeing and social care related quality of life outcomes, it was consistent across the different outcome measures and the falls and homecare service use data. However, there is a greater degree of uncertainty in the findings due to the baseline differences, adjusted results, and the differences in medical conditions between groups (which were not adjusted for). Nevertheless, although based on a small sample, and not discounting the possibility of chance, the consistency of the favourable direction of the trends across the data indicates the potential benefit of this treatment in this population group.

The favourable findings in the OT treatment group in relation to social care related quality of life and mental wellbeing were unexpected and require consideration in this discussion. Whilst it is possible that these trends were due to chance, a large part of the intervention involved the provision of specialised advice and support to the participants. This may have boosted their confidence and feelings of wellbeing, such that they felt they had someone "looking out for them". Furthermore, this could be a feature of "the therapist effect". This is a phenomenon in which therapists may differ in their effectiveness; it has been examined in greater detail in psychotherapy to investigate the association between therapist alliance and outcome (Dinger et al., 2008). It is possible that because the occupational therapist providing the treatment for the intervention was also the principal investigator for the research project, he was particularly motivated to "go the extra-mile" to support the participants and assist them. It might be that this additional input may have affected their mental wellbeing and social care related quality of life (which, in part, measures feeling "looked after"). It would be important to explore the therapist effect in a bigger study as to whether such results were consistent across therapists working routinely and not as part of doctoral

study or research. It might also indicate the need for an attention control group. Such a group would receive "attention" from a non-professionally qualified visitor who would spend an equivalent amount of time with them to that which the occupational therapist spent in the intervention group. The aim of this would be control for the effect of the attention and investigate the specific effects of the occupational therapy. This issue is discussed further in Chapter Six – Final Discussion and Conclusion.

The overall question for this research was "Can an occupational therapy intervention increase independence in activities of daily living?" With regard to personal ADL the adjusted result at two weeks showed a 0.7 (SE 1.07) increase on the Barthel Index in favour of the intervention group with a 95% confidence interval from -1.5 to 2.9. The broad interpretation of this result is that it can be estimated that there was a 0.7 point difference on the Barthel Index in favour of the OT intervention group and based on this sample it can be estimated that the true effect is from 1.5 points lower to 3 points higher with 95% certainty. With regard to extended ADL the adjusted result for NEADL showed a -2.43 (SE 4.59) effect in favour of the control group with a 95% confidence interval from -11.92 to 7.06. The broad interpretation of this result is that there is a 2.5 difference in favour of the control group and it can be estimated that the true effect is from 12 points in favour of the control group to 7 points in favour of the intervention group, with 95% certainty. Both confidence intervals are wide, reflecting the imprecision of the estimate which is due to the small sample size and variance of the data.

Overall, the favourable trends in the OT group were smaller at three and six months than at two weeks. There are three possible explanations for this. Firstly, and arguably most plausibly, the effects of the treatment may diminish with time as participants experience further deterioration and events. Secondly, it may be that increased rates of attrition within the study at these time-points had an influence on the results and trends insofar as the sample was slightly smaller and there was increased 'noise' in the data. Thirdly, it is possible that the control group continued to improve at a slower rate than those in the OT group, such that this led to them catching up more slowly.

These issues would be explored further in a definitive RCT.

An issue was also identified in relation to the suitability of the ADL outcome measures. The floor and ceiling effect on the Barthel Index is well documented in the literature (Quinn et al., 2011) and this was known prior to the use of the measure in this study. However, this is the most commonly used and validated personal ADL measure which is why it was included. It was originally anticipated that people who regained their independence in personal ADL activities and reached the ceiling on the Barthel Index would then transfer onto the NEADL and begin working on extended ADL goals. This does not appear to have been reflected in the results. There were some issues with delivering those aspects of the intervention which related to extended ADL, particularly outdoor mobility, and these are discussed in more detail in the next chapter. There is a greater degree of uncertainty in the results from the Barthel Index because of the ceiling effect. Therefore, these results mean that there is an outstanding question in relation to the most suitable primary outcome measure for use in further study on re-ablement, which is an important implication for researchers working in this area.

The principal strength of this study is that it was the first randomised controlled trial of an occupational therapy intervention within homecare re-ablement services. However, as such, there were no directly relevant studies with which to compare the results. Nevertheless, the trends were broadly consistent with the findings from the systematic review which were that interventions targeted at personal ADL for users of homecare services can improve their ability to manage their own personal care, improve quality of life, and reduce the amount of ongoing care support that they require. An additional strength is that this was an RCT conducted within a social care community setting. Such RCTs are extremely rare and randomisation procedures and processes are largely untested in these settings (Woods and Russell, 2014). Thus, the findings are relevant to re-ablement but also have wider implications for trials within social care, indicating that the methodology is feasible and there is potential for RCTs to be developed and used further in these contexts.

The principal limitation of this study is that it was conducted at a single site involving one occupational therapist delivering the treatment intervention. The occupational therapist was already known to the staff at the social care site which may have positively impacted on their willingness to take part in and engage with the research. Therefore, it cannot necessarily be assumed that the findings on feasibility are generalizable to other service settings as it is not known how many of the successes and barriers are peculiar to Nottingham. However, it seems unlikely that the main findings in relation to feasibility would be different, for example, the willingness of participants to be randomised and remain in the study and the sensitivity of the outcome measures for use in this population group should be applicable to multiple re-ablement service sites.

A further limitation is that the small sample size led to differences in baseline characteristics and measures, and also affected the distribution of outcome data. This led to the analysis being more complex than initially anticipated; as a consequence there is a greater degree of uncertainty in the estimates of the treatment effect. Although the trends in the participant outcomes appear to favour the occupational therapy intervention group consistently, the sample size is extremely small and the possibility of chance differences cannot be discounted. Thus a further, powered study is required in order to ascertain whether the occupational therapy ADL intervention is effective.

In conclusion a further powered trial would be feasible, but would be subject to two important caveats:

1. It would be necessary to identify a sufficient number and range of sites that were providing re-ablement *without* routine occupational therapy input. This would be essential in order to randomise service users to have the additional, enhanced occupational therapy intervention and to establish a control group comparator. As this study has shown, the situation regarding occupational therapy input within these services may be in flux within local authorities. Thus,

collaborating sites would need to commit to continued non-provision of routine occupational therapy input for the duration of the RCT, if such a study were to be successful. The range of sites would also need to incorporate diverse local authority areas, for example, city and county councils, London borough councils and rural councils in order to ensure that the findings were generalizable to the wider population. Scrutiny of the throughput and characteristics of service users would be required, prior to the selection of sites, in order to inform and calculate realistic recruitment rates.

2. It would be necessary to identify a suitable primary outcome measure for use in the main study. Although the quality of life measures appeared sensitive to change, the main remit of the services and the goals of the OT intervention were focussed on activities of daily living. It is therefore imperative that the primary outcome measure should reflect the main purpose of the intervention. It would seem, based on these results, that a measure somewhere "in between" the Barthel Index and the Nottingham Extended Activities of Daily Living would be the most judicious to use. However, does such a suitable measure exist? This would require further investigation and research; this is discussed in the final chapter.

These two issues would need to be explored further and additional research undertaken before determining the likely and realistic tenets for the main, powered study.

The next chapter will discuss the findings on the content and acceptability of the occupational therapy intervention. The results from all phases of the research will then be synthesised in chapter six which provides an overall discussion and conclusions.

Chapter Five – Content and Acceptability of the Occupational Therapy Intervention

5.1 Introduction

In the previous chapter the randomised controlled trial was presented and the feasibility and participant outcomes were discussed. This chapter presents the content of the intervention in detail; it describes the content of the intervention, discusses the fidelity of the intervention with that stipulated in the protocol (Whitehead et al., 2014) and the theoretical tenets of the intervention. It also considers whether the intervention was acceptable to the participants who received it.

Published reports of randomised controlled trials which provide vague or inadequate descriptions of the interventions delivered have been criticised (Wilkins et al., 2003, Hoffmann et al., 2014, Hasson et al., 2012) because an incomplete description of an intervention may make it difficult to accurately replicate in clinical practice. Furthermore, if readers are unable to discern exactly what was provided, they are less able to make an adequate judgement about the relevance of the research findings (Hoffmann et al., 2014). Complex interventions may be particularly difficult to describe, especially when compared to relatively straightforward interventions such as drugs (Wade, 2005, Whyte and Hart, 2003). Rehabilitation interventions are intrinsically complex and have been argued to be particularly difficult to describe because they: contain multiple components (Wade, 2005), are based on a series of interactions between two or more people (Hart, 2009), and are tailored according to the needs and circumstances of each individual recipient (Spillane et al., 2007). Perhaps because of these difficulties, defining and describing rehabilitation interventions has been argued to be the most neglected area of rehabilitation research (Hart, 2009, Grant et al., 2014). In particular, it has been suggested that occupational therapy and physiotherapy interventions have been particularly poorly described (Hildebrand et al., 2012) and that more robust evaluations of fidelity are required (Mars et al., 2013).

In light of these criticisms, and the lack of attention given to describing interventions, this chapter provides a detailed description of the occupational therapy intervention delivered in the RCT. Fidelity is defined as "the degree of exactness with which something is copied or reproduced" (Oxford Dictionary,

2015). If an intervention is delivered imprecisely within a randomised controlled trial, varying widely from person to person, then findings from the research are likely to be questionable. If participants do not receive the prescribed 'dose' of the intervention, or the 'active' component, this can affect both the internal and external validity of the study. Hoffmann et al. (2014) have developed a checklist for reporting interventions delivered in randomised controlled trials; this is termed the *Template for intervention description and replication (TIDieR)*. The TIDieR checklist includes items such as: how; where; when and how much; and modifications to the intervention. This chapter has been written with reference to TIDieR.

Wade (2005) argued that three overarching areas should be included in a full description of a rehabilitation intervention. These are:

1. The organisation of the programme in the broader context of other services
2. The theoretical model underpinning the intervention
3. The specific actions undertaken during delivery of the intervention.

Chapter one described homecare re-ablement services within the current policy context of health and social care service provision, The Care Act (2014), and the prevention agenda. It also described the potential overlap between homecare re-ablement and other rehabilitation services, and the unique organisation of this service within social care. That is, the first overarching area described by Wade (2005) was described in chapter one. Chapter one also described occupational therapy as a complex intervention and discussed the theoretical underpinnings for occupational therapy practice. This theoretical basis was synthesised with the empirical findings from the systematic review (chapter two) and qualitative interview study (chapter three) to design the intervention.

In summary, the core components of the intervention were:

- Functional assessment within the home environment
- Incorporation of areas of functional deficit into goal setting tool (TARGET)

- Collaborative goal setting between occupational therapist and service user
- Delivery of a graded programme comprising: teaching of techniques, practice of activities and/or compensatory equipment provision or strategies
- Reviewing of goals and progress
- Case management and advice.

Knittle (2014) argued that when evaluating fidelity it is particularly important to provide a description of the 'active' component of the intervention and monitor the fidelity of the delivery of this. This is in order to ensure that the key components have actually been delivered and that the results or outcomes reflect this. The theoretical tenet of the intervention in this study was that the above components, carried out by a qualified and experienced occupational therapist, were the active components of the intervention.

This chapter will focus Wade's (2005) third overarching area: describing the specific actions that were undertaken as part of the intervention in the RCT. It will link the findings back to the core components of the intervention described above to evaluate the level of fidelity between the two. Additionally, this chapter will also report an evaluation of the acceptability of the intervention. Acceptability, in this context, is defined as being "suitable" or "able to be tolerated or allowed". This is a particularly important concept for interventions delivered in clinical trials. It has been reported that problems with acceptability often undermine evaluations of interventions (Craig et al., 2013). Thus, problems or acceptability can also undermine the research results and it is also important to demonstrate this when reporting findings from a randomised controlled trial. If participants do not believe in the value or worth of a particular treatment and, if they do not adhere to its processes, then it is unlikely to be effective.

In order to evaluate the feasibility and acceptability of the intervention, this chapter reports: analysis of the content of the intervention; results from an acceptability questionnaire which was mailed to all participants in the

intervention group; and findings from qualitative interviews with five intervention participants. To supplement the data in this chapter, four case study examples have been included in Appendix 11. These give examples of two participants whom, from the occupational therapist's perspective, had the intervention delivered as planned, and two for whom there were difficulties in delivering the intervention.

5.2 Aims and Objectives

The aim was to describe the content and acceptability of the occupational therapy intervention in the RCT, and to evaluate the fidelity of the intervention and its core components and theoretical principles. Specific objectives were:

1. To describe the content that was delivered, in relation to the core components
2. To evaluate the acceptability of the intervention to the participants who received it
3. To identify issues in maintaining the fidelity of the delivery of the intervention with that which was stipulated in the protocol.

5.3 Method

There were three areas in which data were collected for this chapter, which will be presented separately.

5.3.1 Method: Recording, Analysing, and Describing the Content of the Occupational Therapy Intervention

In order to undertake analysis and description of the intervention it was decided that a pro forma checklist would be used to be completed by the occupational therapist after each visit to the intervention participants. This method was selected as it would capture the information pertaining to all intervention visits across all study participants. This would provide a comprehensive picture of the intervention provided, including: the tasks and activities, goals that were set, time taken, and strategies that were employed.

The principal disadvantage of using this method was that it would be less

objective than independent observations. The checklist data relied on self-report by the occupational therapist who delivered the intervention. An independent observer would have provided third-party verification of the actions that were undertaken during the visits. However, due to resource and practical restrictions it would not have been possible to have an observer present at every intervention visit. Therefore an observer would have only captured a proportion of the total completed visits. Additionally, the occupational therapist may have behaved differently when being observed delivering treatment. Thus it was decided that the pro forma would be used but that it would be supplemented by collecting the participants' own views on what they received. This would triangulate the findings between what the occupational therapist and participants reported.

A bespoke pro forma was designed to capture and record the information on the content and actions completed on each visit. The pro forma was designed with reference to previous studies describing occupational therapists' interventions within evaluative studies (Grant et al., 2014, Phillips et al., 2010). The pro forma used in this study covered the following areas: the time spent on the visit, the goals set and goals reviewed (achieved, partially achieved, not achieved), and any equipment or minor adaptations provided. Each visit was categorised (in five minute intervals) into time spent on the following activities:

- assessment
- goal setting
- goal reviewing
- teaching techniques
- practicing activities
- providing advice or generic 'case management'.

In addition to this, the overall visit was categorised into the proportion of time spent on particular activities of daily living:

- indoor mobility
- transfers
- bathing or showering

- strip washing
- dressing
- kitchen activities
- stair mobility
- outdoor mobility
- toileting
- access
- 'other'.

Falls prevention was also included as a category. Free text notes on the visits were also completed, in addition to the written notes in the social care records. A copy of the pro forma can be found in Appendix 8.

The visit pro forma was completed electronically by the occupational therapist as soon as possible after each visit. It was completed in conjunction with the documentation of the visit in the social care records in order to ensure accuracy and consistency of both. The data were entered into a Microsoft Excel spreadsheet and analysed using Microsoft Excel and Stata (version 13) to produce summary statistics and graphs. Additional information was collected on the following activities supplementary to face-to-face contact time: time spent by the occupational therapist on administration, liaison with other individuals, and travel.

5.3.2 Method: Acceptability Questionnaire

In addition to evaluating and reporting those activities that were completed by the occupational therapist it was important to evaluate the participants' reports of the treatment they received and their views and experiences of it. It was decided that a postal questionnaire would be used as the primary means of gathering the information relating to acceptability. Questionnaires are commonly used to gather quantitative data from a number of patients or service users at one time (McColl et al., 2001). An advantage of using a questionnaire in this study was that it could be sent to every participant who received the treatment intervention. As the questionnaire was distributed by post, it may have given service users more freedom to express their views

and feelings. However, postal questionnaires often have poor response rates and the use of closed questions or researcher derived questions may lead to superficial responses which do not reveal the depth of participant views (Ballinger and Davey, 1998). Therefore qualitative interviews were also completed to supplement and add depth to the findings from the acceptability questionnaire. These are outlined in section 5.3.3.

A questionnaire was designed to capture basic information about the participants' experience of the occupational therapy intervention. It was adapted from another questionnaire that has been used to assess the acceptability of occupational therapy led intervention (Fletcher-Smith, 2011). The questionnaire was designed to identify experiences in the following areas:

1. Whether they felt the occupational therapy intervention helped them to manage activities more easily (and identify which particular tasks)
2. Whether the frequency and duration of the visits made by the occupational therapist were appropriate and acceptable
3. How satisfied they were with the overall treatment
4. The most and least helpful aspects of the treatment, and whether anything should have been done differently.

A copy of the questionnaire can be found in Appendix 9. The questionnaire design was purposely simple, with tick boxes and rating scales for participants to give their responses which would also facilitate ease of coding (Ballinger and Davey, 1998). It was kept short to encourage completion. In order not to overlook any unanticipated responses, open ended questions were included at the end to allow participants to comment freely (Kelley et al., 2003).

The questionnaire was sent, by post, to every intervention group participant after their discharge from the re-ablement service, and regardless of their level of participation in the intervention. Questionnaires were accompanied by a letter from one of the research supervisors and by a stamped return envelope addressed to that supervisor. This meant the questionnaire was not sent from the researcher who delivered the occupational therapy intervention. If no reply was received within two weeks a second copy was mailed. No

further contact attempts were made.

Data from completed questionnaires were entered into a Microsoft Excel Spreadsheet. Data were analysed using Microsoft Excel and Stata to produce summary statistics and charts.

5.3.3 Method: Qualitative Interviews with Intervention Participants

In addition to the acceptability questionnaire, qualitative interviews were completed with five participants who received the occupational therapy intervention. The purpose of the interviews was to explore issues related to the acceptability of the intervention in greater detail than the questionnaire could elicit (section 5.3.2.).

Interviews were selected as the aim was to ask the participants to discuss a range of issues related to the re-ablement service, the occupational therapy intervention and their experience of these. A structured format was required to ensure that all aspects were covered. However, it was also important to retain enough flexibility within the structure to allow exploration of unexpected and/or interesting matters. Individual interviews were chosen as opposed to focus groups as they were believed to be more pertinent to the aims of the research. Furthermore, there may have been confidential or personal aspects of the service which might not have been appropriate for discussion in a group.

Semi-structured interviews were selected in order to ensure that all relevant areas were covered in the interview. A topic guide was developed which was based on the service user topic guide used for the pre-intervention interviews (adapted from Glendinning et al. (2010)) which were completed earlier in the research programme (Chapter Three). Additional questions were added to the topic guide to focus on aspects specifically related to the occupational therapy intervention received. These covered:

- The particular activities of daily living that the occupational therapist focussed on
- How it was decided or agreed what would be worked on

- Whether the occupational therapy input helped them to manage activities more easily
- In 'an ideal world' whether there was anything else that the occupational therapist could or should have done.

A copy of the interview topic guide can be found in Appendix 10.

It was decided that the sampling approach would be to identify 'key informants' amongst the intervention participants. Key informants are people who are identified because of their position and status within the population of interest (Gilchrist and Williams, 1999). They were individuals who, from the occupational therapist's perspective, had received the intervention as specified in the protocol and also those where there had been difficulties in delivering the intervention in a standardised way. Certain participants were not suitable due to illness and/or deterioration in their functional abilities.

The interviews were completed by a research assistant (CM) (i.e. not by the researcher who delivered the intervention). This was a different research assistant to the one collecting outcome data for the RCT so as to ensure that that researcher remained masked to the treatment allocation. Interviews were audio recorded, transcribed verbatim by the researcher who delivered the intervention and who also analysed them thematically.

5.4 Results

The results are presented in the four sections below.

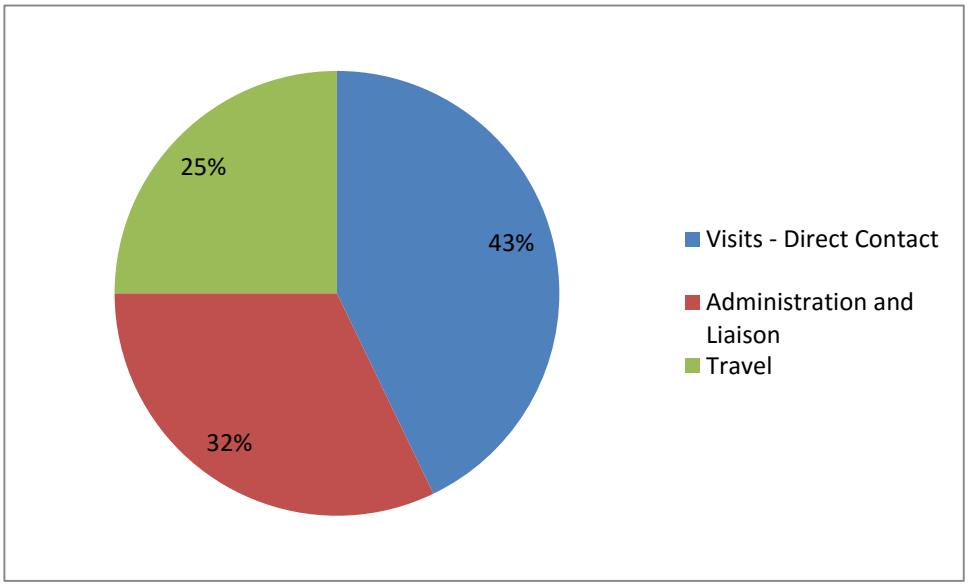
5.4.1 Results: Describing the Content of the Occupational Therapy Intervention

This section presents the data collected from the pro forma which was completed by the occupational therapist. The pro forma took less than five minutes to complete after each visit. Thirteen participants (87%) in the intervention group completed the re-ablement episode; therefore the data were analysed for these participants.

The median length of the re-ablement episode was 56 days, range 20 to 126 days. Seventy-one visits were made to the participants by the occupational therapist. The median number of visits was 5, range 2 to 13. The total time spent on all visits was 53 hours; therefore on average each participant received 4 hours of occupational therapy contact time. The median visit length was 45 minutes, range 15 to 90. For every hour of contact time the occupational therapist spent an average of 45 minutes completing office based tasks, including note writing and liaison with the wider re-ablement team and other health and social care professionals and ordering equipment and adaptations. Some of this liaison related to the research procedures and processes, in addition to the clinical occupational therapy component. Each visit involved travel time of approximately 35 minutes (in total).

Overall, each participant on average received 10 hours of occupational therapy time (4 hours direct contact, 3 hours administration and liaison, and 3 hours travel time). Figure 8 shows the total occupational therapy time divided into: 'Visits: direct contact'; 'Administration and Liaison'; and 'Travel'.

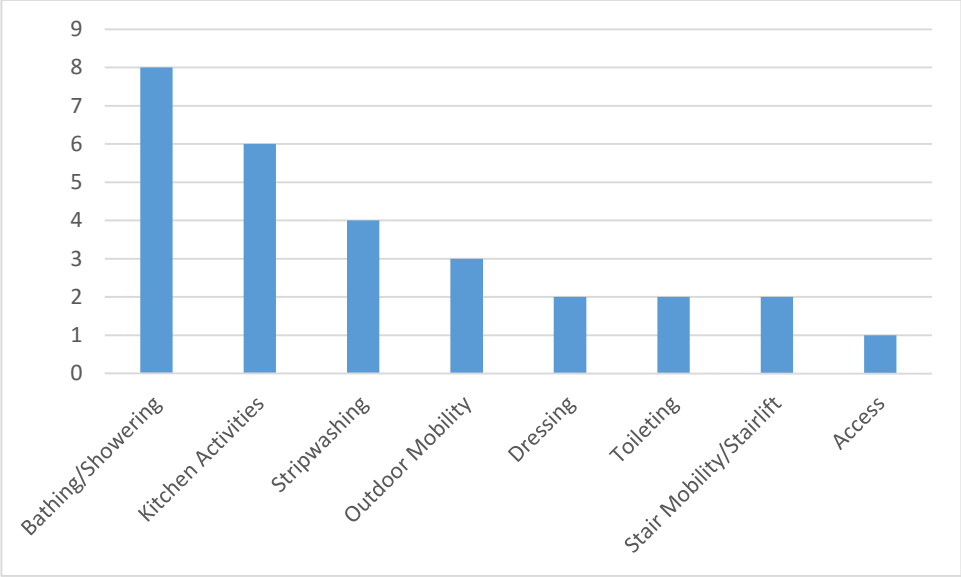
Figure 8: Total Occupational Therapy Time



A total of 28 goals were set for the 13 participants; the median number of goals set was 2, range 1 to 4. Goals were categorised into groups based on

activities of daily living. The most common goal was in bathing/showering with eight participants (62%) having a goal in this area. Six (46%) had a goal in relation to kitchen activities, four (31%) for strip washing, and three (23%) for outdoor mobility. Figure 9 shows the total number of goals in each ADL category. In addition, two goals were set in relation to ongoing falls prevention, however, these could not be reviewed within the re-ablement episode as the outcome (reduction in falls) is a long-term goal.

Figure 9: Goals by ADL Category



Sixteen goals (57%) were fully achieved by the participants. Nine goals (32%) were partially achieved. The main reasons why goals were only partially achieved were that they concerned outdoor mobility but where the participant was not well enough to participate in outdoor therapy, or weather was too inclement. One participant (028) had three partially achieved goals which were set at the beginning of the re-ablement episode to resume independence with: strip washing, dressing and kitchen activities. However, as the episode progressed she was able to complete aspects of these activities independently but she did not display the motivation required to regain complete independence (without the support workers). Three goals (11%) were not achieved. Two of these were in relation to the participants' deterioration in condition, such that they were not well enough to work on the goals. One was

in relation to the participant moving to a different property and not being able to work on the goal which had originally been set.

A total of 21 items of equipment and 13 minor adaptations were provided. The median number of equipment items was 1, range 0 to 4. The median number of minor adaptations was 1, range 0 to 5. The total cost of all equipment and adaptations was £841.51 an average cost of £64.73 per participant, with a range from £0 to £205.51. The most common category of equipment and adaptations were items for bathing or showering. In addition, one participant was referred to mainstream occupational therapy for an assessment for a stairlift. This was not provided directly by the re-ablement occupational therapist as it was outside the remit of the intervention.

Figure 10 shows the overall content of the visits split into the percentage of the occupational therapist's time spent on particular activities: assessment, goal-setting, goal-reviewing, teaching techniques, practicing activities and general advice. The majority of time was spent on assessment (29%), followed by case management and advice and support (24%), and practicing activities (19%). Considerable time was spent on initial assessment and all participants received this full initial assessment. Some had a low number of subsequent visits following the assessment which has increased the overall proportion of time spent on assessment. Time not allocated to individual categories was coded as general advice and case management, and this formed a large component of the intervention. Although the latter might seem lengthy it is consistent with other studies which have reported occupational therapy time use within interventional studies (Phillips et al., 2010, Sackley et al., 2015). Review of equipment and adaptations was coded as practicing activities as this involved demonstration of use.

Figure 11 shows the content of the visits categorised in respect of the various ADL activities that were worked on. These ADL categories are consistent with the goals that were set, with bathing and showering being the principal area followed by kitchen activities. 'Other' included categories of ADL that were too small to form standalone categories for example, transfers and pressure care

etc. NB. Since participants who were unable to transfer with assistance from one person were excluded it is likely that these figures are not representative of occupational therapists' time in re-ablement services as a whole. If people required assistance of two or more to transfer it is likely that the time spent on transfers would have been much higher.

Figure 10: Visit Content - Occupational Therapist's Time

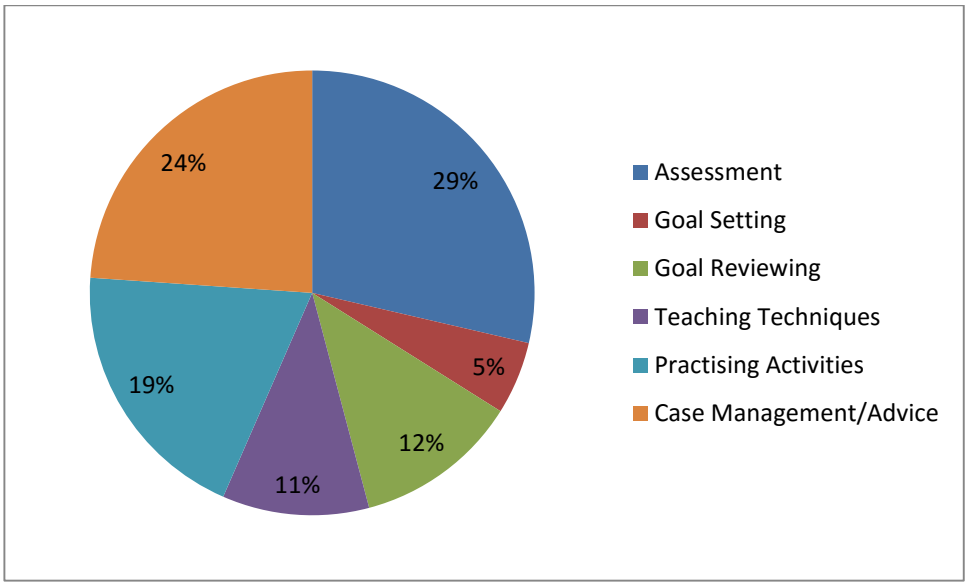
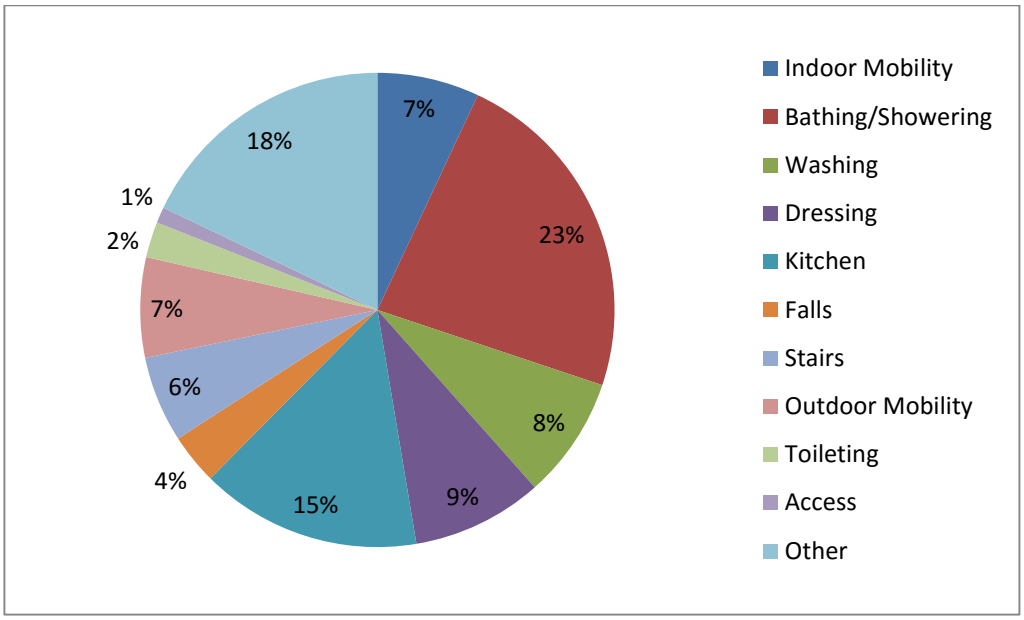


Figure 11: Visit Content - Activities of Daily Living



It was possible to collect the data required to calculate approximate costs for the intervention. In total this was calculated at £309.23 per participant. The breakdown of the cost calculation is summarised in Box 1.

Box1: Average Intervention Cost

A senior occupational therapist paid at £30,000 would cost the organisation approximately £22.00 per hour (including National Insurance and Superannuation at 7.5%). Therefore 10 hours of occupational therapy time equates to £222.00.

5 visits at 10 miles each (return) at £0.45 per mile = £22.50 travel cost
Average Equipment/Adaptation Cost = £64.73

Average Intervention Cost per Participant = £309.23.

5.4.2 Results: Content and Acceptability of Intervention - Questionnaire

This section presents the results of the acceptability questionnaire. Questionnaires were mailed to the 13 participants who completed the intervention. Completed questionnaires were returned from eight participants, a 62% response rate. The characteristics of those who returned the questionnaires compared to those who did not, are shown in Table 18.

Table 18: Characteristics of Questionnaire Respondents

	Returned Questionnaire (*n*=8)	Did not Return Questionnaire (*n*=5)
Gender Male	2 (20%)	2 (40%)
Age	83 (SD 8.9)	80.4 (SD 10.1)
Lives Alone Yes	6 (75%)	2 (40%)
Ethnicity White British Other	7 (88%) 1 (12%)	3 (60%) 2 (40%)

All respondents reported that the occupational therapist helped them to manage daily activities more easily: five (62%) said 'somewhat' and three (38%) said 'very much so'. When asked to comment on those activities that the occupational therapist helped them to manage, the following free text responses were given:

- "Managing to shower myself independently" (008)
- "He did offer to take me for a walk but I didn't feel well enough" (010)
- "Help with the shower with wall seat fitted and useful tips" (013)
- "Walking mainly, ordering delta and kitchen walker" (023)
- "On the whole every part was useful and contributed to success" (026)

All participants reported being satisfied with the occupational therapy intervention received: four (50%) were 'satisfied' and four (50%) were 'extremely satisfied'. Seven participants (88%) reported that the number of

visits made by the occupational therapist was 'about right'. One reported that the number of visits was 'too few'; this participant also took part in a qualitative interview (section 5.4.3.) in which she clarified that she would have liked the occupational therapy treatment to continue after the re-ablement service had ended. All respondents said that that time spent on each visit was 'about right'.

Participants were asked to describe, in free text, "the most helpful things that the occupational therapist did". The responses are listed below:

- "Talking" (004)
- "Gave me good advice and provided a longer sponge" (008)
- "He helped me to get a stairlift and when we went to have a look at them he picked up my daughter at my house so that she could go with me. Very helpful and pleasant." (010)
- "Advice in the kitchen with how far the kettle was from the water tap. Also helped with walking outside to the shop – very helpful it was the first time in two years" (013)
- "Reassurance" (023)
- "If asked the question – answered/ he could" (026)
- "Don't know" (028)

Other free text responses were particularly brief. There were no useable responses to the question about the least helpful things the occupational therapist did. When asked whether anything else could have been done in "an ideal world" one respondent said "easier access to a wheelchair" (023) and another respondent replied "no" (004).

On the whole, the results from the acceptability questionnaire suggest that the occupational therapy intervention was acceptable and that the respondents believed it helped them to carry out activities independently, with particular reference to personal care and kitchen activities. The results also suggest that "advice", "reassurance" and "talking" were valued and appreciated.

5.4.3 Results: Content and Acceptability of the Intervention – Qualitative Interviews

Five participants from the intervention group were interviewed. The characteristics of those who were interviewed compared to those (from the intervention group) who were not interviewed are shown in Table 19. Two interview participants had poor memories so they had difficulty recalling specific information as to what happened during the intervention period. Therefore the data collected from these interviews was limited. However, this is reflective of the population group as memory issues were prevalent amongst the participants. The interviews ranged in duration from 18 to 49 minutes with a mean of 32 (SD 12) minutes.

The findings have been categorised into four themes: Delivering a Graded ADL Programme; Inability to Participate in Re-ablement/Therapy; Provision of Advice and Support; and Time Limit. There are significant similarities between these findings and the findings from the pre-intervention interview study reported in chapter three. Similarities are highlighted below and considered further in the discussion.

Table 19: Characteristics of Interview Participants

	Interviewed (*n*=5)	**Not Interviewed (*n*=8)**
Gender Male	1 (20%)	3 (38%)
Age	82.4 (SD 9.86)	81.8 (SD 9.7)
Lives Alone Yes	2 (40%)	6 (75%)
Ethnicity White British Other	3 (60%) 2 (40%)	7 (88%) 1 (12%)

Theme 1: Delivering a Graded ADL Programme

The first theme was consistent with the findings in chapter three regarding the content of the re-ablement episode: delivery of a graded ADL programme, mainly focussed on activities within the home and on outdoor mobility to a lesser extent. Two participants described a programme whereby they were

supported to regain independence with showering and kitchen activities and a third participant (with poor memory) partially described a graded dressing intervention. The quotations below illustrate the graded ADL programme that was described:

> *"He came and got me a seat put in* [the shower]*... I had the carers come just to watch me at first, you see, to see how I went on. But.. er, it come to a point where I didn't really need them, so.. er, I manage it alright now"* Intervention Participant 013.

> *"Yeah they just.. showed me different ways of doing things that would be easier for me to... I can't get down to my feet. But, you know, they told me to do this-that-and-the-other... I know it sounds silly but they did less each time they came, which was the idea."* Intervention Participant 008

As with the findings from the pre-intervention interviews in chapter three, outdoor mobility was a smaller component of the content of the intervention. One participant (013) described walking outdoors for the first time in two years, with the occupational therapist:

> *"He come and took me a walk round... We only went 'round the block, but, erm, you know, I haven't managed it again on my own, I keep thinking I will do but as I say my arthritis has got worse."* Intervention Participant 013

Theme 2: Inability to Participate in Re-ablement/Therapy Programme

Participant 013, above, described how her condition deteriorated such that she struggled to maintain the progress with outdoor mobility. As reported above, several participants within the intervention group as a whole were too unwell to participate fully in the occupational therapy and re-ablement programme. One participant described being unable to participate due to fatigue and weakness as the quotation below demonstrates:

"I was so tired at the time, I didn't work" Intervention Participant 026

Participant 016 described having difficulties as her property was not suited to her needs. This led to her being at a "very low ebb" such that it was not possible to work on re-ablement goals during much of the episode:

"Yeah I was at a very low ebb, not crying all over the place but you know really low, and I'd got to the point where I thought 'this is it, I'm not bothered, there's not much going off here'" Intervention Participant 016

Both of these participants had difficulty in participating and did not describe a graded programme to the same extent as the others. However, they did highlight that they found the advice and support provided by the occupational therapist to be useful. This is highlighted further in the next theme.

Theme 3: Provision of Advice and Support and Confidence Building

All five participants spoke about the support, advice and encouragement received by the occupational therapist as being valuable and assisting to boost their confidence to manage activities and/or to cope at home. The "mental support" and encouraging approach were appreciated and were believed to be key facilitators. Again, these findings are consistent with the pre-intervention interviews in which confidence building was identified as being a particularly valuable component of re-ablement by the service users. In these interviews all the participants spoke about the advice, support and encouragement that they received from the occupational therapist as being beneficial to them:

"I can remember him explaining and telling me things... at the time it helped me, it helped me... His attitude was that if I wanted to, I could... do, the thing I wanted to. He encouraged me..." Intervention Participant 030

"So you know, that helped a lot, it was the mental support as well

in that respect... It was the confidence, I didn't need to think about it because he gave you the.. he'd got you the ability to give you the confidence to just come out with it if there was something on your mind." Intervention Participant 016

Theme Four: Time Limit

In response to the question: "In an ideal world is there anything else the occupational therapist could have done" four of the participants stated that they could not think of any additional actions that would have been needed. They indicated that the time limit of the intervention was appropriate in that they were able to manage independently by the end of the re-ablement episode such that further input was not needed. However, Participant 016, discharged with an ongoing homecare service, stated that continued, ongoing support from the occupational therapist would have been valuable beyond the end of the intervention period. This was in order to respond to her changing needs and situation, as the quotation below illustrates:

"Whereas I think with occupational therapy... it could be more valuable than what people or what the authorities or what health people think. I think it could be a lot more valuable to people like myself if we saw OT not just for a certain period of time but... Ongoing...My needs might be different. I might need different equipment, I don't know what I might need" Intervention Participant 016

This perhaps suggests that a further review or reviews, by an occupational therapist, after people have been discharged from the re-ablement service might assist with the maintenance of people's independence at home and promote further progress. Alternatively, it may suggest a dependency on the therapist.

Summary

In summary, the interview reports indicated that a graded ADL programme was delivered in some cases but there were difficulties in delivering this to

some participants due to problems with fatigue, physical and emotional health, and social and environmental issues. All participants valued the advice and support provided by the occupational therapist. Most were satisfied with the overall length of the intervention, but one suggested longer-term occupational therapy input would be valuable. There were no criticisms or suggestions for improvement for the occupational therapy intervention.

5.5 Discussion – Intervention Content and Acceptability

The research question for this programme of work was: "Can an occupational therapy intervention increase independence in activities of daily living for people who use homecare re-ablement services?" All participants who returned the questionnaire (62% of those who completed the intervention) reported that the occupational therapy intervention had increased their ability to manage activities "somewhat" or "very much so". They all reported being satisfied with the intervention. This suggests that, on the whole, the intervention was acceptable to the participants who received it; they perceived that it led to improvements in their ability to manage ADL.

Analysis of the data from the visit pro forma suggested that, based upon the overall content and time-use of the occupational therapist, the intervention was delivered as planned. The intervention encompassed: a functional assessment within the home environment, ADL goal-setting and reviewing, teaching and practising of ADL activities and techniques, and the provision of advice and case management. The main ADLs included in the intervention were: bathing and showering followed by kitchen activities. These findings are consistent with the findings from the pre-intervention interviews in chapter three, which were that activities within the home environment were the core areas of remit provided by occupational therapists in homecare re-ablement.

Findings in relation to outdoor mobility were also similar to the pre-intervention interview study findings. Four participants in this study had an outdoor mobility goal, however there were difficulties in achieving these with all four participants during the re-ablement episode. Other participants expressed a desire to work on outdoor mobility, though their health condition

at the time prevented it. This emphasises the importance of outdoor mobility and community access to the service user group. However, it is perhaps indicative that the need for ADL within the home takes a precedence within the re-ablement episode time period. This suggests that it would be more pertinent to focus on extended activities of daily living, particular outdoor mobility, at a later stage, perhaps after the re-ablement episode has ended.

The findings from the visit pro forma and the interviews are consistent with the findings from the interviews conducted before the RCT (chapter three): that the major focus was on activities of daily living within the home. Further findings were that a graded programme was delivered for some participants. This indicates that the intervention delivered in the RCT was reflective of wider occupational therapy practice within re-ablement.

Findings from the free text responses on the acceptability questionnaire and from the qualitative interviews suggest that the emotional support, advice and "talking" provided by the therapist were particularly valued by participants who found that these were helpful in building their confidence. This finding is also consistent with the pre-intervention interviews. Furthermore, the results of the feasibility RCT showed improvements in mental wellbeing and social care related quality of life in the OT intervention group, and these results may be consistent with the description of the components of the intervention that were particularly valued by the participants.

There were difficulties in delivering the occupational therapy and the re-ablement interventions to some participants. There were issues with motivation, physical functional deterioration (resulting in fatigue and/or other physical illness symptoms), or other health and social issues which prevented participants from taking part in the intervention as stipulated in the protocol. Two of the fifteen participants deteriorated immediately, and therefore were not included in the analysis. Two further participants experienced deterioration in their medical condition during the intervention period, such that it was not possible for them to fully participate in a re-ablement programme as they were unwell and/or fatigued for the majority of the time.

A further participant had social and housing problems which meant that she received limited intervention: predominantly advice and support from the occupational therapist. Therefore, overall, one third (5 of 15) of those allocated to the treatment group did not receive the intervention delivered as planned. However, one of these participants emphasised in her interview that she believed that the advice and support was beneficial and contributed to positive outcomes for her. With hindsight, it would have been ideal to exclude these participants using exclusion criteria. However, it is difficult to see how they could have been identified beforehand as a complex process of change was linked to their deteriorations and social issues.

Of relevance to any future trial, it is noted that it proved feasible to collect the information needed to calculate costs of the intervention using the visit pro forma. It was also possible to calculate an approximate cost for the occupational therapy intervention at £309.23. This is approximate, based on a small limited caseload, and involves the occupational therapist who was also undertaking research activities alongside provision of treatment. As an example of this, the occupational therapist had a small caseload and travel time might have been reduced had there been a bigger caseload and more visits included in each journey to and from the office. Therefore, this figure is only intended to demonstrate the feasibility of the cost calculation, and should not be considered a representative cost of occupational therapy in re-ablement.

Some limitations of the data and analysis reported in this chapter should be noted and discussed. The majority of data collection and analysis was completed by the occupational therapist who delivered the intervention in the RCT. This means that there is less objectivity and a possibility for bias in some of the analysis. This was minimised, where possible, by having another researcher to conduct the interviews and by sending the questionnaire from a research supervisor (i.e. not the occupational therapist directly).

The findings on the acceptability of the intervention were unequivocally positive. However, 62% of intervention participants returned the acceptability

questionnaire and 38% of the participants were interviewed. Whilst there is no reason to indicate that these respondents were not representative of the intervention participant group, it is important to note that the data do not represent a complete sample of all the intervention participants. There were very few negative comments or suggestions for improvement on the acceptability questionnaire or in the interviews. One explanation for this may be that the participants were completely satisfied and could think of no suggestions for improvement. However, an alternative explanation may be that they felt inhibited to provide negative comments or suggestions because the research was related so closely with the occupational therapist who delivered their treatment. The interview participants all commented on their positive relationship and/or rapport with the occupational therapist and therefore they may have been unwilling to make comments which could be construed as negative in any form.

Overall, the focus within this study was on determining whether it was feasible to deliver the intervention with a high degree of fidelity to the protocol, in a way that was acceptable to the participants who received it. Thus, the emphasis was on the *development* of the intervention. Should this study be developed further then a further stage of intervention analysis would be necessary to test whether it can be replicated by different therapists and in different local authority settings, before being trialled in a definitive RCT.

In conclusion, the intervention was acceptable to those who received it and was delivered as stipulated in the protocol for the majority of participants. The intervention focussed primarily on ADL within the home environment: personal care and kitchen activities. The participants believed that this helped them to manage activities, but particularly highlighted the confidence building and emotional support provided by the therapist. There were, however, some difficulties in relation to fidelity with the protocol, which were primarily due to the vulnerable and fragile nature of the population group.

Chapter Six - Discussion and Conclusions

6.1 Introduction

This chapter provides the final discussion and conclusions for this programme of work. It draws together the results from the previous four chapters: the systematic review; the pre-intervention qualitative study; the feasibility RCT; and the analysis of the content and acceptability of the intervention. It provides a summary and synthesis of the results; discusses the strengths and limitations of the research; locates the research in the context of other research; and discusses the implications for academic knowledge, clinical practice, policy, and future research. The research question for this study was "Can an occupational therapy intervention increase independence in activities of daily living for people who use homecare re-ablement services?" and this chapter will provide an overall conclusion based on the research undertaken.

6.2 Summary of Results

6.2.1 Summary of Research from Each Strand

The systematic review demonstrated that there was some evidence that interventions targeted at activities of daily living can improve homecare users' ability to perform these. It also found evidence that these interventions reduced the use of and costs associated with ongoing homecare. However, the content of the interventions ranged from single visits to provide equipment, to co-ordinated programmes delivered by multi-disciplinary teams. Furthermore, there were some methodological weaknesses inherent in the majority of the studies included in the review. In relation to occupational therapy input, the role and remit varied from training non-qualified staff on equipment provision, to working as part of multidisciplinary teams, to working uni-professionally providing bathing interventions. In addition, some studies included components such as case management, delivered by other professionals (for example, nurses), which could also be carried out by occupational therapists. Thus, it was not possible to determine whether the occupational therapy input had led to improved outcomes. The systematic review also identified a variety of measures for ADL ability or "functional independence" and there was no one measure that was used consistently in the homecare population.

The qualitative interviews found that, within homecare re-ablement, the occupational therapists focussed mainly on ADL activities within the home. The primary focus of their interventions was an ADL programme that involved a graded approach to assist people to regain the ability to manage these activities independently. The occupational therapists believed that they had several core skills which directly contributed to delivering this, including: implementing a 're-ablement ethos' within the team; selecting and implementing a suitable approach for the re-ablement episode; and identifying 're-ablement potential'. People who used re-ablement services valued the graded approach, advice and support, and described it as building their confidence; they also reported that they felt it helped them to regain their independence. Less commonly, services incorporated activities outside the home, such as outdoor mobility and access to community shops or facilities. Despite these activities being less common, both occupational therapists and people using services thought these were particularly important in terms of their links with social isolation. Participants believed that isolation could be a barrier to successful re-ablement insofar as people who were lonely might become accustomed to the regular social contact provided by the support workers. Being able to resume independent outdoor mobility was believed to be one possible way to overcome this problem.

The findings from the systematic review and qualitative interview study were incorporated into the intervention delivered in the feasibility RCT. The results showed that a powered trial would be feasible, but that further preparatory work would be required in order to identify and confirm the suitability of sites and outcome measures. Although feasibility was demonstrated, key methodological challenges were identified in relation to service structure changes and outcome measures; these would need to be addressed in order to conduct a definitive RCT. Overall, participant outcomes improved from baseline in both the treatment and control groups. These trends were consistent with the trends observed in the systematic review that found interventions targeting personal ADL could lead to modest improvements in ability to manage these, alongside improvements in quality of life and

reductions in the use of services. Furthermore, the OT intervention group showed greater improvements overall than the control group, and this was particularly so for mental wellbeing and social care related quality of life. There were also favourable trends in the OT intervention group for falls and ongoing use of health and social care services, though these were very small. The findings in relation to ADL in the OT intervention group were mixed with improvement in personal ADL at two weeks and six months. However, a greater improvement in extended ADL was observed in the control group at two weeks although this was greater in the OT group at three and six months. Although this study was not powered, and there is a high degree of uncertainty in the estimates of treatment effect, the findings suggest that there may be a beneficial treatment effect.

Findings on the content and acceptability of the occupational therapy intervention suggested that fidelity of treatment with that specified in the published protocol was problematic for three participants. This was due to deterioration in their health and/or social circumstances. The majority of participants' goals were in relation to ADL activities within the home and this is consistent with the findings from the pre-intervention interview study. This indicates that the intervention was representative of practice within homecare re-ablement. Goals in relation to outdoor mobility were the most difficult to achieve as participants were often not ready to work on these; this is also reflective in the findings from the pre-intervention interview study. Findings from the acceptability questionnaire showed that respondents believed that the occupational therapy intervention had led to improvements in their ability to manage everyday activities. The findings from the post-intervention qualitative interviews also supported this, and further suggested that confidence building and emotional support were highly valued. This might be linked to the improvements seen in the outcomes mental wellbeing and social care related quality of life in the feasibility RCT.

6.2.2 Synthesis of Key Findings Across all Strands

This section draws together the findings from all strands of the research. It highlights the key areas in which there were similarities between the strands.

Feasibility issues

The unexpected change in the service structure in the RCT, to incorporate additional occupational therapists into the service, was the biggest threat to the feasibility of the study. The changing nature of services and structures was also a complaint made by some of the occupational therapists in the pre-intervention interviews about the services in which they were working, in that they felt service changes were implemented and they were often "the last to know" about them. Thus, it is unlikely that future services would remain static and changes would be likely in any further study. The impact of such changes would need to be considered carefully and discussed with potential sites before proceeding. A balance of flexibility and pragmatism would be needed.

Although delivering the intervention as stipulated in the protocol was problematic for a small number of participants, the vast majority of those in the intervention group received it as planned. All participants were able to set one or more ADL related goals for the re-ablement episode; this was consistent with the main focus of the practice of the occupational therapists in the pre-intervention interview study. Thus an appropriate balance between fidelity with the protocol and the flexibility required to tailor the intervention to the specific needs of individual recipients was achieved.

ADL within the home Vs wider re-ablement

The primary emphasis of the occupational therapy intervention in the RCT was on ADL within the home. This was consistent with the findings from the pre-intervention interviews and was the initial intention when the research was conceived and the study was designed. All the participants in the feasibility RCT were able to identify goals in relation to ADL within the home, which indicates that the core aim of the intervention was both pertinent and relevant to them. However, some occupational therapists and people who were using services reported that they believed there were potential benefits of extending re-ablement beyond the home. This is also consistent with the analysis of goals and content of intervention, in which some participants had goals in relation to outdoor mobility and access to community facilities. However, there

were difficulties in working on extended ADL, particularly outside the home, within the context of the service; this could indicate that the re-ablement episode is not the most appropriate time to focus on extended ADL. Specifically, it may be that personal ADL takes precedence within the re-ablement episode itself and that extended ADL might be more appropriate at a later stage, perhaps after people have achieved their goals in relation to personal ADL.

Main outcome measure

The systematic review found that a myriad of outcome measures was used for ADL ability, several of which were non-standardised. Additionally, many of the studies included in the systematic review reported physical functioning or physical wellbeing (from the Short-Form 36); this was the closest available alternative to ADL ability in several studies. Whilst there might be parallels between physical functioning and ADL ability this should not be regarded as a substitute for ADL ability. It is argued here that as personal ADL is a principal component of the re-ablement service, and commonly a primary goal for people using the service, the primary outcome measure should reflect this.

Other studies have also reported difficulties in identifying suitable outcome measures. Indeed in the most recent *National Audit for Intermediate Care,* NHS England (2014) reported that "*The Steering Group reviewed a number of outcome tools… much debate was generated about which outcome measure to use*" (pg. 16). This demonstrates that the difficulties in identifying appropriate outcome measures for re-ablement services are widespread. NHS England (2014) used the *Sunderland Community Re-ablement Scheme* (adapted from the *Derby Outcome Measure* and outlined in OPM (2010)) and supplemented this with questions from the *Therapy Outcome Measure* (Enderby and John, 2015). However, the Sunderland measure is not widely used in research studies and there will therefore be difficulties when comparing or combining the results with results of other studies when conducting meta-analyses where standardised outcomes have been used.

In the present study, the Barthel Index was used as this is the most recognised

and validated personal ADL measure (Wade and Collin, 1988). The baseline median (IQR) score for all participants in the feasibility RCT was 16 (16-18). As the maximum score is 20, this demonstrates that most participants had some difficulties carrying out some personal ADL, although they were generally carrying out the majority of activities independently. However, by the two-week follow-up, four participants had achieved the maximum score of 20, reaching the ceiling of the scale. This also makes the analysis difficult as it leads to a non-normal distribution of data. Furthermore, it means that participants do not have the potential for improvement on the scale once they have reached the maximum. Therefore, there is a question in relation to whether a different ADL measure is needed for use within re-ablement and homecare populations.

Based on the findings from the qualitative interviews it could be argued, from the perspective of people using services, that confidence and mental-wellbeing might be more meaningful primary outcome measures. People using services commented extensively on this in the pre and post-intervention interviews and mental wellbeing and social care related quality of life showed stronger trends for improvement in the feasibility RCT. However, as the main content of the intervention (as evidenced by the analysis presented in chapter five) was on personal activities of daily living, it seems judicious to use this as the primary outcome measure with the others as secondary outcomes.

Treatment Effect

Findings across the individual studies in the systematic review were mixed, however, there was a broad trend towards improvement in personal ADL in the majority of included studies, although this was not significant in most of them. There were also improvements in quality of life and physical and mental health in a number of studies. The trends in the feasibility RCT were consistent with these broad trends for personal ADL and for the perceived health and quality of life outcomes. They were also consistent with the views of people who received the RCT intervention (demonstrated by the acceptability questionnaire and post-intervention interviews) and the views of OTs working in re-ablement (pre-intervention interviews). Although it is not possible to

provide a definitive conclusion, overall, the evidence supports the tenet that interventions within homecare, focussing on ADL and including occupational therapy, can increase ability to manage ADL. They may also improve health and social care related quality of life.

6.3 Strengths and Limitations of the Research

The main strengths of this research were:

1. It was based upon a comprehensive, multi-method approach which was based on the recommendations of the Medical Research Council for the evaluation of complex interventions (Craig et al., 2013). There were findings that were consistent across the three strands of the research; this should evoke confidence in the reliability of the research findings. Furthermore, the Social Care Institute for Excellence places particular importance on research which combines the views of people who use services with other forms of evidence (Fisher, 2014, Miller et al., 2014); this research has achieved this.

2. This was the first RCT of occupational therapy in homecare re-ablement services and has demonstrated, subject to the caveats highlighted in chapter four, that a powered randomised controlled trial would be feasible.

3. This is one of only a few randomised controlled trials that have been conducted in social care and thus demonstrates the potential for the use of this methodology within a social care context. The UK National Institute for Health Research School for Social Care Research has published a methods review arguing that more RCTs are needed in social care (Woods and Russell, 2014). The present study is an important step in demonstrating that this is feasible.

The principal limitations of this research were:

1. There was one main researcher who was responsible for the study.

He took overall responsibility for the planning and delivering all stages of the research. He was the only occupational therapist to deliver the treatment intervention. These factors could increase the possibility of bias. However, as this research was for a PhD, this is a necessary process in order demonstrate his ability to take responsibility for planning and conducting a study. The limitations associated with having one principal researcher were reduced by employing research assistants at key stages of the project in order to reduce bias. Research assistants were involved in the following tasks:

- Acting as a second reviewer for the systematic review
- Collecting and entering the outcome data in the feasibility RCT and checking the data
- Carrying out the post-intervention interviews with participants from the occupational therapy treatment group.

2. The feasibility RCT was conducted at one site only. It is therefore not possible to be certain that the feasibility findings are transferrable and generalizable to other local authority sites. However, despite this, there is no reason to assume that the population of Nottingham City were more or less likely to participate in the study or to respond to the treatment intervention. Therefore, it seems reasonable to conclude that the key findings in relation to feasibility would be transferrable to other geographical locations.

3. It is not possible to be certain that the OT intervention is representative of occupational therapy practice in re-ablement. It is clear that there are widespread regional differences in practice, which were acknowledged in the introduction to this thesis and, indeed, were one of the main tenets for conducting this research. However, this limitation is mitigated by the findings from the pre-intervention interviews that were conducted with occupational therapists from 12 re-ablement sites. Although their practice varied, it was consistent in a number of key areas and components and the intervention was designed to encompass these. Nevertheless, it is recognised that

there may be occupational therapists who were not interviewed, whose practice may be different to that delivered in the feasibility RCT.

6.3.1. Reflexivity

Reflexivity is a process of reflection on the way that the researcher's values and actions may have impacted upon the research process. Reflexivity is particularly relevant to qualitative research which involves a greater degree of interpretation on the part of the researcher. As stated in the introduction to this thesis, the researcher is an occupational therapist with a background in social care. He designed this study with reference to a previously held belief, arising from his time in clinical practice, that occupational therapy input into the homecare assessment process could lead to improved outcomes for users and service providers. Additionally, this study was designed with reference to anecdotal evidence of different configurations of occupational therapy involvement within re-ablement services at different local authority sites. Through discussion with occupational therapists in practice the researcher was aware of a popular belief amongst them that they were most effective when operating at the forefront of re-ablement services, working face-to-face with every service user. This was a central tenet of this research. Therefore, there was already an understanding in relation to the broad content and structure of the intervention which was based on pre-existing knowledge and outlined in the original funding proposal before the research commenced. It is therefore important, when considering the results, to remember that the study was designed, conducted and analysed on this premise.

In conducting the qualitative study these values and beliefs in relation to the occupational therapy intervention were evident on the part of the researcher. Nevertheless, these were consistent with the views of the occupational therapists who were interviewed. However, it is possible that this pre-existing commitment on the part of the researcher influenced the emphasis that was placed on certain aspects in the discussion during the interviews. However, this was mitigated in the analysis and write-up by including reference to the

numbers of occupational therapists and service users that contributed to each sub-theme. This is indicative of whether a theme or concept was relevant to one or all the participants in the interview study.

Furthermore, the researcher took the decision to disclose that he was an occupational therapist to all the interview participants. The interview study participants were also aware that the qualitative study was 'nested' and that the purpose was to inform the design of an occupational therapy delivered intervention for an RCT. It is possible that this influenced the findings by influencing the participants to comment more favourably on aspects of occupational therapy practice in order to emphasise the benefits.

The process of reflexivity was continuous throughout the duration of the study. Notes were kept as throughout all phases of the research process (including the systematic review and feasibility RCT) about ideas and issues that were emergent, these were incorporated into the analysis and write-up as appropriate. Reflexive discussions also took place with supervisors at monthly supervision meetings which were conducted throughout the duration of the research.

6.4 Relevance to Other Research

As highlighted earlier, this is the first RCT of occupational therapy in homecare re-ablement; as such there are no studies with which to directly compare the results. However, the results of the present study are largely consistent with wider research on homecare re-ablement. Numerous studies and service evaluations have reported reductions in the use of homecare services following re-ablement episodes (Glendinning et al., 2010, Kent et al., 2000, McLeod and Mair, 2009). Some studies have involved occupational therapists (Winkel et al., 2014) whilst others have not (King et al., 2012a). Although the majority of these studies have methodological weaknesses, the findings in relation to reductions in service use have been consistent. However, findings on the effect of re-ablement on individual outcomes (such as functional or ADL ability) are promising, but equivocal. The systematic review in the present study concluded that, although the evidence was methodologically weak,

interventions targeted at ADL ability could lead to improvements in individual's ability to perform these. Therefore, it appears that the trends in this study are consistent with the wider research.

With regard to occupational therapy, the introduction to this thesis highlighted that there is high quality robust evidence demonstrating the effects for diverse patient groups, particularly in the community. An individual patient meta-analysis of community occupational therapy for people with stroke (Walker et al., 2004) and a systematic review of occupational therapy for community dwelling older adults (Steultjens et al., 2004) both showed beneficial effects of occupational therapy on ADL performance. These findings are consistent with the focus on ADL reported by the occupational therapists in their practice and with the trends seen in the feasibility randomised controlled trial.

Previous qualitative research on the views of people who use re-ablement services has yielded similar findings to the qualitative research in the present study. The results from the pre-intervention qualitative interviews highlighted that people receiving the service did not always feel fully involved in the initial set-up and goal setting processes, or setting the agenda for what would happen during the re-ablement episode. Findings from research conducted by Wilde and Glendinning (2012) led to similar conclusions.

There were also similarities with Wilde and Glendinning's (2012) findings in relation to social isolation and consideration of social needs. This indicates that social isolation and access to community facilities is a particularly important priority for people who use re-ablement services. Newton (2012) highlighted the importance of increasing motivation for people using re-ablement services by setting goals that were personally important and relevant to them. Therefore, outdoor mobility is an area that warrants further attention and development, particularly because it is important to people who use services and many services do not currently focus on this.

Also highlighted earlier was the fact that few RCTs have been conducted in social care settings. One study by Logan et al. (1997) compared an enhanced

social care occupational therapy intervention for people with a stroke with routine care; the enhanced intervention involved participants being treated more quickly and with more visits than those receiving usual care. Logan et al. (1997) found that the enhanced occupational therapy intervention led to improvements in extended ADL in the short-term. There are therefore some similarities between their study and the present study in relation to an "enhanced" occupational therapy intervention being delivered successfully within a social care setting. Future research could build upon the findings of these two studies.

It is also pertinent to consider research that has led to different and/or contradictory results and conclusions to those of the present study. Three studies are highlighted, comprising: a systematic review, qualitative interview study, and RCT of an occupational therapy intervention focussing on ADL:

1. A systematic review of homecare re-ablement published recently (and after this research had started) (Legg et al., 2015) used a different definition of "homecare re-ablement" to that used in the present study. Legg et al. (2015) defined this as being delivered only by "personal care staff" (i.e. not by a multidisciplinary team or involving therapists) and identified no studies that met their inclusion criteria. They concluded that there was no evidence that re-ablement was effective. This was in contrast to the findings in the systematic review in this study which did find evidence (although moderate) of an effect for broader interventions in homecare. However, the systematic review in the present study included research which involved qualified therapists in delivering the re-ablement intervention, in accordance with the definition of the re-ablement workforce provided by NHS England (2014). The difference between the results of the two reviews emphasises the differences in terminology and inconsistencies in configuration of re-ablement services nationally.

2. Qualitative research has highlighted that senior social care managers and front-line re-ablement staff believe that the specialist skills

provided by occupational therapists are particularly important for successful re-ablement, but have questioned whether occupational therapists need to be employed or located directly within re-ablement teams (Rabiee and Glendinning, 2011). This is in contrast with the views of most of the occupational therapists in this study who reported they were most effective when working "on the front-line" leading and co-ordinating the approach for the re-ablement episode. Thus, there are some potentially important differences between the views of occupational therapists and other professionals and decision-makers involved in re-ablement as to what the optimum occupational therapy role might be. Further clarification is needed in this area.

3. Although systematic reviews and meta-analyses of occupational therapy have shown beneficial results for ADL performance, some studies individually have not shown this. It is important therefore to examine the different practice settings and circumstances in which these studies were conducted. For example, a recent multicentre RCT of occupational therapy in care homes found no effect on ADL ability (Sackley et al., 2015). It is possible that the benefits observed in people's own homes do not translate to care home settings. Alternatively, it may be that the greater levels of impairment amongst residents of care homes lead to different outcomes. This is potentially relevant to the present research as the treatment effect may be different for people with increased levels of dependency.

Finally, it is important to consider research that is currently in progress. Three ongoing studies or projects have been identified:

1. A large NIHR funded programme entitled "*Models of reablement evaluation: a mixed methods evaluation of a complex intervention*" is currently being led by researchers at the University of York (Social Policy Research Unit, 2015). This study aims to map existing re-ablement services in England; evaluate generic re-ablement services by comparing outcomes between models; and describe specialist

models of re-ablement.

2. A randomised controlled trial of re-ablement is currently ongoing in Norway (Jacobsen, 2015, Langland et al., 2015). In this trial, participants are being randomised to receive re-ablement (involving input from qualified therapists working alongside "home helpers"), or usual care which primarily consists of compensatory help (the "doing for" approach).

3. The UK National Institute for Health and Care Excellence (NICE) is currently in the process of reviewing the evidence on Intermediate Care and Re-ablement with an anticipated clinical guideline publication date of July 2017 (National Institute for Health and Care Excellence, 2015b).

Thus, there is growing interest in research on re-ablement, including policy documents, which will be published over the coming years. The results of the present study will be relevant within this context. It would be judicious to update the systematic review when the above studies have been completed and published.

6.5 Context and Implications of the Research

6.5.1 Implications for Practice in Homecare Re-ablement

As this was a feasibility study, it was not intended that the results would lead to definitive conclusions about the effectiveness of occupational therapy in homecare re-ablement. Therefore, it is not intended that practice should be altered on the basis of this research. However, there are several aspects from the overall research programme which have particular implications for homecare re-ablement services and occupational therapy practice in re-ablement. These are discussed below.

The principal content of the occupational therapy role was the provision of a graded programme focussing on ADL within the home. Whilst this is not likely

to be new information for therapists practicing in this area, nevertheless it offers confirmatory evidence of the occupational therapists' perceived 'ideal practice'. This could be useful for occupational therapists when reflecting on their own practice or discussing ideal practice with service managers and commissioners. As highlighted earlier, previous research has suggested that social care managers are not necessarily aware of the potential occupational therapy role in re-ablement teams, and the findings from the qualitative research could assist with improving this.

The analysis of the occupational therapist's time when delivering the treatment intervention may also be of interest to occupational therapists and service managers in re-ablement. Although the amount of time spent in activities away from direct patient contact is sometimes perceived to be excessive, the time in this study (43% on direct contact, 32% on administration/liaison and 23% on travel) was broadly comparable with other studies of occupational therapists' time in other clinical settings. Thus, these figures allow occupational therapists to compare their time-use with others and provide commissioners with a potential benchmark in terms of average time and resources required per re-ablement participant.

People using re-ablement services particularly valued the confidence building and emotional support and this is another area for development and consideration by occupational therapists, re-ablement workers, and commissioners. It is possible that the therapeutic alliance may be enhanced if occupational therapists pay particular attention to people's emotional support needs. It is also possible that "better outcomes" might be achieved if the re-ablement workforce have sufficient time to spend with people using the service in order to form relationships that can build confidence and supportive relationships. This is consistent with the NICE guideline on homecare, published in September 2015, which recommended that the duration for each homecare visit should not "usually" be less than 30 minutes to enable the worker to have sufficient time to talk to the person (National Institute for Health and Care Excellence, 2015a). However, further research would also be required on the specific effects of visit length on therapeutic relationship,

confidence building and emotional support in re-ablement.

The National Audit for Intermediate Care (NHS England, 2014) reported an increase in re-ablement services that were "therapy-led" from 9% in 2013 to 32% in 2014. This indicates that, during the time that the present study has been running the scale, role and remit of therapy, including occupational therapy, in re-ablement has rapidly expanded. Therefore, the results of the present study and the potential implications of a further definitive study, are likely to be increasingly relevant given the expanding role of occupational therapy in re-ablement.

6.5.2 Contribution to Academic Knowledge

Each strand of the research is a piece of independent, original research. The systematic review was the first to collate studies of interventions for ADL in homecare and extrapolate these findings to re-ablement and occupational therapy. The qualitative interview study was the first to examine the views and practices of multiple occupational therapists working in re-ablement. The feasibility trial was the first RCT of occupational therapy in re-ablement. Therefore, the findings presented in each of the chapters are new and original contributions to the literature.

There are also theoretical and philosophical implications of the research. Although occupational therapy was defined as a complex intervention by the UK College of Occupational Therapists (Creek, 2003), a subsequent review found few examples of this definition being implemented in research (Creek, 2009). The present feasibility RCT offers such an example where "occupational therapy", focussed on ADL, was delivered as a complex treatment intervention. The theoretical basis for this, as discussed in the introduction, was the link between activity as treatment and activity as the outcome. Therefore, this study offers a practical example of occupational therapy being implemented as a complex intervention which can be used to further this theoretical premise.

It was also highlighted in the introduction that the philosophical perspective

of pragmatism was adopted for this research, based on the combination and use of multiple methodologies as appropriate to the specific objectives of the research. It is believed that this perspective was justified and has contributed to the overall successful delivery of this programme of research.

6.5.3 Implications and Suggestions for Future Research

The main implication arising from this research is the need for a further powered RCT on occupational therapy in homecare re-ablement. This is discussed separately in the succeeding section 6.5.4. However, there were other implications for further research that were highlighted throughout the thesis. These are summarised and presented below:

1. Research to explore the use of outcome measures in the homecare re-ablement population is needed. It is advocated that an outcome measure that incorporates personal ADL (such as the areas on the Barthel Index) and other ADL within the home (i.e. kitchen activities) would be pertinent for use in this population. A suitable outcome measure has not been identified and therefore further research may be needed to develop one. The development of a suitable outcome measure for intermediate care and re-ablement has already been proposed by NHS England (2014). This also has wider implications for occupational therapy research, particularly interventions carried out in people's homes, which may also benefit from such an outcome measure.

2. The optimum time limit and timing of the re-ablement episode and re-ablement visits should be investigated. It was highlighted that that there is limited evidence for a six-week time-period and several interview participants (occupational therapists) believed that a longer time may lead to better outcomes in some circumstances. It was also suggested that subsequent "review visits" by the occupational therapist might be beneficial on the basis that people's needs might change in the weeks immediately following re-ablement.

3. Research is currently ongoing to map re-ablement services in England (Social Policy Research Unit, 2015). However, it is also particularly important to map the nature and extent of occupational therapy in re-ablement, given the expansion of therapy led services. This would also be necessary in order to identify suitable possible sites for a further, powered RCT, but would also be important to reduce inconsistencies and differences between service provision in different localities.

4. The difficulties in implementing a "re-ablement ethos" within services that had evolved from traditional homecare services were highlighted by the occupational therapists and also by Wilde and Glendinning (2012). The occupational therapists reported in their interviews that they had a role in promoting a re-ablement ethos within teams and also training the support workers in re-ablement approaches and techniques. Although this study focussed specifically on the provision of a direct and targeted occupational therapy intervention, research could also evaluate more generic models involving indirect occupational therapy input, such as training support workers, and whether these are effective.

5. People using re-ablement services are particularly vulnerable to social isolation. The re-ablement episode may focus on "re-abling" them within the home but they may not be supported to regain independence with outdoor mobility and community access. Given the importance of these activities to people using the services, further research should focus on interventions to support these. However, due to the difficulties identified when working on goals in relation to outdoor mobility, research could investigate the optimum time to focus on these. As several occupational therapists suggested that there was insufficient time to incorporate these within the re-ablement episode, it is suggested that it might be appropriate to focus on these after treatment within the home has ended.

6. There remains an issue with the use of terminology and definitions in re-ablement, particularly in relation to rehabilitation (Legg et al., 2015). This study took a pragmatic definition, based on the association between re-ablement and homecare, which was consistent with the definition adopted by NHS England in the *National Audit of Intermediate Care* (NHS England, 2014). However, the use of different definitions continues to be problematic when attempting to review studies to collate and compare interventions. Further work, focussing on a consensus on the content and configuration of re-ablement, is needed.

6.5.4 A Further, Powered RCT

Given the high priority placed on re-ablement services, the increase in therapy led services, and the variability of occupational therapy input between services, a further powered RCT is both needed and warranted. In addition to further research to identify a suitable primary outcome measure discussed earlier, the following components should be considered when planning a future RCT:

- As highlighted in chapter four, it would be necessary to identify a suitable and sufficient range of sites that provide "usual care" without routine occupational therapy input. It would be important that this did not change during the course of the trial, as it did in the feasibility RCT. It is likely that identifying such sites would be problematic and therefore alternative strategies would also need to be considered. One possibility would be a "waiting list control" where participants could wait to receive the occupational therapy input. However, this would be likely to have ethical implications associated with delaying treatment. Another alternative would be to identify sites that offered limited occupational therapy input (i.e. not a comprehensive ADL programme of the type delivered in the feasibility RCT) and randomise participants to receive an "enhanced" OT intervention, compared to usual care as was delivered in the study by Logan et al. (1997). However, this may also present some difficulties as it would

be likely to reduce any differences between groups if the control group were receiving some level of occupational therapy input.

- If the intervention were to be delivered by multiple therapists, particular attention would need to be paid to the fidelity of the treatment to that stipulated in the protocol. This would likely take the form of the development of a treatment "manual" or "handbook" and training being provided to the therapists prior to the commencement of the study. A monitoring system would need to be in place during the running of the trial, including independent observations of treatment sessions, alongside the self-reported content of what was actually delivered by the occupational therapists.

- It could be argued that the improvements in mental wellbeing and social care related quality of life, which were particularly apparent in the OT intervention group in the feasibility RCT, could be due to the additional "attention" that people received rather than the effect of the occupational therapy intervention. Therefore, the use of an attention control should be considered in a future study. This could take the form of a non-professionally qualified visitor to offer generic advice and support. Thus, a future RCT might consist of a three-arm design with an OT treatment group, an attention control group, and a usual care control group.

6.6 Conclusions

The occupational therapists who were interviewed as part of this study believed that a graded ADL programme could lead to improvements in the abilities of re-ablement service users to manage such activities. This finding was consistent with the wishes and motivations of people using re-ablement services who wanted to maintain their ability to manage daily living tasks. Occupational therapists believed that their unique contribution was the identification of appropriate approaches to tailor re-ablement programmes to the needs of individual users. People using re-ablement services valued graded approaches, particularly where they assisted them to regain their

confidence in a step-wise manner. The systematic review found moderate evidence that interventions targeted at personal activities of daily living led to a reduction in homecare service users' dependency with activities. However, the content of interventions, and the way outcomes were reported, were variable. Interventions involving occupational therapists led to moderate improvements in ADL, although the content of occupational therapy input varied. Few RCTs were identified and none were identified which specifically focussed on occupational therapy in a homecare re-ablement setting. Thus, whether occupational therapy input actually leads to improved outcomes for these users is not known.

Although re-ablement services continue to dominate the social care policy agenda and have received significant investment from national and local government, questions remain about the most effective 'model' for re-ablement service delivery. Anecdotally, it is known that there are widespread regional variations in service configurations and practices. Whilst the results of large-scale studies which compare the effectiveness of different models of re-ablement (such as the study being conducted at The Social Policy Research Unit (2015)) are likely to provide useful and valid insights to inform practice, they will inevitably lead to further questions about whether the results are generalizable, because of the use of non-randomised methods.

Randomised controlled trials continue to be regarded as the "gold standard" (Kaptchuck, 2001) for testing the effectiveness of treatment interventions. Although there are particular difficulties in conducting trials of complex, rehabilitation and social care interventions, advocates still consider that they are necessary (Woods and Russell, 2014). However, given that re-ablement is now firmly established as a routine practice, and is the usual care in many localities in the UK, there would be ethical difficulties in randomising people to receive re-ablement or not. Therefore, the opportunity to conduct *randomised* trials comparing re-ablement to alternative models of care may have passed. Nevertheless, it is still possible to randomise people to receive particular components of re-ablement, as this study has done. A key question in relation to re-ablement is whether people have "better outcomes" with

occupational therapy than without it (Social Care Institute for Excellence, 2011b) and the most robust way to gather this evidence is to conduct a randomised controlled trial.

This is the first RCT of OT in re-ablement and is therefore an important study in the development of the evidence base for this area of practice. The favourable trends observed in the OT group, compared to the control group, indicate the potential benefits for the homecare re-ablement population. It was possible to deliver the intervention as specified in the protocol to the majority of the participants. All participants were able to set one or more ADL goals. All those responding to the acceptability questionnaire believed that the occupational therapy intervention helped them to manage daily activities more easily. Some changes to the definitive study would be necessary, but this study showed that the RCT method was feasible.

This research also highlighted a wider issue in relation to outcome measurement in the homecare and homecare re-ablement populations. A myriad of outcome measures were included in the systematic review which were reported in numerous different ways. This makes comparison between studies problematic. Furthermore, with regard to ADL ability numerous different measurement methods were used, with physical function often being the closest available proxy. However, given the emphasis on personal ADL within the homecare re-ablement episode, it is concluded that a suitable and standardised measure of ADL ability must be developed or identified as a priority.

In addition to the issues relating directly to the design of the definitive study, other important implications for future research were highlighted during the course of this study. These were: the optimum timing and time-limits for re-ablement; mapping the nature and extent of occupational therapy involvement in re-ablement; the impact of a broader occupational therapy role on re-ablement outcomes; the effect of social isolation on re-ablement, including whether a focus on outdoor mobility might reduce this; and the use of terminology in re-ablement. Research focussing on these areas is likely to

provide results that will be highly relevant to social care staff and clinicians, commissioners and, especially, people who use re-ablement services.

In conclusion, this study has shown that an RCT of a targeted occupational therapy intervention, which was designed based upon the best available evidence and the views and experiences of occupational therapists and people using services, is feasible. A further definitive randomised controlled trial is warranted and would be important, timely and judicious. In the face of a rapid increase in re-ablement services, particularly those that are therapy-led, the need for high quality evidence to justify the investment in these services is paramount. Furthermore, the findings from this study suggest that the timely provision of occupational therapy to those who have a need for homecare could have important implications on their ability to manage and sustain their ADL ability, in addition to boosting mental wellbeing and quality of life. Given that Government policy in the UK is focussed on assisting people to remain independently in their homes for as long as possible, the implications of a definitive study in this area are likely to be substantial.

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Appendix 1: Systematic Review Search Strategy

1. home care services/
2. home health aides/
3. homemaker services/
4. homecare.tw.
5. (home$ adj1 (care$ or treat$ or help$)).tw.
6. (home$ adj2 (service$ or aid$)).tw.
7. domiciliary.tw.
8. 1 or 2 or 3 or 4 or 5 or 6 or 7
9. activities of daily living/
10. self care/
11. independent living/
12. (function$ adj1 (independ$ or abilit$)).tw.
13. (self adj1 care).tw.
14. (activit$ adj2 daily).tw.
15. (restorat$ adj2 (care$ or model$ or service$ or home$)).tw.
16. (re-able$ or reable$ or re-enablem$ or enablem$).tw.
17. goals/
18. (goal$ adj2 (set$ or treat$ or therap$)).tw.
19. 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18
20. 8 and 19
21. randomized controlled trial.pt.
22. controlled clinical trial.pt.
23. (control$ adj2 trial).tw.
24. intervention studies/
25. experiment$.tw.
26. (time adj1 series).tw.
27. (pre test or pretest or posttest or post test).tw.
28. random allocation/
29. intervention?.tw.
30. evaluation studies/
31. comparative study.pt
32. 21 or 22 or 23 or 24 or 25 or 26 or 27 or 28 or 29 or 30 or 31
33. 21 and 32
34. nursing home/
35. 33 not 34
36. limit to adults

Appendix 2: Systematic Review Secondary Outcomes

Study	Death	EADL	Admissions	Falls	Mood	HrQoL SCrQoL
Feldman et al. (1996)	I: 15% (of 229) C: 14% (of 175)	Change scores only – no difference between groups	Not Reported	Not Reported	CES-D No data – but reported no differences between groups	Not Reported
Glendinning et al. (2010)	I: 11% (74/654) C: 12% (44/361)	Not Reported	Not Reported	Not Reported	Not Reported	Significant improvement in EQ5D score in re-ablement group (P<0.001). No change in control group. No significant differences in ASCOT scores.
Gottlieb and Caro (2000)	Not Reported	Change scores – no differences between groups	Not Reported	Not Reported	Not Reported	Not Reported
King et al. (2012a)	**4M** I: 2% (2/93) C: 0% (0/93) **7M** I: 3% (3/93) C: 2% (2/93)	**NEADL - 4M** I: 44.3 (0.9) C: 45.0 (1.0) **NEADL– 7M** I: 44.2 (1.0) C: 44.4 (1.1)	**Residential** **4M** I: 3% (3/93) C: 2% (2/93) **7M** I: 4% (4/93) C: 2% (2/93)	Not Reported	Not Reported	SF-36 (overall) Between arm difference in change 3.8 (0.0, 7.7) P= 0.05.
Lewin and Vandermeulen (2010)	**3M** I: 4% (4/100) C: 4% (4/100) **12M** I: 11% (11/100) C: 11% (11/100)	***PAF – IADL*** **3M** I: 14.8(3.7) C: 14.9(4.1) **12M** I: 14.0 (2.8) C: 14.5 (3.9)	**Residentia**l 3M I: 1%(1/100) C: 2%(2/100) 12M I: 2% (2/100) C: 4% (4/100)	Not Reported	PGMS 3M I: 10.4 (3.6) C: 11.0 (3.7) 12M I: 10.8 (3.4) C: 10.9 (3.6) Significant difference in change (2.04, P=0.041)	Not Reported
Lewin et al. (2013)	**3M** I: 5% (17/375) C: 7% (25/375) **6M** I: 17% (65/375) C: 19% (72/375)	Obtained from authors No difference between groups	**Hospital/ Residential/ Hospice** 3M I: 13% (49/375) C: 7% (27/375) 6M I:13% (49/375) C: 14% (52/375)	Not Reported	Not Reported	Collected but not presented in paper. No differences reported.

Study	Death	EADL	Admissions	Falls	Mood	HrQoL SCrQoL
Marek et al. (2006)	I: 11% (6/55) C: 7% (2/30)	Not Reported	**Nursing Home** I: 4% (2/55) C: 23% (7/30)	Not Reported	Mood indicators – Minimum dataset I: 0.3 (0.6) C: 0.7 (1.5) No difference	Not Reported
Markle-Reid (2002)	I: 10% (6/62) C: 11% (7/64)	Not Reported	**Hospital Admission** I: 16%(of 62) C: 24% (of 64)	Not Reported	CES-D I: 8.61 (6.98) C: 13.64 (12.04) P=0.02	SF-36 Split into component scales – significant improvement in summary scales in intervention group.
Markle-Reid et al. (2006)	Group data not reported.	Not Reported	Not Reported	Not Reported	CES-D Difference in mean change in favour of I: 2.72 (0.39, 5.07), P 0.022	SF-36 Split into component scales
Markle-Reid et al. (2011)	I: 8% (4/52) C: 6% (3/49)	Not Reported	Not Reported	Not Reported	CES-D I: 11.40 (11.95) C: 12.62 (10.9) No difference	SF-36 Split into component scales
Parsons et al. (2012)	I: 0% (0/108) C: 4% (4/97)	Not Reported	Not Reported	Not Reported	Not Reported	SF-36 (overall) Intergroup difference in change from baseline P <0.0001 in favour of Intervention.
Tinetti et al. (2002)	I: 0.4% (3/691) C: 0.1% (1/691)	**Home Mgmt** I: 9.5 (2.9) C: 9.2 (3.0)	**No longer at home** I: 18% (122/691) C: 29% (201/691)	Not reported	Not reported	Not reported
Zingmark and Bernspang (2011)	I: 9% (5/55) C: 9% (3/32)	Not Reported	Nursing Home I: 2% (1/55) C: 0% (0/32)	Not Reported	Not Reported	EQ5D Graphically displayed (no data)
Total (/13)	**11**	**6**	**7**	**0**	**6**	**8**

Study	Health Economic	Caregiver Strain	On-going Homecare	Participant Satisfaction	Provider Satisfaction
Feldman et al. (1996)	$2,900 annual cost saving per person in intervention group	Not Reported	Average of 6 less hours per week in intervention group.	Participants at intervention site significantly less satisfied with service.	Not Reported
Glendinning et al. (2010)	Re-ablement associated with significant decrease in subsequent social care costs. High probability of cost effectiveness.	Not Reported	Cost data, not hours or per participant. Intervention participants used less social care services during follow-up period.	Not Reported	Not Reported
Gottlieb and Caro (2000)	Not Reported	Not Reported	Significantly greater increase in use of formal service in control group (change scores only – no data).	Not Reported	Not Reported
King et al. (2012a)	Not Reported	Not Reported	Reduced Support I: 29% (22/76) C: 0% (0/81)	Not Reported	Not Reported
Lewin and Vandermeulen (2010)	Not Reported	Not Reported	Reduced/ Discontinued 3M I:66% (66/100) C: 11% (11/100) 12M I: 65% (65/100) C: 26% (26/100)	Not Reported	Not Reported
Lewin et al. (2013)	Not Reported	Not Reported	Needing on-going 'personal care' 3M I: 28% (103/375) C: 64% (238/375) 6M I: 18% (67/375) C: 40% (151/375)	Not Reported	Not Reported
Marek et al. (2006)	Not Reported	Not Reported	Not Reported	Not Reported	Not Reported
Markle-Reid (2002)	Higher costs related to intervention; lower acute hospitalisation costs.	Not Reported	Not Reported	Not Reported	Not Reported

Study	Health Economic	Caregiver Strain	On-going Homecare	Participant Satisfaction	Provider Satisfaction
Markle-Reid et al. (2006)	No differences in health and social services cost at 6months.	Not Reported	Not Reported	Not Reported	Not Reported
Markle-Reid et al. (2011)	Higher total per-person mean cost of health services in the intervention group.	Not Reported	Not Reported	Not Reported	Not Reported
Parsons et al. (2012)	Not Reported	Not Reported	Not Reported	Not Reported	Not Reported
Tinetti et al. (2002)	Not Reported	Not Reported	Not Reported	Not Reported	Not Reported
Zingmark and Bernspang (2011)	Not Reported	Not Reported	I: 30% (14/46) C: 75% (21/28)	Not Reported	Not Reported
Total (/13)	**5**	**0**	**6**	**1**	**0**

Key:
M = Months
I = Intervention
C = Control
Deaths and admissions data is cumulative where there is more than one time point.
Differences in data presentation reflects the different ways in which the data was reported (and what could be extracted) from the original papers.

Appendix 3: Interview Topic Guides

Interview Topic Guide – Occupational Therapist

The purpose of this research is to investigate the nature and content of occupational therapy input into re-ablement services. We want to find out about the occupational therapy role in these services in order to help us plan further research. We are interviewing up to 12 occupational therapists who work in different re-ablement teams. Are there any questions that you would like to ask me before we begin?

I would like to audio record the interview. Can you confirm that you are happy for me to do this?

[Turn on the recorder]

1. Can you tell me a bit about your professional background before you came to work for the re-ablement team?
    - How long qualified
    - Training
    - Previous employment
    - Previous re-ablement experience
    - Length of experience with this re-ablement team
    - How you came to be working in re-ablement

2. Can you tell me about the structure of the re-ablement service that you currently work in?
    - How long established
    - Structure and skill-mix
    - Funding arrangements
    - Older people or adults of all ages (casemix)
    - NTAKE or selective service
    - Time-limit
    - Other OTs/Therapists/Key Staff
    - Funding for OT posts (health/social care/split)

3. Can you tell me about your role within the service?
    - How you spend your time
    - Who you work with and how do you work with them
    - Work with others based outside the team (referrals to other agencies)
    - What do you do that is different/unique to the other team members

4. Could you describe a typical day at work to me, where you have lots of service user contact?

5. Could you give me an example of a service user you have worked with, who had a lot of OT input, and talk me through the process from referral to discharge?
What effect/impact did this have

6. What assessments and interventions do you use?

Are these different to those used by other (non-OT) team members (how)?

7. What works well within the service currently?
What is most effective about OT input/role

8. What would make the service more effective?
- Re-ablement service
- OT input within the service

As I have already explained, these interviews are a precursor to further research. We are planning to conduct interviews with re-ablement service users, followed by a feasibility randomised controlled trial in which we randomise people to have a specific OT intervention as part of their re-ablement, or not. I would like to ask some final questions directly about this research:

1. What do you think I should ask the service users in their interviews?
2. If you had the freedom to deliver an ideal world intervention to the re-ablement service users, could you describe that intervention to me?
3. What research evidence do you think is needed regarding re-ablement services?

Are there some other things that you would like to say?

Are there some other things you would like to ask me?

[Thanks and end]

Interview Topic Guide – Service User
***Adapted from Glendinning et al. (2010)**

I am an occupational therapist working at the University Of Nottingham. [Explain OT role if needed]. I am carrying out some research to look at how occupational therapists can work as part of re-ablement teams. As you have been receiving help from the re-ablement team I would like to talk to you about the help you have been receiving. I would also like to ask about your circumstances before you had help from the team, and your views about what worked well about the service and what didn't work well.

Are there some things that you would like to ask me before we begin?
I would like to audio record the interview, would that be ok?

[Turn on recorder]

I would like to ask you to think back to just before you were referred for help from the re-ablement team.

Can I start by asking you to tell me who referred you to the re-ablement team and why?

What difficulties were you experiencing at the time?

- Health
- ADLs
- Support

Can you tell me about your situation just before re-ablement? Were you receiving help from health or other social care services?

- In hospital
- OT
- Social worker
- Homecare/Meals at home
- How long for/currently receiving

Were you receiving any help from friends and family? What type of help?
How long for/currently receiving

When you started with the re-ablement service, how did you think things would work and what did you think would happen?

I would now like to ask you a few questions to find out more about the kind of services you received from the re-ablement team.

At the beginning, when they first came to see you, can you tell me how you decided what they would help you with?

Who else was involved with making this decision?

What did the re-ablement team help you with?

- Personal care

- Mobility
- Housekeeping
- Practical support
- Confidence/emotional support
- Information and advice
- Social contact
- Managing your health
- Making you feel safer

Can you tell me what happened during the visits?

- What kind of help
- What did they do and what did you do
- Did this change over time
- Did you feel involved in this process

Can you tell me how many visits you had each day and each week?

- How long were they
- Did this change over time

- Did you receive any equipment?
- Was this helpful
- Any difficulties using it

Can you tell me whether you saw an occupational therapist during your time with the re-ablement team?

- What happened
- How did this affect you

Have you ever seen an occupational therapist before? If so, can you tell me a bit about what they helped you with?

- How did this affect you (independence? Support needed? Confidence?)?

I'd now like to talk about the re-ablement service ending, and how the service affected you and the support you need.

How do you feel about coming to the end of re-ablement/did you feel about the re-ablement service ending?

- Long enough/too long

Do you feel that the re-ablement service has made any difference to your life?

- Probe in relation to things that they helped with (Q7).

Do you feel more able to do things independently?

- Explore

Do you feel it has affected the amount of support you need from other people?

- Health and social care services
- Friends and family

Can you tell me some of the things that have been most helpful?

- Explore

Can you tell me some of the things that have been least helpful?

- Explore

Are there some things that you would you have liked to have been done differently?

- Explore

Are there some other things that you would like to tell me about the re-ablement service, or your experience of it?

Are there some other things that you would like to ask me about?

[Thanks and end]

Appendix 4: Participant Information Sheets (Interview Participants)





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Occupational Therapy in Homecare Re-ablement Services

Interview Information Pack – Occupational Therapist

A research study focusing on homecare re-ablement services is taking place in Nottingham. We would like to invite you to take part in this study. To help you decide whether to take part, this sheet explains why the research is being done and what it would involve for you. Please take time to read the following information

What is the purpose of the study?

We are carrying out some research exploring at how occupational therapists work with homecare re-ablement teams. As part of this research, we would like to talk to you about your experience of working within a homecare re-ablement service. This research will also form part of Phillip Whitehead's PhD study.

Why have I been invited?

You have been invited because you are currently working as an occupational therapist in a homecare re-ablement service.

What will happen to me if I take part?

We would like to carry out an interview with you where we talk to you about your current role within the service. We are particularly interested in hearing about the assessments and interventions you carry out and how you spend your working week. We would like to hear your views about the service, what works well and what works less well. The interview will be conducted by a researcher from the University of Nottingham and will take about 30 to 45 minutes. It will be audio recorded, with your consent. The interview can be completed face-to-face or via the telephone. It will be completed at a time to suit you.

Do I have to take part?

It is up to you to decide whether to take part in the study. You have some time to think about it. The study researcher, Phillip Whitehead, will contact you to ask if you would like to participate in the study. He will also be able to answer any further questions that you have. If you decide to take part you will be asked to sign a consent form. Even if you give your consent, you can withdraw from the study at any time, without giving a reason. If you decide to take part in the study you do not have to do anything - a member of the research team will contact you to ask whether you want to take part.

What are the potential benefits of taking part?

There may be no direct benefit to you. However the information we get from the study should help us determine how to organise homecare re-ablement services in the future. The study also aims to help NHS and Social Care staff best use the resources available to them when treating people in their own homes.

What are the potential disadvantages and risks of taking part?

We do not anticipate there are any serious risks involved in taking part.

Expenses and payments

Participants will not be paid to participate in this study.

Will my taking part in the study be kept confidential?

Yes. We will follow ethical and legal practice and all information about you will be handled in confidence.

If you join the study, some parts of your data collected for the study will be looked at by authorised persons from the University of Nottingham who are organising the research. They may also be looked at by authorised people to check that the study is being carried out correctly. All will have a duty of confidentiality to you as a research participant and we will do our best to meet this duty.

All information which is collected about you during the course of the research will be kept **strictly confidential**, stored in a secure and locked office, and on a password protected database. Your name and address will be removed (anonymised) and a unique code will be used so that you cannot be recognised from it.

Your personal data (address, telephone number) will be kept for 6 months after the end of the study so that we are able to contact you about the findings of the study. We may also wish to contact you about *possible follow-up studies* and will ask you to indicate whether you are willing for us to do this. All other

data (research data) will be kept securely for 7 years. After this time your data will be disposed of securely. During this time all precautions will be taken by all those involved to maintain your confidentiality, only members of the research team will have access to your personal data.

Although what you say in the interview is confidential, should you disclose anything to us which we feel puts you or anyone else at any risk, we may feel it necessary to report this to the appropriate persons. We would discuss this with you before telling anyone else.

What will happen if I don't want to carry on with the study?

Your participation is voluntary and you are free to withdraw at any time, without giving any reason, and without your legal rights being affected. If you withdraw after the interview has been completed then the information collected cannot be erased and this information may still be used in the project analysis.

What if there is a problem?

If you have any concerns about the study you are encouraged to speak to a member of the research team and they will do their best to answer your questions. You can contact Phillip Whitehead, or Professor Avril Drummond. Their contact details are given at the end of this document.

What will happen to the results of the research?

It is intended that the results of the research will be published formally in scientific journals and patient newsletters. The results will also be written up as part of Phillip Whitehead's PhD thesis. You will not be identified in any report or publication.

Who is organising and funding the research?

The research is being organised by The University of Nottingham. The research is being conducted as part of a doctoral research project, funded by *The National Institute for Health Research*. There is a steering group who meet regularly to advise the research team. The group includes experienced research therapists, patient representatives and staff from Nottingham City Council.

Who has given permission for the study to be carried out?

All research in the NHS and Social Care sector is looked at by an independent group of people, called the Research Ethics Committee to protect your safety, rights wellbeing and dignity. This study has been reviewed and given favourable opinion by the Social Care Research Ethics Committee (ref: 13/IEC08/0002).

Further information and contact details for the study:

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NHS
National Institute for Health Research

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Occupational Therapy for Homecare Re-ablement Services

Interview Information Pack

A research study involving people who use homecare re-ablement services is taking place in Nottingham. We would like to invite you to take part in this study. To help you decide whether to take part, this sheet explains why the research is being done and what it would involve for you. Please take time to read the following information carefully. Talk to others about the study if you wish.

What is the purpose of the study?

We are carrying out some research looking at how occupational therapists can work with homecare re-ablement teams. As part of this research, we would like to talk to you about your experience of receiving the homecare re-ablement service. This research will form part of Phillip Whitehead's PhD study.

Why have I been invited?

You have been invited because you are currently receiving the homecare re-ablement service from Nottingham City Council, which is the centre for this study. The staff from the homecare re-ablement team have identified you as being suitable for the study.

What will happen to me if I take part?

We would like to carry out an interview with you where we talk to you about the re-ablement service. We are particularly interested in hearing your views about the service, what has worked well and what has worked less well. The interview will take place in your own home and will be conducted by a researcher from the University of Nottingham and will take about 30 to 45 minutes. It will be audio recorded, with your consent. If you choose to take part all your normal re-ablement, health and social care services will continue.

Do I have to take part?

It is up to you to decide whether to take part in the study. You have some time to think about it. The study researcher, Phillip Whitehead, will contact you within two days of receiving this information sheet, to ask if you would like to participate in the study. He will also be able to answer any further questions that you have. If you decide to take part, you will be given this information sheet to keep, and will be asked to sign a consent form. Even if you give your consent, you can withdraw from the study at any time, without giving a reason. This will not affect the care you receive.

What will I have to do if I want to take part?

If you decide to take part in the study you do not have to do anything - a member of the research team will contact you to ask whether you want to take part.

What are the potential benefits of taking part?

There may be no direct benefit to you. However the information we get from the study should help us determine how to organise homecare re-ablement services in the future. The study also aims to help NHS and Social Care staff best use the resources available to them when treating people in their own homes.

What are the potential disadvantages and risks of taking part?

We do not anticipate there are any serious risks involved in taking part. Some of the questions in the interview will focus on the activities you are having difficulty with, as well as those you are able to do, and there is a possibility that some people may find these questions upsetting. However, the interview will be completed by a qualified healthcare professional who is used to dealing sensitively with these issues.

Expenses and payments

Participants will not be paid to participate in this study.

Will my taking part in the study be kept confidential?

Yes. We will follow ethical and legal practice and all information about you will be handled in confidence.

If you join the study, some parts of your data collected for the study will be looked at by authorised persons from the University of Nottingham who are organising the research. They may also be looked at by authorised people to check that the study is being carried out correctly. All will have a duty of confidentiality to you as a research participant and we will do our best to meet this duty.

All information which is collected about you during the course of the research will be kept **strictly confidential**, stored in a secure and locked office, and on a password protected database. Your name and address will be removed (anonymised) and a unique code will be used so that you cannot be recognised from it.

Your personal data (address, telephone number) will be kept for 6 months after the end of the study so that we are able to contact you about the findings of the study. We may also wish to contact you about *possible follow-up studies* and will ask you to indicate whether you are willing for us to do this. All other data (research data) will be kept securely for 7 years. After this time your data will be disposed of securely. During this time all precautions will be taken by all those involved to maintain your confidentiality, only members of the research team will have access to your personal data.

Although what you say in the interview is confidential, should you disclose anything to us which we feel puts you or anyone else at any risk, we may feel it necessary to report this to the appropriate persons. We would discuss this with you before telling anyone else.

Will the research team have access to my medical details and social care records?

No. We will not need to access your medical details for this study. In the interview, we will ask you some basic questions about the difficulties you are having which led to you needing input from the homecare re-ablement team. We will also collect basic information from you, such as your date of birth.

What will happen if I don't want to carry on with the study?

Your participation is voluntary and you are free to withdraw at any time, without giving any reason, and without your legal rights being affected. If you withdraw after the interview has been completed then the information collected cannot be erased and may still be used in the project analysis. You will continue to receive treatment as normal from the homecare re-ablement service.

What if there is a problem?

If you have any concerns about the study you are encouraged to speak to a member of the research team and they will do their best to answer your questions. You can contact Phillip Whitehead, or Professor Avril Drummond. Their contact details are given at the end of this document. If you remain unhappy and wish to complain formally you can do this through the Nottingham City Council complaints procedure.

What will happen to the results of the research?

It is intended that the results of the research will be published formally in scientific journals and patient newsletters. The results will also be written up as part of Phillip Whitehead's PhD thesis. You will not be identified in any report or publication.

Who is organising and funding the research?

The research is being organised by The University of Nottingham. The research is being conducted as part of a doctoral research project, funded by *The National Institute for Health Research*. There is a steering group who meet regularly to advise the research team. The group includes experienced research therapists, patient representatives and staff from Nottingham City Council.

Who has given permission for the study to be carried out?

All research in the NHS and Social Care sector is looked at by an independent group of people, called the Research Ethics Committee to protect your safety, rights wellbeing and dignity. This study has been reviewed and given favourable opinion by the Social Care Research Ethics Committee (Ref. 13/IEC08/002).

Further information and contact details for the study:

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Professor Avril Drummond
Faculty of Medicine and Health

A Floor, Medical School
Queens Medical Centre
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NG7 2UH
Tel: 0115 8230493
Email:
avril.drummond@nottingham.ac.uk

Nottingham City Council Social Care Representation and Complaints Procedure
The Clocktower
Eastcroft Depot
London Road
Nottingham
NG2 3AH
Tel:0115 87 65974

Email: socialcarecomplaints@nottinghamcity.gov.uk

Thank you for taking the time to read this information pack

Appendix 5: Example Trial Screening and Recruitment Log

THIS DOCUMENT IS STRICTLY CONFIDENTIAL

Record Form – Participant Screening and Enrolment Log – The OTHERS Trial

Nottingham City Council – Intake Homecare Re-ablement Team

No.	**Participant Initials**	**Date of Referral to Intake**	**Date of Intake Service Commencement**	**Not Eligible**		**Investigator Signature and Date**
1.				☐0 Unable to speak English ☐1 End of life care pathway ☐2 Needs 2+ to transfer ☐3 Receiving other therapy services (CST, ICS)		
	Agreed to Contact	**Date of Consultation**	**Consent**	**Date Consent Obtained**	**Trial Number**	
	☐0 No ☐1 Yes		☐0 No ☐1 Yes			
No.	**Participant Initials**	**Date of Referral to Intake**	**Date of Intake Service Commencement**	**Not Eligible**		**Investigator Signature and Date**
2.				☐0 Unable to speak English ☐1 End of life care pathway ☐2 Needs 2+ to transfer ☐3 Receiving other therapy services (CST, ICS)		
	Agreed to Contact	**Date of Consultation**	**Consent**	**Date Consent Obtained**	**Trial Number**	
	☐0 No ☐1 Yes		☐0 No ☐1 Yes			

Appendix 6: Participant Information Sheet (RCT)

The University of Nottingham
UNITED KINGDOM · CHINA · MALAYSIA

NHS National Institute for Health Research

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Occupational Therapy in Homecare Re-ablement Services

Participant Information Pack

A research study involving people who use homecare re-ablement services is taking place in Nottingham. We would like to invite you to take part in this study. To help you decide whether to take part, this sheet explains why the research is being done and what it would involve for you. Please take time to read the following information carefully. Talk to others about the study if you wish.

What is the purpose of the study?

Occupational therapists provide support for people to do the things they need or want to do. In homecare re-ablement services occupational therapists assess how the person is managing at home and identify any support they may need to help them to manage everyday tasks more easily. This may involve providing equipment or making suggestions for changing the way an activity is carried out.

Some people who receive homecare re-ablement services are treated by an occupational therapist routinely. Other people do not see an occupational therapist and instead are supported by the homecare re-ablement staff. We do not know which of these options is best. We are carrying out a study to compare one group of people who receive occupational therapy as part of their homecare re-ablement with another group of people who do not. This research will form part of Phillip Whitehead's PhD study.

Why have I been invited?

You have been invited because you are currently receiving the homecare re-ablement service from Nottingham City Council, which is the centre for this study. We are inviting everyone who is in a similar situation to you to take part.

The staff from the homecare re-ablement team have identified you as being suitable for the study.

What will happen to me if I take part?

If you choose to take part all your normal re-ablement, health and social care services will continue. You will be put into one of two groups by chance (randomly). There is a 50% chance of being in either group. The two groups are:

Homecare Re-ablement Services – People in this group will receive the usual homecare re-ablement service provided by Nottingham City Council. This involves a period of re-ablement provided by re-ablement support workers under the direction of a re-ablement manager. This normally lasts for six to eight weeks.

Homecare Re-ablement Services PLUS Occupational Therapy – People in this group will receive all of the usual treatment above. They will also receive occupational therapy during their time with the re-ablement service. The occupational therapy input may cover a range of areas to help you to do the things you wish to do on a daily basis. The occupational therapist will visit you regularly during your time with the re-ablement team and will provide you with advice. The occupational therapists may also provide equipment to help with your daily activities.

At the end of your time with the re-ablement service we may also like to interview you about your experiences of the occupational therapy treatment. We would like to find out what you liked and did not like and see what you thought could be improved on. With your permission we would like to audio record the interview. The interview is a separate part of the study and you do not have to take part in this. There is a separate consent form for the interview.

All participants

People in both groups will complete some initial assessments and questions at the start of the research. They will also receive three follow-up visits which will take place at two weeks, three months and six months after finishing with the re-ablement service. These visits will be conducted by a member of the research team. They will discuss how you have been managing and also complete some further assessments of your general health, emotional and physical abilities. If you would like another person to be present, this can be arranged.

Do I have to take part?

It is up to you to decide whether to take part in the study. You have some time to think about it. The study researcher, Phillip Whitehead, will contact you within two days of receiving this information sheet, to ask if you would like to participate in the study. He will also be able to answer any further questions

that you have. If you decide to take part, you will be given this information sheet to keep, and will be asked to sign a consent form. Even if you give your consent, you can withdraw from the study at any time, without giving a reason. This will not affect the care you receive.

If you decide to take part in the study you do not have to do anything - a member of the research team will contact you to ask whether you want to take part.

What are the potential benefits of taking part?

There may be no direct benefit to you. However the information we get from the study should help us determine how to organise homecare re-ablement services in the future. The study also aims to help NHS and Social Care staff best use the resources available to them when treating people in their own homes.

What are the potential disadvantages and risks of taking part?

We do not anticipate that there are any serious risks involved in taking part. Some of the questions we need to ask will focus on activities such as washing, dressing and getting to the toilet and there is a possibility that some people may find these questions upsetting or intrusive. However, the researcher who visits you has received training in dealing sensitively with these issues.

Expenses and payments

Participants will not be paid to participate in this study.

Will my taking part in the study be kept confidential?

Yes. We will follow ethical and legal practice and all information about you will be handled in confidence.

If you join the study, some parts of your social care records and data collected for the study will be looked at by authorised persons from the University of Nottingham who are organising the research. They may also be looked at by authorised people to check that the study is being carried out correctly. All will have a duty of confidentiality to you as a research participant and we will do our best to meet this duty.

All information which is collected about you during the course of the research will be kept **strictly confidential**, stored in a secure and locked office, and on a password protected database. Your name and address will be removed (anonymised) and a unique code will be used so that you cannot be recognised from it.

Your personal data (address, telephone number) will be kept for 6 months after the end of the study so that we are able to contact you about the findings of the study. We may also wish to contact you about *possible follow-up studies* and we will ask you whether you agree for us to do this. All other data (research data) will be kept securely for 7 years. After this time your data will be disposed of securely. During this time all precautions will be taken by all those involved to maintain your confidentiality, only members of the research team will have access to your personal data. Although what you say during the course of the research is confidential, should you disclose anything to us which we feel puts you or anyone else at any risk, we may need to report this to the appropriate persons. However, we will discuss this with you before telling anyone else.

Will the research team have access to my social care records?

Yes, we will ask for your consent to do this. We would like to collect basic details about you and information about your social care package from these records. Information will only be collected once you have consented and will be held in line with Nottingham City Council's confidentiality policy and the Data Protection Act. The occupational therapist that will provide your treatment is a member of the research team and will access the social care records of those in the occupational therapy group to record the treatment they receive.

Will my GP be informed that I am taking part?

No. We will not inform your GP that you are taking part.

What will happen if I don't want to carry on with the study?

Your participation is voluntary and you are free to withdraw at any time, without giving any reason, and without your legal rights being affected. However, if you withdraw then the information collected up to the point of withdrawal cannot be erased and this information may still be used in the project analysis. You will continue to receive treatment as normal from the homecare re-ablement service, and other health and social care teams.

What if there is a problem?

If you have any concerns about the study you are encouraged to speak to a member of the research team and they will do their best to answer your questions. You can contact Phillip Whitehead, or Professor Avril Drummond. Their contact details are given at the end of this document. If you remain unhappy and wish to complain formally you can do this through the Nottingham City Council complaints procedure.

What will happen to the results of the research?

It is intended that the results of the research will be published formally in scientific journals and patient newsletters. The results will also be written up as part of Phillip Whitehead's PhD thesis. You will not be identified in any report or publication.

Who is organising and funding the research?

The research is being organised by The University of Nottingham. The research is being conducted as part of a doctoral research project funded by *The National Institute for Health Research*.

There is a steering group who meet regularly to advise the research team. The group includes experienced researchers, service user representatives and staff from Nottingham City Council.

Who has given permission for the study to be carried out?

All research in the NHS and Social Care sector is looked at by an independent group of people, called the Research Ethics Committee to protect your safety, rights wellbeing and dignity. This study has been reviewed and given favourable opinion by the Social Care Research Ethics Committee (Ref. 13/IEC08/002).

Further information and contact details for the study:

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Health Sciences
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Queens Medical Centre
Nottingham
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Tel: 0115 8230247
E-mail: phillip.j.whitehead@nottingham.ac.uk

Professor Avril Drummond
Faculty of Medicine and

A Floor, The Medical School
Queens Medical Centre
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NG7 2UH
Tel: 0115 8230493
E-mail:
avril.drummond@nottingham.ac.uk

Nottingham City Council Social Care Representation and Complaints Procedure

The Clocktower, Eastcroft Depot
Nottingham
NG2 3AH
Tel:0115 87 65974

Email: socialcarecomplaints@nottinghamcity.gov.uk

Thank you for taking the time to read this information pack

Appendix 7: Participant Consent Form (RCT)

CONSENT FORM – RCT Participant

Occupational Therapy in Homecare Re-ablement Services

The "OTHERS" Study

REC ref: 13/IEC08/002

Name of Researcher:
Name of Participant:

		Yes	No
1.	I confirm that I have read and understand the participant information pack Final Version 1.1 dated 25/02/2013 for the above study and have had the opportunity to ask questions.	☐	☐
2.	I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, and without my medical care or legal rights being affected. I understand that should I withdraw then the information collected up to the point of withdrawal cannot be erased and that this information may still be used in the project analysis.	☐	☐
3.	I understand that relevant sections of my social care records will be accessed by the research team from the University of Nottingham to collect demographic and social care package information, and for the purpose of providing the occupational therapy treatment.	☐	☐
4.	The data collected in the study may be looked at by individuals from the University of Nottingham who regulate the research team, such as auditors. I give permission for these individuals to have access to this study data.	☐	☐
5.	I give permission for the research team to collect, store, analyse and publish information obtained from my participation in this study. I understand that my personal details will be kept confidential.	☐	☐
6.	I agree to take part in the above study.	☐	☐
7.	I agree to being contacted about possible follow-up studies.	☐	☐

Name of Participant	Signature	Date

Name of Person Taking Consent	Signature	Date

3 copies: 1 for participant, 1 for the PMF and 1 for the social care records

Appendix 8: Intervention Visit Proforma

NB – Please note this is a word version of the electronic proforma which was completed after each participant treatment visit in the intervention group.

Free Text Notes on Visit

Goals Set
1. 2. 3.

Goals Reviewed
1. 2. 3.

Goal (list)
Achieved Partially Achieved Not achieved

Activity and Mode of Delivery

Equipment/Adaptations Provided and Cost of these

Overall Visit

Time Spent on:

Activity	Tick	Time (mins)	Comments
Assessment			
Goal Setting			
Teaching Techniques			
Practicing Activities			
Goal Reviewing			
Case Management & Advice			
TOTAL Time			

Overall Visit:

ADL Activity	Proportion of Visit
Indoor Mobility	
Bathing/Showering	
Washing	
Dressing	
Kitchen	
Falls	
Stairs	
Outdoor Mobility	
Toileting	
Access	
Other	

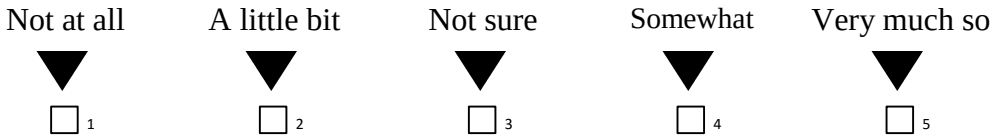
Appendix 9: Acceptability Questionnaire

Occupational Therapy Questionnaire

As part of your involvement in our research, you received treatment from an occupational therapist within the homecare re-ablement service.

Your occupational therapist was **Phillip Whitehead**. This questionnaire is about the **occupational therapy treatment** you received**.**

1. Do you think the occupational therapist helped you to manage daily activities more easily?

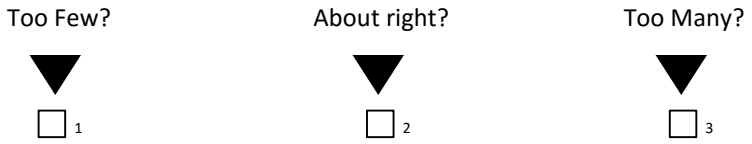


2. If yes, which particular tasks or activities:

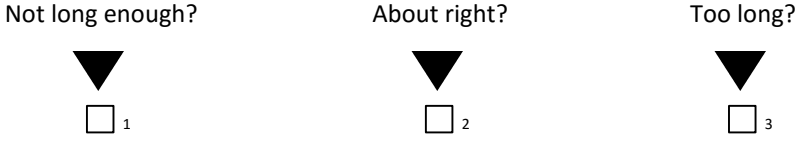
.....
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.....
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3. Do you think that the number of visits made by the occupational therapist was:



4. Do you think that the time spent on each visit made by the occupational therapist was:



5. Overall, how satisfied were you with the occupational therapy treatment you received?

Not at all Satisfied	Not Satisfied	Partially Satisfied	Satisfied	Extremely Satisfied
☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

What were the most helpful things that the occupational therapist did?

.....

.....

.....

.....

What were the least helpful things that the occupational therapist did?

.....

.....

.....

.....

In an ideal world, is there anything else that you would have liked the occupational therapist to do or arrange for you?

.....

.....

.....

.....

Thank-you for taking the time to complete this questionnaire.

Appendix 10: Intervention Participant Interview Topic Guide

Adapted from Glendinning et al. (2010)

I am a researcher working at the University Of Nottingham. I am working with Phillip Whitehead whose study you are currently participating in looking at how occupational therapists can work as part of homecare re-ablement teams (the carers). As you received the re-ablement team and input from Phillip the occupational therapist, I would like to talk to you about the help you received. I would also like to ask about your circumstances before you had help from the carers, and your views about what worked well about the service and what didn't work well.

Are there some things that you would like to ask me before we begin?

I would like to audio record the interview, would that be ok?

[Turn on recorder]

I would like to ask you to think back to **just before** you were referred for help from the re-ablement team (the carers).

1. Can I start by asking you to tell me who referred you to the re-ablement team and why?

2. What difficulties were you experiencing at the time?
   - Health
   - Everyday Activities
   - Support

3. Can you tell me about your situation just before re-ablement? Were you receiving help from health or other social care services?
   - In hospital
   - OT
   - Social worker
   - Homecare/Meals at home
   - How long for/currently receiving

4. Were you receiving any help from friends and family? What type of help?
- How long for/currently receiving

5. When you started with the re-ablement service, how did you think things would work and what did you think would happen?

   The next thing I'm going to ask you is about the kind of thing the reablement team worked on with you

6. At the beginning, when they first came to see you, can you tell me how you decided what they would help you with?
   - Who else was involved with making this decision?

7. What did the re-ablement team work on with you?
    - Personal care
    - Mobility
    - Housekeeping
    - Practical support
    - Confidence/emotional support
    - Information and advice
    - Social contact
    - Managing your health
    - Making you feel safer

8. Can you tell me what happened during the visits?
   What kind of help
   What did they do and what did you do
   Did this change over time
   Did you feel involved in this process

   Can you tell me how many visits you had each day and each week?
   How long were they
   Did this change over time

   I would now like to ask you about the occupational therapy treatment you received. Your occupational therapist was **Phillip Whitehead.** I would now like you to think about the things that Phillip worked on with you/did with you and not the rest of the team (the carers).

   Prompt: Tell the interviewee that you do not know what Phillip did with them (i.e. you are not testing their memory!).

   What did Phillip work on with you?
    - Personal care
    - Mobility
    - Housekeeping
    - Practical support
    - Confidence/emotional support
    - Information and advice
    - Social contact
    - Managing your health
    - Making you feel safer
    - Contacting other services/agencies

   How did you decide what things that Phillip would do?

   Did you receive any equipment or adaptations to your home (from Phillip)?
    - Can you tell me about them?
    - Any difficulties using it/them?

   Do you think that the help provided by Phillip helped you to manage activities more easily?

Were there some things that Phillip suggested which you did think were needed?

Are there some activities that you are still having difficulties with?

In an ideal world, what else that would have liked Phillip to work on with you?

Are there some other things that you would like to tell me about the occupational therapy treatment you received (from Phillip)

Are there some other things you would like to tell me about the re-ablement service?

[Thanks and end]

Appendix 11: Intervention Case Study Examples

This appendix presents the four case studies. The first two illustrate participants who, from the perspective of the occupational therapist, proceeded well and adhered to the protocol. The second two did not receive the intervention as specified in the protocol and highlight such issues in delivering this.

Participant 013

Background & Assessment
This participant commenced with the re-ablement service having been discharged from hospital with reduced confidence to manage activities of daily living – particularly showering. The assessment indicated reduced balance and standing tolerance affecting her ability to shower safely and independently. The participant also had reduced confidence with outdoor mobility and was dependent on family members to take her out to visit the shops.

Goals
To be able to access shower cubicle safely and independently in order to undertake showering without assistance from support workers.
To be able to mobilise outdoors safely and independently using delta walking aid.

OT Programme
Six visits over five weeks.
The programme consisted of: the provision of shower-seating and rails; practising the shower transfer; practising showering using graded techniques (continued with support workers). Advice was also provided regarding kitchen activities and kitchen layout and one visit involved practising kitchen activities (although no goals were set in relation to this). An outdoor mobility assessment was completed with subsequent practice and advice.
Equipment provided: wall-fixed shower seat, grab rail.

Outcome
Participant resumed independent showering.
Participant began mobilising outdoors.
Participant was discharged from the re-ablement service to manage independently at home (no ongoing services). Participant was still managing independently without services at six-month follow up.

The above case study is an example of a case which worked well with the intervention being delivered according to the stages specified in the protocol and handover of activities to the support workers during the process.

Participant 021

Background
This participant was discharged from hospital with a re-ablement package for one call per day to assist with stripwashing and/or showering. However, the participant was predominantly independent with most activities of daily living and the support workers had minimal input. The assessment revealed that she was unable to access the overbath shower independently and safely due to reduced balance and range of movement. She had a bathboard in situ but she was unable to use this safely.

Goals
To be able to access the overbath shower safely and independently and to be able to shower without assistance from support workers.

Programme
Two visits and one review phone call over three weeks.
The intervention consisted of provision of alternative bathing equipment (swivel bather), teaching of an appropriate transfer technique (using the equipment) and practising the transfer. A plan was implemented for the participant to use the equipment and a telephone call confirmed she had used it independently, without difficulty.
Equipment provided: Swivel bather.

Outcome
Participant resumed independent showering within two days of the equipment being delivered. The re-ablement service discontinued. However, the participant had a subsequent event during the follow-up period and was receiving homecare assistance once per day at the final outcome point.

The above case study illustrates a case in which a brief and focussed intervention from the occupational therapist was able to remove the need for the homecare package. However, the participant's subsequent event is illustrative of the vulnerable and variable nature of the population group and that changes in their medical conditions can have a sudden impact upon the outcomes.

Participant 015

Background
This participant was male and lived with his wife who was providing support with all activities of daily living. The re-ablement package was set-up to support his wife and relieve the caring responsibility. The package was to provide assistance three times per week with showering.

Goals
To increase independence and safety whilst showering.

Programme
Five visits over seven weeks.
This participant was chronically unwell for 3 (60%) visits, complaining of tiredness and fatigue. On these visits no active treatment was provided. Advice was given regarding energy conservation and liaison was undertaken with district nurses regarding the management of pressure care and continence. Support and advice was provided to the participant's wife. On the fourth visit a full washing and dressing assessment was undertaken with the support worker present. Rails were provided in the shower and shower room. However, due to the care package being needed to provide ongoing support and respite for the wife, ongoing services were indicated.
Equipment provided: two grab rails in shower room.

Outcome
Participant was discharged with an ongoing homecare service for 3 visits a week to assist with showering. Participant died between the two week and three-month follow-up visits.

The above case study is an example of a case in which there were difficulties in delivering the occupational therapy. These difficulties were primarily related to the participant's underlying medical conditions, in that he was too unwell to participate in active treatment. This is evident by the timing of his death. Furthermore, the need for homecare was somewhat at odds with the 're-ablement ethos'. There was evidently a need to provide some support to allow the wife to continue undertaking her caring role – thus, preventing the need for other, more costly services, such as residential care. The participant may have had the potential to regain his ability to shower independently but he would have been likely to continue to seek and request assistance from his wife, which would have placed her under increasing strain. Therefore an ongoing care package was considered to be a judicious outcome.

Participant 016

Background
This participant was female and lived with her extended family. Her property was unsuited to her needs – the washing, toileting and sleeping facilities were upstairs and the property could not be adapted. She was already on the waiting list for a move to an alternative property due to longstanding disability issues. This move occurred during the re-ablement episode. The participant was unhappy at the new property: anxious and isolated. It was therefore not possible to work on ADL goals due to her preoccupation with her living situation.

Goals – (Set at beginning of episode before property move)
To be able to shower independently
To be able to mobilise outdoors independently and safely

Programme
It was not possible to implement a programme as, initially, the participant's house move was imminent and it was not practical to do so in the unsuitable property. In the new property she did not wish to work on a re-ablement programme. The occupational therapist provided advice and support in relation to the decision to undertake a further property move and assistance to arrange this move.
Equipment provided: Easy-reacher to assist with bending.

Outcome
Participant moved again to an alternative property where she reported being much happier and much less anxious.

The above case study is a further example of a case in which there were difficulties in delivering the occupational therapy intervention. These difficulties were due to the participant's living arrangements, unsuitable housing and social circumstances. The occupational therapist provided input in the form of advice and assistance, but this was not directly in relation to ADL goals. However, The Care Act (2014) emphasises that the suitability of a person's living accommodation is inextricably linked to their wellbeing. It is also likely that the move to suitable living accommodation was a contributing factor to her ability to carry out ADL and the improvements in her mental wellbeing. Furthermore her ability to access ADL facilities was much improved as she was not able to access these in the previous property.