



Preventing cold-related harm in older people: a qualitative exploration of domiciliary care

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**Preventing cold-related harm in older people: a
qualitative exploration of domiciliary care.**

Amanda-Jayne Stocks

A thesis submitted in partial fulfilment of the requirements of

Sheffield Hallam University

for the degree of Doctor of Professional Studies

30th July 2021

Candidate Declaration

I hereby declare that:

1. I have not been enrolled for another award of the University, or other academic or professional organisation, whilst undertaking my research degree.
2. None of the material contained in the thesis has been used in any other submission for an academic award.
3. I am aware of and understand the University's policy on plagiarism and certify that this thesis is my own work. The use of all published or other sources of material consulted have been properly and fully acknowledged.
4. The work undertaken towards the thesis has been conducted in accordance with the SHU Principles of Integrity in Research and the SHU Research Ethics Policy.
5. The word count of the thesis is 49,490

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Abstract

Illness and death caused by living in a cold home is a serious issue in England, and response has focused upon practical interventions which can neglect the moderating effect of individual contextual or behavioural influences.

People over 65 are vulnerable to cold and more are remaining at home, with help from domiciliary care services, as their care needs increase. Responding to a gap in the literature, this is the first study to examine how the domiciliary care system contributes to the prevention of cold-related harm in older people, and the influencing factors. The study used qualitative interviews and thematic analysis, underpinned by an interpretive constructionist epistemology, to explore the views and experiences of service commissioners (n=5), provider organisations (n=7) and direct care staff (n=10) within Yorkshire, England.

A paradox was found in which the opportunity to deliver interventions by the domiciliary care system was undermined by the system itself. Response to increasing demand and fewer resources meant less time to care and a focus upon task; reducing the care staffs' ability to run a dual agenda of care and prevention. National policy guidance to galvanise the prevention of cold-related harm within social care was not translating into commissioning practice; providing no incentive to deliver interventions or equip care staff with the knowledge and skills to do so. Regardless of these factors, some care staff reported delivering interventions that aimed to reduce the risk of harm in their clients. Importantly these were reported to go beyond the efficacy of practical interventions alone. The care staffs' actions appeared to be driven by individual behavioural influences and therefore individual staff response to risk was variable. As such, the study concludes that the outcomes of an older person at risk of cold-related harm, and in receipt of domiciliary care services, is currently a matter of chance.

Strength lies in the exploration of the domiciliary care system at both system and individual level. Thus, providing insight and understanding of the influences upon the system, and individuals within it, and ultimately the effect upon the prevention of cold-related harm. Notwithstanding sample and geographical limitations, the recommendations address what needs to happen if the opportunities presented by the domiciliary care system to prevent cold-related harm in older people are to be harnessed; including: how preventing cold-related harm can be incorporated into commissioning practice, how provider organisations can be encouraged to consider cold when delivering care and how care staff can be equipped with the knowledge, skills and motivation to do so.

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Glossary

In addition to the glossary below describing the meaning of words and phrases used within the thesis, I would like to clarify my use of four terms which are sometimes contested in the literature and often the subject of debate about their meaning and the inference this brings. The English language is complex and nuanced and finding terms that meet the approval of every reader is undoubtedly beyond my gift. So, I shall explain my use of these four terms below.

Firstly, I use the term **‘older people’** within the study for people who are over 65 years old. This is because the body of scientific literature and collation of excess winter deaths (EWD) and illness figures identify people over this age as being amongst the most vulnerable (Mercer 2003) and are the subject of this study.

Secondly, I use the term **‘frontline staff’** for staff who meet people face-to-face when delivering services to them in community settings or in their homes. I appreciate the use of ‘frontline’ infers a combative meaning to some, but I use this term to simply differentiate between staff directly delivering services to people and those, for example, who are health and social care managers.

Throughout this thesis, I use the term **‘cold-related harm’** to mean harm to health, or a detrimental effect upon health, caused by exposure to low indoor temperatures – such as living in a cold home.

Finally, I use the term **‘client’** to mean people receiving domiciliary care services. I appreciate this term has commercial inference. However, domiciliary care is a service provided, in the main, by private sector organisations. I use this term to reflect the language used by the study participants.

Clinical commissioning groups (CCG): were created following the Health and Social Care Act in 2012 and are clinically led statutory bodies responsible for the planning and commissioning of health care services in their local area.

Commissioning: process by which health and care services are planned, purchased and monitored.

Community services: health and care services delivered in a wide range of settings such as people's homes, community clinics, community centres and schools.

Constructionism: Meaning is constructed not discovered and meaning making of the world is constructed through interpersonal or social interactions.

Care Quality Commission (CQC): the independent regulator of health and social care in England.

Delayed transfers of care: occurs when a patient is ready to leave a hospital (or similar care provider) or step down to a less intensive level of care but cannot be discharged due to a lack of community-based care capacity.

Department of Health and Social Care (DHSC): formally known as The Department of Health, is the UK government department responsible for government policy on health and adult social care matters in England (along with a few elements of the same matters which are not otherwise devolved to the Scottish Government, Welsh Government or Northern Ireland Executive). It oversees the English National Health Service.

Domiciliary Care: a range of services to support an individual in their own home to maintain health, hygiene, dignity, safety and ease of living. The services may vary from individual to individual depending upon their care needs and could include providing personal care, medication or domestic tasks.

Fuel poverty: The condition of being unable to afford to keep one's home adequately heated. Formal definitions describe households as being in fuel poverty if they must spend a high proportion of their household income to keep their home at a reasonable temperature, and were they to spend that amount, they would be left with a residual income below the official poverty line.

Health and care system: all organisations, people and actions whose primary intent is to promote, restore or maintain health.

Health and wellbeing boards (H&WB): a statutory forum where political, clinical, professional and community leaders from across the health and care

system come together to improve the health and wellbeing of their local population and reduce health inequalities. These are now evolving into integrated care systems (see below) - a closer form of collaboration in which the NHS and local authorities take on greater responsibility for managing resources and performance.

Integrated care systems (ICS): take the lead in planning and commissioning care for their populations and providing system leadership. They bring together health providers and commissioners and local authorities to work in partnership in improving local health and care.

Interpretivism: a philosophical theory stating that interpretations of the social world are culturally derived and historically cited and that there are multiple realities.

Interventions: any activity undertaken with the objective of improving, or preventing the decline of, human health by preventing disease, harm to health or injury.

Local Authority (LA): an organisation officially responsible for a range of public services and facilities in a particular geographical area. For example, waste collection, planning and leisure facilities. In addition to public health responsibilities, local authority social services have statutory duties to provide welfare services such as residential accommodation for those needing care, because of age, illness or disability, which they cannot otherwise obtain.

National Health Service (NHS): provides health care for all UK citizens based on their need for medical care rather than their ability to pay for it.

National Institute for Health and Care Excellence (NICE): an organisation whose aim is to improve outcomes for people using health and other public health and social care services by producing evidence-based guidance and advice for health, public health and social care practitioners. They are generally known by the abbreviation NICE; derived from their former name: National Institute for Clinical Excellence.

Ofgem: the Office of Gas and Electricity Markets, a non-ministerial government department and independent national regulatory authority.

Organisational culture: refers to the way things are done in an organisation, written and unwritten rules influencing individual and group behaviour and attitudes.

Positivism: philosophical theory stating that genuine knowledge is exclusively derived from experience of natural phenomena and their properties and relations.

Public Health Outcomes Framework: sets out the broad range of opportunities to improve and protect health across the life course and reduce inequalities in health that persist.

Realism: philosophical theory stating that realities exist outside of the mind and are independent of human action and observation.

Urgent and emergency care services: medical services for individuals requiring urgent attention for illness or injury. They treat accidents and illnesses requiring urgent attention but not life threatening.

Welfare: the health, happiness, and fortunes of a person or group.

Welfare state: a range of government programmes providing financial or other aid to individuals or groups who cannot support themselves.

Wellbeing: a complex combination of a person's physical, mental, emotional and social health factors and strongly linked to happiness and life satisfaction.

CHAPTER 1: Introducing the nature and importance of the study

1.1 Introduction

Whilst working for the Department of Health at the National Social Marketing Centre, in the role of Regional Social Marketing Manager, I was involved in 'Keeping Warm in Later Life' or KWILLT (Tod et al 2012), a research project facilitated by Sheffield Hallam University. Prolonged exposure to cold temperatures can have a detrimental impact on health (Hajat 2017) and KWILLT aimed to shed light upon the factors influencing why some older people experienced prolonged exposure to cold temperatures caused by living in a cold home.

Some participants of KWILLT had domiciliary care service staff visiting their homes to deliver care services and, during an interview, a staff member explained that one client's home was always so cold that she did not remove her coat whilst visiting. This quote stopped me in my tracks somewhat and sparked question and debate amongst the project team and I about the role played by social care services to prevent cold-related harm within their clients. On reflection, I realise that my own family's experiences of living in a cold home provided a latent emotional interest in this issue, and combined with my professional experience and skills, this inspired me to explore what I could do to address the problem. This led to my research to answer the following question:

"Do domiciliary care services prevent cold-related harm to health in older people?"

It is important to note that whilst this thesis results from data collected several years ago, this is not an historical document. I wrote this thesis in the wake of Central Government austerity measures and reductions to LA funding which impacted most keenly within deprived communities (Beatty & Fothergill 2016). Reduced LA funding resulted in a detrimental impact on social care spending (see for example: Prince et al 2015, Barker 2014, Wenzel et al 2018) and the global COVID-19 pandemic has exposed the frailties of the current social care system (Hodgson et al 2020); in particular the stark health inequalities between

our most affluent and most deprived LA areas (Bambra et al 2020). This is evidenced in the unequal health and economic impacts of COVID-19 on the North of England, where this study is set, which experienced higher average rates of COVID-19 related mortality and financial hardship compared to the rest of England (Munford et al 2021). Compounding this is the unequal impact of welfare reform (Beatty and Fothergill 2016), an increasing cost of living and an unprecedented rise in domestic fuel prices pushing more households into fuel poverty (NEA 2022).

According to the Office of National Statistics (ONS) (2022), 43% of respondents in a national survey carried out in April 2022 reported finding it very or somewhat difficult to pay their fuel bills leading to several changes in behaviour in response to increasing domestic fuel costs including spending less on non-essentials (54%) and using less gas or electricity at home (45%).

The Resolution Foundation (2022) offered that the 1st of April 2022 heralded the start of the most acute part of a UK cost of living crisis, with a 54% overnight increase in energy bills (pushing a typical annual dual fuel bill up by £693 to £1,971 a year) coming alongside cost pressures in other parts of the economy. They outline how it is lower-income households who are disproportionately impacted by high energy costs, with four-in-five of England's poorest families set to face financial difficulties in paying domestic fuel bills by October 2022, compared with just one-in-fifty of those in the top income decile. The Resolution Foundation (2022) state that older people are more adversely affected in comparison to working age households with the heating bill of a typical over 60s couple reaching an average of £1,315 by winter 2022, more than double the average bills during 2021, and £180 higher than an equivalent working-age household.

Consequently, the numbers of those at risk of cold-related harm to health from living in a cold home, which I will discuss in greater detail below, are growing making my findings and recommendations increasingly significant.

This chapter introduces my study by describing the problems caused by prolonged exposure to cold temperatures and the link between cold homes and ill health. This is followed by an explanation of why older people are particularly

vulnerable to cold-related harm to health. Following a brief description of the social changes and policy direction leading to the greater demand for domiciliary care services, I offer the rationale for the importance of this research. The chapter ends with a brief overview of the thesis structure.

1.2 The link between prolonged exposure to cold temperatures, ill health and death

In 2009, the Chief Medical Officer for England stated that “*Winter kills*” (Department of Health 2009 p. 31) to emphasise the potentially serious health problems caused by prolonged exposure to cold temperatures and the surge in death rates that follows the onset of cold weather in England. This increase in death rates is seen after two days of prolonged weather when the mean outdoor temperature remains below 8°C (Katiyo et al 2018 p.14) and is marked by an escalation in the instances of cardiovascular illness (Roche 2010, Marmot 2010). This is followed by an increase in strokes, peaking after five days, and deaths from respiratory illness after twelve days (Public Health England 2013 p. 7). On average circa. 35,000 additional deaths occur in England in winter (Office of National Statistics 2020; using a rolling 5-year average as large fluctuations between years are common). The term additional deaths is used here as many people who die during, or shortly after, periods of cold weather were not expected to die at that time despite having existing morbidities. The term excess winter deaths is used to describe this phenomenon (Hajat & Gasparini 2016).

The ONS standard method to measure excess winter death defines the winter period as December to March and compares the number of deaths that occur in this period with the average number of deaths occurring in the preceding August to November and the following April to July (Office of National Statistics 2020). It is calculated simply as:

$$EWD = \text{Deaths in Dec to Mar} - \frac{(\text{Deaths in Aug to Nov} + \text{Deaths in Apr to Jul})}{2}$$

Although the number of annual excess winter deaths has fallen since records began over 70 years ago, this decline has flattened out and over the last 30

years the 5-year rolling average has remained at over 25,000 per annum (ONS 2020). Despite a range of policy responses, including a national Cold Weather Plan for England (CWP) (Katiyo et al 2018) and best practice guidance from NICE (2015) which I will detail in the following chapter, the rates of excess winter death have remained constant for several decades. This raises questions about the limitations of current approaches to tackling the issue. In 2018, The Chief Medical Officer for England noted that if the problem of excess winter death is not sufficiently addressed, the numbers will continue to remain high (Katiyo et al 2018) and in 2018 to 2019, the national number of excess winter deaths was 23,200.

Whilst the most recent data on excess winter death and morbidity has been skewed by the reporting of COVID-related deaths since 2020, the overall picture remains that of inequality and an unequal impact across more deprived areas in the North (Munford et al 2021). This is reflected in the figures with Yorkshire and The Humber having the highest excess winter death index in England at 16.5% (the difference between winter and non-winter deaths as a percentage) (ONS 2020)

The UK has the sixth highest rates of excess winter death, per head of population, out of 30 European countries (Guertler & Smith 2018). Some experience much colder winters than England, but many report lower rates of excess winter deaths (Analitis et al 2008), for example: Finland where rates of excess winter deaths per head of population are half England's (Liddell et al 2016) which Liddell et al (2016) refer to as the excess winter death paradox. Although causes of excess winter deaths can include external exposure to cold and seasonal viral infection, exposure to prolonged cold within the home is a significant risk factor (Wilkinson et al 2001). Significantly, in countries like Finland, both the people and their housing are better prepared for the cold and engaging in behaviours to keep warm at home are social norms (Liddell et al 2016, National Energy Action 2015, Marmot 2010).

1.3 The link between cold homes and ill health

The correlative links between housing conditions such as damp, mould, condensation, and poor health outcomes have been known for many years

(Geddes et al 2011), and a growing evidence base suggests that heating a home to adequate levels is a key factor in preventing cold-related harm (Park & Porteous 2019, Rudge and Gilchrest 2005). There has been some debate around the recommended minimum indoor temperature required to prevent cold-related harm. Following a review of the evidence, Public Health England (PHE) (Wookey et al 2014) revised the previous advice from the World Health Organisation, which was over 30 years old, and settled on advising people to heat their homes to at least 18 °C (65F) and ideally 21°C (70F) where older people live in the house (these are the recommended temperatures to prevent cold-related harm that will be referred to throughout this thesis).

For some people, spending the required amount to heat their homes to recommended levels leaves their residual income below the poverty line (GOV.UK 2022). This is referred to as fuel poverty and the UK Government sets out 3 factors that determine whether a household is fuel poor: household income, household energy requirements and fuel prices (ibid). In 2019, it was estimated that 13.4% of households (3.18 million) were in fuel poverty (GOV.UK 2022).

The charity Age UK estimates around 1 million older households (over 65) are in fuel poverty, representing 1 in 10 older households and a total of 1.4 million older people (Age UK 2022). Age UK warned that rising energy prices experienced in the winter of 2021/22 could push 150,000 additional older households into fuel poverty. The charity suggests those on low and/or fixed incomes are already extremely worried about fuel bills given that escalating inflation and, for some, welfare reforms were already placing a squeeze upon their finances. Age UK believe that behaviours such as turning the heating down and cutting back on food will be likely coping responses. The charity offers this presents a health risk to older people given that they find it harder than younger people to regulate their temperature and cold is particularly dangerous for those with pre-existing health conditions (Age UK 2022). Whilst some behaviour around heating is a matter of choice, which will be discussed further in Chapters 3 and 5, the current rise in cost of living and fuel prices, means that choice is being ever increasingly taken away from those with least

resources. The choice not to heat is not one made through volition, but by their circumstances.

Despite the growing evidence base around the impact of cold and poor health outcomes, Geddes et al (2011) estimates that up to 30% of excess winter deaths remain contributable to living in a cold home. Using the ONS five year rolling average for excess winter death (Office of National Statistics 2020), this suggests that circa 9,000 annual deaths are attributable to living in a cold home: a figure comparable to the numbers of people dying each year in England from breast or prostate cancer (Guertler & Smith 2018).

In addition to deaths, there is considerable reporting of how living in a cold home exacerbates existing illness costing society dearly in both financial terms and the suffering caused (see for example Marmot 2010, Boardman 2012, Thomson et al 2013, Maidment et al 2014, NICE 2015). As well as the detrimental impact cold homes have on individuals, the impact reaches far wider. Elliot et al (2008) and Roche (2010) estimate that, following a period of cold weather, accident and emergency and GP visits increase dramatically and for every excess winter death caused by living in a cold home, there are approximately eight hospital admissions and 100 General Practice (GP) consultations. In 2018, Burlinson et al estimated the cost to the NHS of cold-home related illness to be in the region of £1.3 billion (UK). This analysis does not include the 'knock on effect' upon demand and cost to social care services (Guertler & Smith 2018)

1.4 Older people and vulnerability to cold-related harm

Several groups within the UK population, including the very young and the homeless, have been identified as at risk of cold-related harm (Public Health England 2013, Marmot 2010). However, people over 65 (Mercer 2003) and particularly those over 75 years old, are high risk and considered amongst the most vulnerable (Hajat 2017).

Studies exploring the effect of cold temperatures on the human body are relatively plentiful (Morgan 1996) and the scientific explanations why older people may be more vulnerable to cold-related harm to health are

physiologically complex (Neno 2005, Timiras 2007). Day and Hitchings (2011) aid lay understanding by providing some simplified explanations. They offer that older people are more vulnerable partly because of an increased likelihood of suffering from pre-existing chronic illness; for example: respiratory illness which has been evidenced as an important modifier in further increasing the vulnerability to cold-related harm (McLafferty 2009, Department of Health 2009). Aging bodies also retain their core temperature less well than younger bodies because of a lower metabolic rate. This means they generate less heat internally. Due to a less effective vasoconstriction response, they are less able to re-direct blood from the skin to prevent heat loss and retain less heat because of a reduction in their levels of body fat. Day & Hitchings (2011) also offer indirect biology such as reduced mobility as a factor increasing risk of cold-related harm as this may increase the time older people spend inactive at home compared to more physically active people. In short, older and less mobile people, living in an inadequately heated home may be vulnerable to cold-related harm. This increased vulnerability is reflected in the statistics for excess winter death in the UK and in 2018/19 80% of excess winter death were in people over 75 years old (Office of National Statistics 2020).

1.5 Why this study matters

Several key factors are pertinent to and in combination illuminate the importance of this research.

The UK has a rapidly aging population which is testimony to the success of advances in medicine and Public Health (Stewart & Dhesi 2016). The percentage of older people, as part of the general population, is increasing. By 2050, it is estimated that one in four people in the UK will be 65 or over - an increase from one in five in 2020 (Office of National Statistics 2021 p. 6.1). Within this, the older-old, (those over 80 years old) are the fastest growing component of the UK population (Cangiano and Shutes 2010). Given that those over 65 are amongst the most vulnerable to cold-related harm, both the increasing numbers of older people, combined with the increased risk created by the socio-economic factors described above, are significant in terms of the number of people who may be at risk of exposure to cold in their homes.

Aging brings the increased prospect of co-morbidities. Age-related illness and the increased likelihood of living alone in older age, due to the loss of a partner, can necessitate the need for support from others to manage the tasks associated with daily living (Westwood and Daly 2016, Chung 2019). Future estimates suggest that that 8 out of 10 people aged 65 and over will need some care and support in their later life (Gov.UK 2012 p. 8) and there will be a 57% increase in adults over 65 needing care by 2038 compared with 2018 (National Audit Office 2021 p. 4). At present, care provided through informal means, such as family and friends, dwarfs that provided by the formal health and social care system (Murphie and McDougall 2018). However, Lewis and West (2014 p. 1) suggest that society is *'running out of daughters'* meaning that informal sources of care such as children providing care for aging parents, is declining. This decline, combined with the aging population, will result in further demands upon formal health and social care services (Pickard 2015). Between 2017 and 2019 most people (75%) receiving formal care services did so in their own home (Griffiths et al 2018, Murphie and McDougall 2018) and estimates suggest that by 2050 the current level of demand for domiciliary care services will have doubled (Prince et al 2015).

Over recent decades, the underpinning principle of health and social care policy ambition has increasingly focused upon preventative health interventions and *'keeping people at home and independent for as long as possible'* (Lloyd 2006 p. 1173). As such, delaying the need for hospital or residential care to protect health service capacity and manage the cost of state-funded care as demand rises (Westwood and Daly 2016, Park & Porteous 2019). In November 2018, the Department of Health and Social Care published *'Prevention is better than cure'* (Department of Health and Social Care 2018), a vision to put prevention at the heart of improving the nation's health and thus increasing healthy and independent life expectancy. In defining the aims and activities associated with prevention, the document sets out what prevention means and what is meant by the activity of prevention. This is the definition of prevention, and therefore preventative interventions, that will be used within this thesis:

- Prevention is about helping people stay healthy, happy and independent for as long as possible.

- Prevention means stopping problems from arising in the first place; focusing on keeping people healthy, not just treating them when they become ill.

(Adapted from Department of Health and Social Care 2018 p. 5)

The vision makes the case for prevention based on financial gains to the health and social care system and advocates that the responsibility for prevention should be wider than the remit of Public Health. The vision advocates that investment in preventive interventions is an investment in managing an escalating demand for future health and social care services by reducing need. Importantly, the vision recognises the opportunities presented by health and social care to deliver preventative interventions and that this should be an integral activity with the delivery of care.

“We know that prevention works. A review of international studies suggests that past investments in prevention have had a significant long-term social return on investment.”

(Department of Health and Social Care 2018 p. 5)

“Prevention is not solely the job of public health experts, social workers and community nurses - everyone working in the health and social care system has a role to play”.

(Department of Health and Social Care 2018 p. 15)

“The health and social care system should put prevention at the heart of everything it does”

(Department of Health and Social Care 2018 p. 27)

In summary, the importance of this study is a result of a combination of factors.

Older people (who are defined as over 65 for the purpose of this research) are amongst the most at risk of cold-related harm caused by living in a cold home. Within the UK, the population is aging. This means a greater % of people being over the age of 65. This in turn is leading to greater numbers of people living with the co-morbidities associated with increasing age. As a result, there are

greater demands upon the health and social care system and an increasing use of domiciliary care services to provide support to enable those needing care to remain at home. This projected increase in the need for social care comes with increased cost. The National Audit Office (2021 p. 4) estimates that by between 2021 and 2038, the cost of providing social care to adults will increase by 106%. The Association of Directors of Adult Social Services (ADASS) advocates that If society is to manage the demand for social care, then there needs to be an investment in *‘preventive approaches so that people are less at risk of increasing social care needs’* (ADASS 2020 p. 6). Whilst cold-related illness and deaths remain a significant problem within England, the Cold Weather Plan for England (2018) is clear that much could be prevented through simple interventions.

“...in many cases simple preventative action could avoid many of the deaths, illnesses and injuries associated with the cold.” (Katiyo et al 2018 p. 12)

I therefore offer that an exploration of how domiciliary care services are delivered to older people, how this contributes to the prevention of cold-related harm and how this can be maximised could contribute to preventing the harm to health that can result from living in a cold home.

1.6 Structure of the thesis

The thesis continues in the following chapters:

Chapter 2 - Provides the contextual setting for the study by describing the social care system in England and the recent policy response to cold homes.

Chapter 3 - Describes the approach used to review the current literature and presents the findings from the review. The chapter ends by presenting the research question.

Chapter 4 - Introduces the conceptual framework and the ontological and epistemological underpinnings for the study. Following this, the chapter sets out the research methodology and methods used.

Chapter 5 - Presents the research findings within two themes and five sub-themes.

Chapter 6 - Discusses the research findings and their implications.

Chapter 7 - Sets out the study strengths and limitations followed by a description of how reflexivity was used within this research.

Chapter 8 - Presents recommendations for policy and practice within the domiciliary care system.

Chapter 9 – Offers my final conclusions.

The references and appendices then follow.

CHAPTER 2: The contextual setting for the study

2.1 Introduction

The social care system and policy response to the prevention of cold-related harm are the environments in which the study is set and the context in which the findings, analysis and subsequent discussion are located. This chapter provides this background and is presented in two parts. The first section describes the social care system and the domiciliary care system in the UK; and the second provides a brief overview of recent UK policy response aiming to reduce the harm to health caused by living in a cold home.

2.2 Part 1: The social care system and the domiciliary care system

This section gives a brief overview of the social care system and the domiciliary care system by focussing on three areas of relevance to this study namely why and how social care differs from health care; how the delivery of social care is organised and delivered; and the form of the current social care sector in England.

Firstly, it is important to understand what is meant by social care and domiciliary care services within this thesis and introduce the key facts about how social care in England is organised and funded.

The term social care is used as 'shorthand' for care organised to support adults who need help with activities associated with daily living because of illness or disability (Burchardt et al 2020). Domiciliary care services are social care services provided within someone's home (Westwood & Daly 2016). The phrase 'social care system' is used to describe the structures, organisations, people and practices used to deliver social care.

The distinction between formal and informal care is important. The term formal care is used within this thesis to mean social care and informal care is generally defined as *'unpaid care provided to older and dependent persons by a person with whom they have a social relationship, such as spouse, parent, child, other*

relative, neighbour, friend or other non-kin' (Broese Van Groenou and de Boer 2016 p. 271).

Table 1 below sets out the organisation and funding of the present social care system in England.

Table 1 - Organisation and funding of social care in England

Type of Care	Key Features
Formal social care organised and/or paid for through Local Authorities	<p>Eligibility is determined by an assessment of need and a means-test.</p> <p>Most social care is organised and purchased by Local Authorities (LAs) from independent provider organisations. Some is provided by LA themselves or in the form of a direct payment to the person with needs with which to make their own arrangements.</p> <p>LA-arranged care is funded through a combination of local revenue collection, central government revenue, NHS funding and service user charges.</p>
Formal social care arranged and paid for privately	<p>Those not eligible for LA-funded care may arrange and pay for care themselves.</p> <p>In some cases, the care funded by a local authority for the person with needs, is 'topped-up' with private funds to buy supplementary or additional services or pay for a more expensive care home for instance</p>
Informal social care	<p>Unpaid care accounts for the largest share of all social care delivered in England (Burchardt et al 2020).</p> <p>Informal carers may receive some support and advice from LAs and some may be eligible for financial support through the Carers Allowance (Carers UK 2021)</p>

Whilst the above provides a simple descriptive definition of social care, adding the simple prefix of 'social' to 'care' creates complex meaning (Bowling 2014)

resulting from the knotty and multifaceted considerations of social policy, the provision of care and the role of the state in providing care (Glennerster & Glennerster 2007, Daly & Lewis 2000). This may appear an unnecessarily involved discussion, but the debate around what is social care is not purely an academic one and the impact is seen in UK social care policy, care delivery and notions which position social care within the UK's collective consciousness (Castles 2012). The resulting legacy is a boundary between health and social care and a division between what counts as health or social care. This all has implications upon which services are funded for individuals, what care people are entitled to, and ultimately, the care they receive (Glennerster & Glennerster 2007).

2.2.1 Development of social care systems in England

Although the boundaries between health and social care may be blurred and overlapping when considering the care needs of an individual, they are profoundly separated by fundamental questions about who is responsible for organising and delivering the care and who pays (Bernard & Phillips 1998, Glasby 2006, Prince et al 2015). Society's response to answering these questions has shaped the development of today's social care system. They are the manifestations of a contract between the state and its citizens in caring for those in need and have created the enduring boundaries and inequalities between health and social care (Barker 2014, Shardlow and Nelson 2005).

The NHS remains largely free at the point of use, yet social care is not only means-tested but also needs-tested (Barker 2014). The current system assumes that a distinction can be made between those who are sick and those who are frail, disabled or need support with the activities of daily living because of illness. Those who are deemed to have healthcare needs receive typically free at the point of use care from the NHS, whilst those deemed to have social care needs fall under the remit of LA social services and may be required to fund some or all of the cost of their care (ibid). The differences in eligibility between health and social care remains an exacerbating issue (Wenzel et al 2018) which creates inequalities and results in a lack of parity between health and social care for service users (Quilter-Pinner and Hochlaf 2019, Glasby 2006, Glasby 2017).

Many accounts describing the foundations of this divergence between health and social care begin with the Beveridge Report of 1942 and the subsequent 1948 National Assistance Act (Lowe 1998, Harrison 2009). However, history reveals plentiful evidence of how society's response to the questions 'who is responsible and who should pay?' has shaped welfare provision, including social care, for many centuries before this point (Quigley 1996, McIntosh 1988, Alcock et al 2008). The Poor Relief Act of 1601 created an early systematic approach to welfare provision. Responsibility was placed at local level within the community and the question of providing care for those with no means to pay, was settled by creating the enduring system of funding welfare through taxation (Alcock et al 2008).

Although the 1948 National Assistance Act was not the foundation for the divergence between health and social care in the UK, it was highly consequential in cementing this division and developing the contemporary health and social care systems because of two significant factors. Firstly, the Act separated responsibility for local welfare provision from national responsibility for social security (Fraser 2009, Pettinger 2017). Secondly, it reinforced the historical boundaries between health and social care leaving an enduring legacy which has impacted upon social care policy and funding and the position of social care within the public psyche today (Wanless et al 2006).

Following the introduction of the 1948 Act, healthcare, through the establishment of the NHS, was free at the point of use and available to all whilst social care was not and financial charges were applied. Responsibility for social care remained at local level under the remit of Local Authorities. However, responsibility would only be theirs if there were no informal mechanisms in place. Entitlement to social care was established through assessments and means testing to determine both eligibility and the level of any state financial contribution towards the cost of that care. Accounts from the time, when the 1948 Act was introduced, describe how NHS services came to be regarded as for all citizens, whereas the local authority provision of social care was not regarded in the same manner and was considered a residual option when there were no informal avenues of care (Wanless et al 2006).

Debate continues on how the 1948 Act contributed to the significance of gender in care. Whilst opinions are divided, the creation of the welfare state and other more recent policies, which aim to support women into the workplace, are critiqued around their role in positioning care, and its value, within our society (Glendinning and Kemp 2006). Lewis (in Glendinning and Kemp 2006 p12) suggests that whilst Beveridge's intention was to place informal care as a family responsibility, it affirmed societal notions of care being a female role. Beveridge defended his stance offering that in fact he was supporting women through "*extolling the value of a housewife as part of the marital team*" (Frazer 2009 p254). Frazer (2019) contends however that this enforces notions of care being a woman's' role. Later policy to bring women into the workplace has also focused on childcare and care for elderly relatives; again, supporting the construct of care as a female issue (ibid).

Over the last five decades the provision of social care has fluctuated, to a greater or lesser extent, between two models – the 'state and the market' (Hudson 2019 p. 414). The Seebohm Report (Seebohm 1968) brought a brief period of a predominantly state centric model with LAs being responsible for planning and delivering services. The years of Conservative rule following the 1979 general election were highly significant in shaping the current provision of social care. Social care systems of the time had come under savage attack for being cripplingly bureaucratic and taking up a disproportionately large chunk of the state's resources, for example in the escalating use of state funded residential care (Lowe 2005). The then Prime Minister, Mrs Thatcher, took this as a mandate to reform (Frazer 2009). A Green Paper 'Community Care: Agenda for Action' authored by Griffiths (1988), advocated that many problems facing the welfare state could be solved by applying the theory of managerialism and accountability (Leathard 2000, Enteman 1993). The recommendations within the paper built upon a growing notion within the 1980s that free market principles should be applied through greater use of private sector services within the public sector (McDonald 2006). This aimed to create cost savings, greater choice, flexibility of care services and raise standards through the impact of competition (The Audit Commission 1992). A fundamental principle maintained that care in the community must primarily be delivered through informal or third sector mechanisms and that the role of public

services should be to facilitate and support these systems of care (Wanless et al 2006, Westwood and Daly 2016). A commitment to enabling people to remain living in their own homes for as long as possible was regarded as delivering a better quality of life; but also key to ease the increasing concern about the future funding of health and social care considering the predicted increases in demand (Davies et al 2020c, Jasper et al 2019).

The ideas proved enticing (Xie et al 2014, McDonald 2006) and the recommendations were enacted in the NHS and Community Care Act 1990 (Legislation.Gov.UK 1990). This has resulted in an era of largely private sector provision alongside significant LA control of the purchasing of services, the fabled '*purchaser-provider split*' (Hudson 2019). LAs became the purchasers of care services rather than their previous primary role of providers of formal care through directly employed care staff (Bochel 2005, Hudson and Henwood 2002). The word commissioner rather than purchaser of care services began to appear in social care literature coming from Central Government to soften the language for those uncomfortable with the introduction of market-based approaches to care (Glennerster and Glennerster 2007). Over the following three decades the independent sector became dominant in providing social care. In the case of the domiciliary care system, only 5% of domiciliary care services were delivered by the independent sector in 1993; by 2012 this had grown to 89% (Hudson 2016 p. 8). This shift has, overtime, changed the structure and the dynamics of power in the sector. The '*marketisation*' of social care is the '*new normal*' (Hudson 2019 p. 2).

2.3 The current adult social care system in England

The move to a market-based approach has shaped several of the key features which characterise the present social care system, namely how care is organised and delivered. The provision of social care is fragmented both in the multiplicity of competing providers but also by who pays. Tightening eligibility for state-funded care means that the care market has become a complex mix of LA-funded and privately-funded clients. Whilst different perspectives are offered throughout the literature, citing problems of funding, workforce and a fragmented care provider market, there is almost unanimous agreement that the

current system is not working for those who commission, provide and receive care (Curry & Oung 2021, Hudson 2019).

2.3.1 Commissioning social care

For care commissioners, adopting the new systems required to become a large-scale care purchaser of care services following the 1990 Act posed a considerable challenge. Most adopted a system of block contracting to make the new administrative burden manageable enabling them to buy care services en masse rather than carrying out tender processes for every single package of care required (Lowe 2005). Providers wishing to provide care under the block contract arrangements are required to compete under commercial conditions and endeavour to create competitive advantage by using service differentiation variables such as price (Wyatt 2002). Despite the Audit Commission's predictions above (The Audit Commission 1992), critics suggest the reforms did not deliver the intended choice or flexibility for commissioner or service user and in fact created a social care sector that became fragmented with complex chains of commissioning, provision, and accountability (Murphie & McDougall 2018, Hudson 2016 & 2019).

More recently, the Care Act 2014 gave LAs in England broad duties around health and wellbeing, shifting the focus of service delivery to encompass a more preventative agenda. The Act placed greater emphasis on a more holistic approach to social care; one that is personalised and flexible enough to meet the individual care needs of those needing care services. Thus, encouraging improved health and wellbeing outcomes for service users. However, several factors presented barriers to achieving these aims.

Meeting the administrative burden of purchasing care on an individual basis for each service user would be insurmountable and some LAs moved from block contracts with care providers to overarching umbrella agreements. This creates a pool of pre-selected care providers who can then bid [compete] to deliver the care services required. This pre-determined group of providers is often called a provider framework (Crescent Purchasing Consortium 2019). Under this arrangement when an individual needs or requests care an assessment is carried out, usually by a social worker, to determine what care is needed, how

this will be provided and who will pay. Should the care then be funded and/or organised by the LA, the care requirements are circulated to framework providers. For domiciliary care services, this might include the number of daily visits required, the preferred visit times and the tasks to be completed within each visit. This highly task-based and time-specified approach to designing and contracting the delivery of domiciliary care services is known as the 'time and task' approach (Lewis & West 2014).

Once the details of the care requirements have been circulated to potential care providers, those who can deliver these requirements then bid for the contract which is commonly referred to as a package of care (Xie et al 2014). The individual needing care, and/or the social worker with ownership of the individual case, then chooses from those who respond which provider they would like to deliver the care. Again, this process has been heavily critiqued for undermining the ambition to deliver a more personalised approach to care by reducing the delivery of care '*to a function*' or a service product purchased within a system based upon the concept of marketised exchange (Curry & Oung 2021 p. 30).

Creating the provider framework is a lengthy tendering and procurement exercise governed by strict legal parameters and is usually only carried out every few years. Framework organisations remain under contract until a new framework is established or a break of contract agreement is reached or enforced by either party. Likewise, the contractual conditions specified at the time of establishment often remain in place throughout the life span of the framework. These can include the service specifications and the level of remuneration providers will receive in exchange for their services.

At this point I also mention the duty placed upon LAs within the Care Act 2014 to make direct payments to those eligible for local authority-financed care who wish to employ their own care staff (often referred to as personal assistants or PAs) rather than use the care services available through local authority frameworks (Westwood & Daly 2016, Griffiths et al 2018). However, personal assistants are currently unregulated, and little is known about these care staff (Newman et al 2008).

2.3.2 The UK social care market

There are currently an estimated 18,200 organisations providing adult social care in England (Skills for Care 2020 p. 27). The organisational types cover a wide spectrum ranging from large national multiple-based organisations (250 employees plus) to micro-organisations (less than 5 people) and individual self-employed care staff. For employees, the size of organisation they work for is polarised as organisations in the sector are likely to be either relatively small or very large. The majority (87%) of the organisations delivering social care are small to medium enterprises employing less than 50 staff (Skills for Care 2020 p. 25). However, a small number of large organisations, making up just 2% of the total number of organisations, employ between them nearly half the social care workforce (49%) (ibid).

The increasing numbers of people continuing to live in their own home, rather than move to residential settings when receiving care services, has created a shift in the type of provider organisations operating in the care market (Lewis & West 2014, Kearney 2018). Between 2009 and 2017, there was a 41% increase (200,000) in the total number of domiciliary care system jobs (Griffiths et al 2018). By 2020, 57% of social care organisations provided non-residential services (Skills for Care 2020 p. 25) and there were 1.52 million people working in social care by 2020 (equivalent to 1.6 million full-time jobs). This represents an increase of 130,000 jobs since 2012/13 (Skills for Care 2020 p. 24).

The social care sector is a significant employer in England employing slightly greater numbers of people than employed by the NHS at 1.2 million full-time equivalent jobs (NHS Digital 2020) and making social care one of the largest employers in the UK. A social care employee is likely to be female, white British and the average age of employees in social care was 44 years old in 2020 (Skills for Care 2020 p. 70). The gender balance is unrepresentative of the general population and is a highly-feminised employment sector (Yandle et al 2006) with 82% of workers being female (Skills for Care 2020 p. 70). This contrasts to the total % of females in the economically active population in England which stood at 47% in 2020 (ibid). As described above (2.2.1), the gender bias in care has historical roots stemming both from the consideration of care being a feminine role and welfare policy which has further entrenched this

notion (Yeandle et al 2006). Yeandle et al (2006) offer that this historical positioning, and the associated value attached to care, has led to care being regarded as a feminine role. Furthermore, one in which job occupants are poorly rewarded, both in terms of their pay and in terms of the social evaluation of the work they do (ibid).

Employment conditions within the social care sector, particularly within the domiciliary care system, are considered problematic (Cavendish 2013, Carr 2014) and the industry is characterised by low pay and insecure working conditions (Hudson 2016). Social care has been defined as a '*low paying industry*' since the first report published by The Low Pay Commission in 1998 (Low Pay Commission 1998). Government figures suggest that nearly half of staff within the sector were being paid below the UK National Living Wage in 2019 (Smith 2019). Although 89% of the total social care workforce in 2020 were on permanent employment contracts (50% being part time), 24% of the total did not have any fixed hours of work (Skills for Care 2020 p.40). The use of zero-hours contracts has attracted negative attention in both the popular media (Partington 2019, Halliday 2019), and at national policy level (Beattie 2016), as despite being employed by an organisation, staff on zero-hour contracts have no guaranteed income level. The percentage of those employed on zero-hour contracts within the social care sector increases substantially when direct domiciliary care service staff (as opposed to managerial or admin) staff are considered in isolation. Within this group, 42% report being employed on zero-hour contracts (Skills for Care 2020 p. 40).

NHS England's recommendations to Clinical Commissioning Groups make the link between care services and health outcomes for people needing care, stating that good outcomes in both health and wellbeing are dependent upon those who deliver and manage care services having the highest standards of practice (NHS England 2017). Yet, unlike social work and nursing for example, domiciliary care staff are not '*officially defined as professionals*' (Itua et al 2021 p. 2) and do not require formal registration or qualifications to deliver care services (McFarlane and McLean 2003). In 2020, 52% of social care staff held no formal social care qualification (Skills for Care 2020 p. 98). Across the social care sector care workers are the least experienced with a large proportion of the

workforce having less than 3 years' experience in the role (Skills for Care 2020 p. 58).

In the wake of the Francis Report Inquiry (Francis 2013, Report of the Mid Staffordshire NHS Foundation Trust Public Inquiry 2013) into Mid-Staffordshire NHS Foundation Trust, the then Secretary of State requested Camilla Cavendish to review what actions were required by Government and the sector to ensure that unregistered staff within the NHS and social care treat all patients and clients with care and compassion. Following recommendations from the report (Cavendish 2013), The Care Certificate was launched in 2015. The Certificate aims to provide a basic induction for the non-regulated workforce providing care or support but is not a legally-mandated requirement (Skills for Care 2020). Domiciliary care services report the highest level of engagement with the Certificate with 44% of care staff, who had started in their role since January 2015, having completed the certificate (Skills for Care 2020 p. 97). However, this leaves 56% of staff delivering care either having not started the Certificate or having not completed it. The Certificate is self-assessed in the workplace by providers themselves. This raises questions about the uniformity and standard of this training and the Certificate's efficacy in providing care staff the knowledge they need. Indeed, a simple Google internet search reveals several sites providing ready-made answers for care staff to copy from pre-completed workbooks (Gompel 2019).

Despite the low levels of formal qualifications or engagement with the Care Certificate, this is not to say that staff have not completed some form of training. It is estimated that of those without a recognised qualification in social care, 77% had received some form of induction training (Skills for Care 2020 p. 102). The most common areas of training provision reported in 2020 being statutory requirements including moving and handling (76%), health and safety at work (62%) and safeguarding adults (72%) (Skills for Care 2020 p. 100).

2.3.3 Sustainability of the social care system

The literature provides a growing consensus that the social care system is fragile and faces major challenges threatening its sustainability and ability to meet the demand for care. Much of the current discussion pertaining to these

challenges is dominated by the issues of funding and workforce (see for example Lewis & Glennister 1996, Westwood & Daly 2016, ADASS 2019).

Social care is the largest single area of expenditure with LA budgets accounting for 43% of main service area expenditure and costing an estimated £22.2 billion per annum nationally (Kings Fund 2021). The Local Government Association (2018) predicted that adult social care services in the UK will face a funding gap of £5.5 billion by 2025 and some estimates predict that the cost of meeting social care needs will increase by over 300% in real terms by 2041 (Comas-Herrera et al 2006). Yet between 2010/11 and 2015/16, Central Government funding to local authorities was cut, following difficult economic conditions in the UK, by 37% in real terms; a total reduction of £7 billion since 2010 (ADASS 2019). Although LA budgets were being reduced, the NHS remained relatively protected from funding cuts during this time (Quilter-Pinner and Holchaf 2019). The Government made a commitment in 2017 for a Green Paper on the future funding of social care. However, this has been severely delayed which has been blamed on the impact of Brexit negotiations (Jarrett 2019) and more recently, the management of the COVID-19 pandemic in 2020.

The austerity which reduced LA budgets has resulted in a widening gap between publicly funded social care and care need. Between 2009/10 and 2013/14 services became increasingly focused on those with the most '*intense*' needs and the numbers of people receiving LA organised/funded care fell by a quarter (Burchardt et al 2020 p. 3). The result was intensified demand upon informal care and increasing levels of unmet care needs (ibid). Funding is concentrated on those with the lowest income and without assets who receive care if their care needs meet increasingly stringent eligibility criteria. Above this low threshold, the means-tested nature of publicly funded care means that those with modest income and assets who have long, or intense periods of care needs, will also experience the cost of funding their own care (Burchardt et al 2020).

The nature of private-sector social care provision means that the market is driven by the forces of profit and market share and organisations are answerable to a complex set of players including creditors, investors, shareholder and banks (Hudson 2019). This creates a mismatch between the

market forces driving the private sector and the austerity measures dominating the public sector. For some providers operating a traditional business model epitomised by funding leveraged from debt and thus requiring a significant return on investment (ROI) has resulted in failure; for example: Southern Cross went into administration in 2011 having previously held a 9% market share in the UK. These issues create considerable problems for those needing care, and creates difficulties for LAs in maintaining meaningful engagement with providers which, in turn, has implications upon the commissioners' ability to manage the local care market (Curry and Oung 2021, Davies et al 2020b).

Maintaining a workforce is also a significant problem for the social care sector. The difficulties faced in recruiting and retaining staff are well reported (see for example, Cavendish 2013, CQC 2018, United Kingdom Home Care Association (UKHCA) 2018, Trigg 2018) and it has been estimated that the turnover rate [% of overall staff leaving their role within the period of 1 year] within direct domiciliary care service staff is circa 39%. This means that on average, around four in ten domiciliary care service staff leave their role within a 12-month period (Skills for Care 2020 p. 51). Rates have increased steadily by 10.2% between 2012/13 and 2019/20 (Skills for Care 2020 p. 52). Bennet et al (2018) describe this as a 'significant challenge' for the sector noting the poor pay, lone working (isolation) and lack of job stability (zero-hour contracts of employment) as contributory factors. Bennet et al (2018) also offer societal perceptions of care work being low paid, offering low self-esteem and lack of career progression as problematic making social care an unattractive career option and further fuelling the recruitment and retention issues experienced by the sector.

Vacancies within the adult social care sector were estimated to average at 7.3% of the total roles available, meaning there were approximately 112,000 vacancies at any one time in 2019/20 (Skills for Care 2020 p. 61). The domiciliary care system had the highest vacancy rate in care service type with an overall vacancy rate of 9% (ibid p. 63). Although turnover rates within the sector are high, not all leavers leave the care sector and employers report that a high percentage, circa 67% in 2018 (Griffiths et al 2018) of new starters were recruited from within the sector itself. This suggests that switching roles within

the sector is common and likely made easy due to the high number of vacancies.

The above section has described UK social care as one aspect of the contextual setting. The next section will now give a brief overview of the policy response to the prevention of cold-related harm to health caused by living in a cold home.

2.4 Part 2: Policy response to cold homes

1995 marked a formal response to the problem of cold-related harm caused by living in a cold home through the formation of the All-Party Parliamentary Warm Homes Group (National Energy Action 2015). In 1997 the Winter Fuel Payment (WFP) was introduced which remains in place today. This provides a non-means tested, tax-free automatic annual cash payment into the bank accounts of everyone of state pensionable age (Goodwin 2007, Lloyd 2013, Stewart & Dhesi 2016). An extension of this makes additional payments to eligible households during periods of extreme cold weather. However, this is determined by the receipt of certain other welfare benefits.

In 1999, the newly-established Inter-Ministerial Group on Fuel Poverty examined policy response and initiatives that had a bearing on fuel poverty (Jones 2001). Households are described as being in fuel poverty if they have difficulty keeping their homes warm because the cost of this is outside their financial means (National Energy Action 2015). Following the review, The Warm Homes and Energy Conservation Act became law. This required the Government to take a strategic approach to eliminate fuel poverty in the UK over the following 15 years. Warm Front was launched with the specific intention of reducing fuel poverty by providing funding to support fuel poor households with improvements to home heating and loft insulation (ibid).

In 2001, amid growing concern about the condition of social housing, The Decent Homes Standard was introduced which included the requirement for LAs to make modest energy efficiency improvements to their housing stock (National Energy Action 2015, UK Parliament 2010). People who lived in privately-rented homes were not covered by this standard, and in 2004 the

Housing, Health and Safety Rating System provided enforcement powers to LAs to identify and protect against potential health risks from deficiencies in privately rented dwellings through enforcement action. This includes mould, damp, condensation and inadequate or broken heating systems. The system rates excessive cold as a Category 1 hazard [most serious and needing urgent rectification] (GOV.UK 2019).

More recently, policy focus has shifted amid growing concerns about the impact of carbon emissions on global warming and new energy efficiency legislation aimed to reduce the use of fossil fuels has been introduced. In 2005, a Carbon Emissions Reduction Target was placed upon domestic energy suppliers and in 2008 this was extended to include energy generators under the Community Energy Saving Programme (National Energy Action 2015). This required energy companies to install efficiency measures into households in deprived areas and establish partnerships with councils and voluntary organisations to support households which were vulnerable to fuel poverty.

In 2010 Warm Front was closed. This effectively ended the publicly-funded energy efficiency grants that had been in place for low-income households. The Carbon Emissions Reduction Target and Community Energy Saving Programme were also ended and replaced by the Energy Company Obligation; a government scheme aiming to reduce carbon emissions and reduce fuel poverty (Ofgem 2020). This included a Home Heating Cost Reduction Obligation which was intended to replace the gap left by Warm Front through the energy suppliers' subsidisation of energy efficiency improvements to households in deprived areas (National Energy Action 2015). A further requirement upon electricity suppliers was also introduced. The Warm Homes Discount compels suppliers to provide a rebate (£140 in 2020) on the electricity bills of a core group of low-income pensioners and a broader group of low-income households (GOV.UK 2020). Whilst the core group are defined by statute and receive the discount automatically through a data-matching exercise with the Department of Work and Pensions, the wider group is at the discretion of the individual energy supplier (Lloyd 2013).

The first Cold Weather Plan for England was published in 2011 (Department of Health 2011). This was a significant Government document which aimed to

tackle cold-related harm to health by providing best practice guidance to initiate cold weather preparedness and deliver preventive interventions at local community level. The plan is broken down into actions at five levels starting from year-round planning, actions to take during periods of cold weather and increasingly bad weather, to a situation where the weather is so severe that a major incident at national level is declared. Each level has detailed action cards recommending steps to be taken by those commissioning and delivering health and social care services. The plan is underpinned by a system of Met Office cold weather alerts which the Cold Weather Plan advises should be cascaded throughout the health and social care system (Heffernan et al 2018, Katiyo et al 2018, Lloyd 2013). The launch of the first Cold Weather Plan was also accompanied by the Warm Homes Healthy People Fund which the Government made available to support the plan's implementation at local health and social care system level (Lloyd 2013).

Although the Cold Weather Plan is updated almost every year, the content has remained broadly similar with only minor amendments reflecting updated scientific evidence, new interventions programmes and changes to the structure of the health and social care system. Of significance in the 2014 plan (Bone et al 2014) was the introduction of 'Make Every Contact Count'. This initiative encourages frontline staff delivering care to use their time with clients to provide them with advice and support to keep warm and well. This was an important change as it formalised the role and responsibility of frontline staff in preventive interventions and highlighted the route by which national initiatives can be translated to individual level through the actions of staff providing care.

Shortly after the first Cold Weather Plan was published, the Green Deal loan scheme was introduced. This enabled households to borrow the cost of energy efficiency improvements from a government loan company and repay the debt, with interest, through a levy added to the household's electricity bills. The initiative proved very unpopular with the public and the programme was later scrapped having only completed 15,000 'Green Deals' out of a target of 1 million.

In 2012, The Health and Social Care Act (legislation.gov.uk 2018) created Health and Wellbeing Boards representing health, housing, and social care to

deliver an integrated approach to reducing health inequalities and improving local population health outcomes. The Public Health Outcomes Framework was introduced to influence the priorities of the Health and Wellbeing Boards and support preventive interventions and one priority within the framework is to reduce excess winter death (Bennet et al 2016). The National Institute for Health and Care Excellence (NICE) published its guideline document 'Guidance on Excess Winter Deaths, Cold-Related Morbidity and The Health Risks Associated with Cold Homes in 2015 (NICE 2015). The guidance makes twelve recommendations to prevent cold-related harm, including the identification of those at risk and ensuring that adequate home warmth is specified within plans for people receiving care at home. Five recommendations target local system-level policy makers, for example Health and Wellbeing Boards and three target social care providers and their frontline staff. Like the Cold Weather Plan (Katiyo et al 2018), the NICE Guidance (2015) suggests that frontline health and social care staff use time with their clients to assess their risk and provide opportunistic interventions such as advice or referral into interventions where appropriate. The guidance is also plain in recommending that all frontline staff receive the training required to deliver these types of interventions and that this training should be included in the professional standards within the health and social care sector.

In 2015 Ofgem, the energy regulator, imposed a £10.5m fine upon the energy company SSE for misselling gas and electricity. The fine was the largest ever against a supplier, and the monies were used to fund a national intervention called the Warm at Home Programme (Bennet et al 2016). The programme was managed by a national charity on behalf of Ofgem, and the funds were distributed through an existing network of home improvement agency project leads across 183 council areas.

In October 2018, the Government launched a new version of the Energy Company Obligation (GOV.UK 2018). Within the new scheme, only low-income, vulnerable and fuel poor households in receipt of specific benefits are eligible. However, it is important to note that eligibility for Energy Company Obligation does not necessarily mean that an energy supplier, or installer, will

decide to install an energy efficiency measure in home of the eligible person (Ofgem 2020).

In December 2021 wholesale UK gas market prices hit a new all-time high of £4.70 (UK) per therm; circa nine times higher than the same time in 2020. The rise was attributed to cold weather increasing demand while Russian gas supplies to Europe fell (The Lords Library 2022). On Wednesday 2nd February 2022, the Government announced the 'heat now and pay later' plan which effectively loaned £200 to every household which will be re-couped by the government through the following years energy bills (National Energy Action 2022). As described in Section 1.1 above, rising fuel prices and wider economic pressure has led to an acute cost of living crisis disproportionately affecting the most deprived and older households the most (Resolution Foundation 2022). The ONS (2022) suggests that in response, the most adversely affected households are changing behaviour and cutting their electricity and gas to make ends meet.

This chapter has provided background and context to the study. The following chapter will provide, using a review of the literature, an in-depth analysis of the current state of knowledge in relation to the domiciliary care system and the prevention of cold-related harm in older people through examination of the interventions aimed at preventing cold-related harm caused by cold homes.

CHAPTER 3: A review of the literature

3.1 Introduction

This chapter begins by describing the approach taken to reviewing the literature. The second part of the chapter reports the findings from the review, and finally presents the research question addressed by this study.

3.2 Review approach

This review explored and developed an understanding of the current state of knowledge about prevention of cold-related harm to health within the domiciliary care system. Thus, providing research inspiration and direction (Thistoll et al 2016, Wertz 2011). A review of literature was first undertaken in January 2014. It was re-run in January 2020 to update the results and aid analysis and contextualisation of the study findings. The results presented below represent the updated findings.

A scoping review was identified as the most appropriate approach being well-suited to literature reviews where the body of literature may be large, heterogeneous, complex and derived from several sources including grey literature or policy documentation (Papaioannou et al 2010, Porritt et al 2014). Although scoping reviews are broader and more inclusive than a systematic review, the same systematic, transparent, and rigorous methods were applied and documented at each stage of the process to promote clarity, validity, and replicability (Levac et al 2010, Aveyard 2014). To ensure methodological rigour, I developed a stepwise approach for searching electronic databases. This was informed by the Centre for Reviews and Dissemination guidance (Khan et al 2001) and worked up examples from the methodological literature (Arksey & O'Malley 2005, Boland et al 2017). The steps followed were:

1. Identifying relevant studies using search terms.
2. Removing duplicates and screening the remainder at title and abstract level.

3. Obtaining and screening full text papers against inclusion and exclusion criteria
4. Quality assessment.
5. Data extraction.
6. Analysis and synthesis.
7. Reporting the findings.

To prepare for the literature review, an information specialist from Sheffield Hallam University and I carried out some preliminary electronic database searches to explore the potential quantity and scope of the literature regarding the domiciliary care system and the prevention of cold-related harm. Of significance was that these searches identified no studies that specifically focused upon the domiciliary care system and the prevention of cold-related harm and identified a clear knowledge gap (Appendix 1). Consequently, I made the decision to include all interventions aiming to prevent excess winter death or cold-related harm to health in a domiciliary setting. By using this broader scope to address the review question below, the literature was explored by examining how interventions aimed to prevent cold-related harm to health and the factors determining their success. Most importantly, this approach allowed me to shed light upon if, and how, the domiciliary care system was involved.

3.3 The review question

‘What interventions exist that are designed to reduce cold-related harm and/or excess winter deaths, how effective are they and what influences their effectiveness?’

The review’s objectives were:

- To establish what interventions exist, and how they aim to reduce excess winter death and/or cold-related harm.
- To provide a critical assessment of the intervention’s effectiveness in reducing excess winter deaths and/or cold-related harm to health and what are the factors influencing effectiveness.

- To establish where the domiciliary care system has contributed to interventions designed to reduce excess winter deaths and/or cold-related harm to health and critically assess that contribution.

3.4 Search strategy

The 'PICO(S)' model provides a useful tool for asking focussed questions that aid the development of search strands regarding health interventions within qualitative research where a systematic review is not the aim (Methley et al 2014, Higgins and Green 2011). The table below details how the 'PICO (S)' model was adapted for the present literature review by using the 'PIO' elements of the model to create search words and phrases through discussions with SHU information specialists and by using the database thesaurus and MeSH (Medical Subject Headings; a thesaurus of controlled and hierarchically organised vocabulary produced by the National Library of Medicine). Words were entered into search strings using the appropriate syntax for each academic database. * indicates use of truncation for multiple ending searches where appropriate.

Table 2 - The search words and phrases used to search electronic databases

Search strand	Search words and phrases
Population	'old', 'aged', 'geriatric', old* people', 'old* person', 'elderly people', 'elderly person*', 'age* person*', 'age* people', 'geriatric people' 'geriatric person*' 'vulnerable people', 'vulnerable groups'
Interventions	'Social care', 'social services, 'commissioning', 'care services', 'domiciliary', 'domiciliary care', 'home care', 'home help', 'provider*', 'organi?ation*', 'compan*', 'carer*', 'care assistant*', 'personal assistant*', 'care worker*', 'home carer*', 'care staff'
Outcomes	'prevention', 'intervention*', 'cold*', 'cold weather', 'cold temperatures', 'cold home*' 'extreme temperature', 'low temperature', 'seasonal mortality', 'seasonal deaths', 'seasonal illness', 'winter mortality', 'winter deaths', 'winter illness', 'excess winter death', 'EWM', 'EWD'

The electronic databases utilised were Scopus, CINAHL, MEDLINE, PsycINFO and Social Care Online. Each database was searched using the search words and phrases in Table 2 and using the appropriate syntax for each. Boolean operators 'NOT', 'AND' and 'OR' were used to combine search strings and truncation using * was used at word ends to allow for all possible endings where database protocol permitted. The searches can be found in Appendix 2.

Incremental searches involved three techniques. I carried out a series of hand searches using author, citation chaining and reference searches as key authors and papers were identified from the database searches (Wong et al 2004, Papaioannou et al 2010). In addition, I contacted four prominent authors for informal discussions to confirm I had not overlooked any relevant papers. Finally, I searched the grey literature using professional, third sector and industry websites and government databases in line with guidance developed by Arksey & O'Malley (2005).

After removing duplicates, I screened the search results at title and abstract level against the inclusion criteria in Table 3. below. The inclusion and exclusion criteria reflect the PICO(S) model utilised by Boland et al (2017 p. 51) and aimed to ensure a rich, varied, yet focused data set by which to answer the review question. I also considered the publication date of papers, the types of paper (for example, primary research or discussion) and the publication language. Following initial screening, I obtained the remaining papers in full text and further screened them for eligibility against the inclusion and exclusion criteria.

The table below sets out the criteria applied and the rationale for each decision.

Table 3 - The inclusion and exclusion criteria for the literature review papers.

Inclusion criteria	Rationale
Interventions that aimed to prevent excess winter death or cold-related harm caused by living in a cold home	Focus of the study

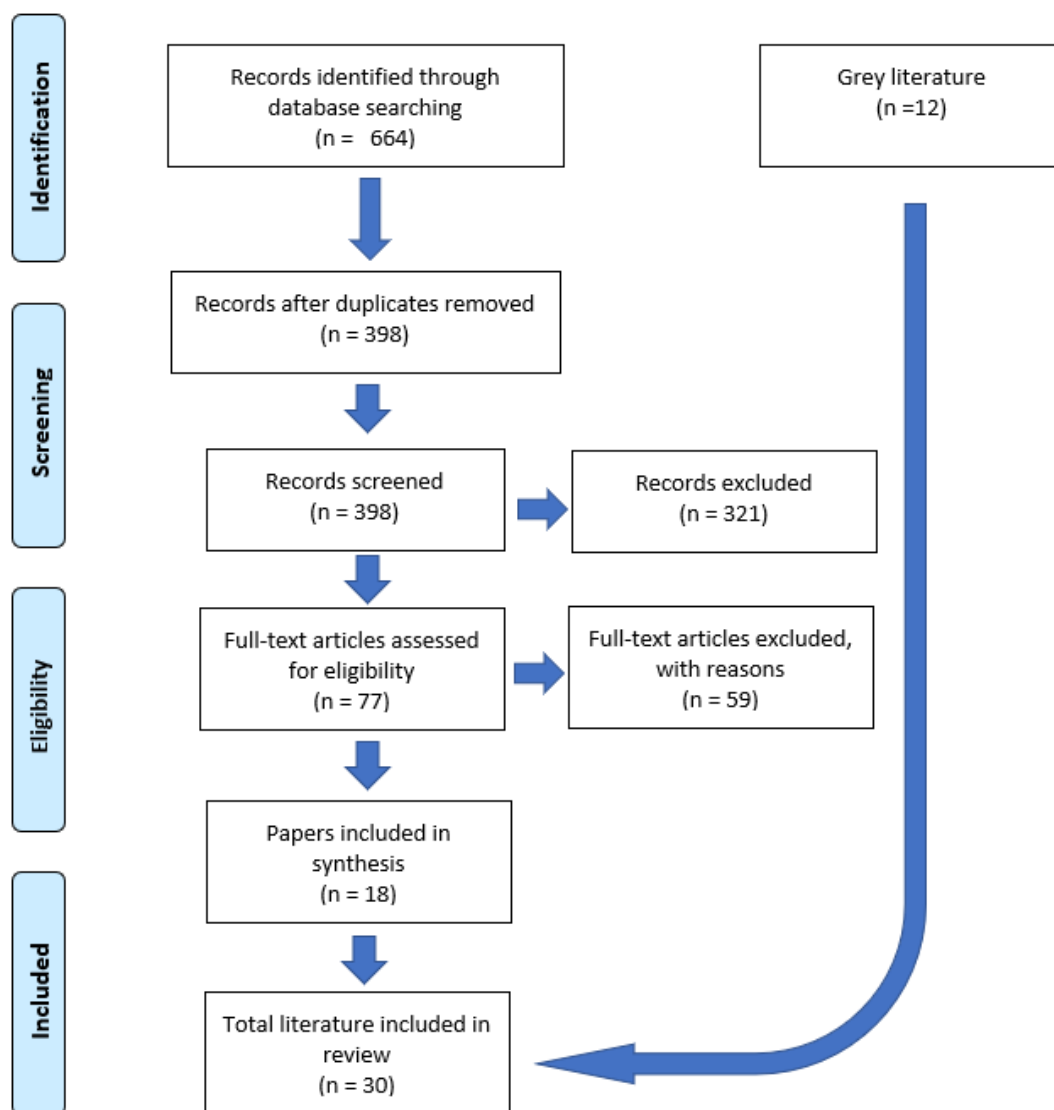
Papers focussing on, or including, people 65 years and over in the participants. Or papers which state the term 'older people'.	Focus of the study
All primary research papers, journal articles, discussion papers, grey literature (based on expert opinion) and policy documents.	To facilitate a credible, broad and comprehensive evidence review
Published between January 2005 and January 2020.	To ensure inclusion of large and significant interventions programmes to improve the thermal efficiency of homes stemming from national policy initiatives.

Exclusion criteria	Rationale
Concerned with causes of excess winter death or cold-related harm that are not related to cold in the home (for example deaths from flu, falls outside the home, external exposure to cold).	Not applicable to review question
Intervention(s) not delivered in a community or home setting	Not applicable to review question
Papers from countries where formal social care systems do not exist to deliver care in the home to older people.	To exclude papers where findings are not comparable to the UK
Non-English language.	No access to translation

3.5 Search results

The PRISMA diagram in Figure 1 below illustrates the results of the literature search.

Figure 1 - PRISMA diagram



3.6 Quality assessments

I applied several quality assurance tools to the review findings: each appropriate for the research method or paper type.

Table 4 - Quality assessment tools used to review literature search results

Paper type	Quality assessment tool used
Quantitative	National Institute for Clinical Excellence: Quality Appraisal Checklist – Quantitative Interventions Studies (NICE 2012)
Qualitative	Critical Appraisals Skills Programme – Qualitative Research Checklist. (CASP 2018)
Mixed Methods	McGill University’s Mixed Methods Appraisal Tool (MMAT) (Hong et al 2018)
Grey Literature, reports, policy guidance and discussion papers.	Guidance adapted from Hek and Langton (2000), Wooliams et al (2011), Fink (2019), Jesson, Matheson & Lacey (2011).

The quality assessment tools above were not used to determine inclusion or exclusion on judgements of quality alone. Instead, and as is the norm in scoping reviews, the tools provided a consistent and robust approach that enabled critique and judgment of the results and findings in terms of their meaningfulness and validity in respect to the review question (Boland et al 2017).

Examples of the completed quality assessment for each evidence type can be found in Appendix 4. I tabulated the quality assessment results which can be found in Appendix 5. This further aided comparison, critique and synthesis of the papers in respect to the findings of the review. The findings from the quality assessment of the papers are presented below (3.9).

3.7 Data extraction and synthesis

To aid familiarisation with the papers, I read each paper several times prior to data extraction and made notes about the analytical and descriptive data directly onto the hard copy. Following this, I used a data extraction form to collate the data. I created the form using examples from Arksey & O’Malley (2005) and Boland et al (2017) and included headings that were relevant to the review question for example, intervention type, aim, metrics of success and any

contribution by the domiciliary care system as well as details pertaining to the research approach where relevant. See Appendix 6 and 7 for both the full data extraction forms and a summary data extraction table.

I mapped the data onto a findings matrix I adapted from examples used within systematic reviews (Boland et al 2017, Higgins & Green 2011). The analysis and aggregation of the data in this manner helped me to translate the findings and refine the themes identified across the data. This provided illumination upon the review question by deriving greater meaning than the individual pieces of evidence alone could offer (Boland et al 2017).

The findings matrix can be found in Appendix 8.

3.8 Findings from the quality assessment of papers

The 18 empirical research papers were from a mixed evidence base comprised of five quantitative research papers, five qualitative research papers and eight using a mixed methods approach. 16 studies were conducted in the UK, with the other two from Australia and New Zealand. Five studies included in the review employed rigorous quantitative and statistical methodological approaches which were well documented. Only one (Grey et al 2017), partially met several of the criteria which was due to a high dropout rate. All five qualitative studies and the eight mixed methods studies were transparent in research approach. Overall, there was a lack of reporting of bias within the qualitative and mixed methods.

The grey literature examined was of good quality and comprised of policy documentation or the opinion of experts whose authorship was considered credible through their role and professional experience.

3.9 Review findings

Table 5 below provides an overview of the three themes, and their sub-themes, identified from the review. The next section presents each theme and sub-theme in turn.

Table 5 - The thematic findings of the literature review

Theme	Sub-themes
1. Ensuring the health and social care system can deliver interventions to reduce cold-related harm to health.	<p>1.1 Best practice guidance</p> <p>1.2 Identifying those at risk of cold-related harm to health.</p>
2. Tackling cold in the home.	<p>2.1 Improving the energy efficiency of homes</p> <p>2.2 Reducing the cost of domestic fuel</p> <p>2.3 Providing personal practical resources</p>
3. Raising awareness and knowledge of cold-related harm to health and providing advice on keeping warm.	<p>3.1 Interventions aimed at health and social care staff</p> <p>3.2 Interventions aimed at the public</p>

3.9.1 Theme 1: Ensuring the health and social care system can deliver interventions designed to reduce cold-related harm to health

Four papers examined interventions that aimed to tackle cold-related harm and excess winter death by galvanising the health and social care system into supporting people at risk during cold weather. This was approached in two ways: firstly, by proving best practice guidance and secondly, by identifying those at risk of cold-related harm; this being a pre-requisite to interventions.

3.9.1.1 1.1 Best practice guidance

The annual Cold Weather Plan for England (Katiyo et al 2018) and the NICE Guidance on The Prevention of Excess Winter Death (NICE 2015) were significant national policy responses to the problem of cold-related harm. Both offer best practice guidance encouraging the health and social care system, including LA commissioners, care providers and care staff, to be prepared for cold weather and take action to protect those they care for. Two papers examined the implementation of the Cold Weather Plan, and a third paper

investigated the influence of NICE guidance upon local decision-making systems and processes.

Heffernan et al (2018) used semi-structured interviews to seek the views and experiences of a purposive sample of local health and social care managers (n=52) involved in delivering the Cold Weather Plan across 10 LAs in England. All participants reported that the plan had served as a catalyst, increasing preparedness for cold weather in their area because of the formal recognition of the harm to health caused by cold. As such, the plan had established a legitimate basis for joint planning and preparedness across local areas. However, participants in the Heffernan et al (2018) study reported that responsibility for overall delivery of the plan appeared to have been a '*hot potato*' with most of the loci of responsibility falling under the remit of the LA emergency planning departments.

Within their study, Heffernan et al (2018) found universal recognition amongst participants of the ideally positioned, and potentially pivotal, role of the domiciliary care system in identifying those vulnerable to cold-related harm and delivering preventative interventions; actions for the domiciliary care system which are outlined within the Cold Weather Plan. However, Heffernan et al (2018) reported that the commissioners within their study made assumptions about the preventive interventions that were being delivered by social care providers and had no mechanisms in place to establish if care providers and staff were carrying out the preventive interventions prescribed by the Cold Weather Plan.

The launch of the Cold Weather Plan was accompanied by the Warm Homes Healthy People Fund to support delivery of the plan at local level. Madden et al (2014) examined how the fund had been utilised at local levels using a mixed methods study with project leads across England. The study employed an online survey (n=101), analysis of 42 local project evaluation reports and qualitative interviews with a purposive sample of 15 project leads. The study participants reported that overall, the fund had been a useful and well-received adjunct to the Cold Weather Plan which had aided partnership working by reducing some of the bureaucratic barriers which are normally created as partners debate 'who is going to pay' for interventions. As a result of the

funding, circa 200k people in England received practical interventions such as heating repairs and insulation upgrades.

Madden et al (2014) found that within the study participants, their efforts to identify people at risk of cold-related harm and deliver interventions, had been hampered by barriers to data sharing created by organisational boundaries and differing data management policies. Some participants reported that frontline staff had proved to be a vital and effective mechanism to overcome their data sharing problems by identifying people at risk and directly referring them into interventions schemes.

Three years after the launch of the Cold Weather Plan, Stewart & Dhesi (2016) examined how the NICE Guidance on the Prevention of excess winter deaths (NICE 2015) was being applied by local health and social care policy makers from four Health and Wellbeing Boards in England. Using case study analysis, qualitative interviews and observation at the Board meetings, their study reported two significant factors which had restricted interventions to prevent cold-related harm, resulting from living in a cold home, at local level. Firstly, LA budget pressures had created an artificial divide between delivering statutory duties and acting upon best practice guidance. As a result of fiscal constraints, the Boards had made choices about what activities could be undertaken in their local areas and in most cases only the minimum statutory duties were delivered; for example: acting upon only the most serious cases of mould and damp, as required under the Housing Health and Safety Rating System. Secondly, participants reported that the pressure to prioritise specific national policy ambitions at local levels, such as reducing childhood obesity, also left little room and/or resources to develop and deliver interventions to tackle other issues including the harm to health caused by living in a cold home.

3.9.1.2 1.2 Identifying those at risk of cold-related harm to health.

Two papers reported interventions that aimed to identify people at risk of cold-related harm. In the first paper, Adedeji & Jepps (2014) reported on a scheme in Nottingham which sought to identify people at risk within existing users of social care services. Also, within people accessing support through local third and voluntary sector organisations. Of note within this scheme was the use of

domiciliary care staff, third sector and voluntary staff to identify people at risk. The scheme leaders provided training (20 events) to frontline staff. The staff were then asked to identify clients at risk of cold-related harm and refer them into local schemes and/or provide them with communication materials containing information about the health risks associated with cold homes and advice about how to get help.

In the second paper, Bull et al (2010) describe an algorithm developed to assist frontline health and social care staff, in the NHS Birmingham and North Midlands area, to identify people at risk of cold-related harm. The algorithm prompted staff supporting people with long-term health conditions to ask a series of questions to assess their risk. Depending on the client's response, staff were directed by the algorithm to offer advice on keeping warm or to refer the client to benefit advice and local energy efficiency schemes. Although evidence was lacking to establish any link to reduced instance of cold-related harm, Bull et al (2010) discuss the potential benefits of the algorithm in raising staff awareness of the issue and supporting the identification of people at risk. However, both Adedeji & Jepps (2014) and Bull et al (2010) raise concerns that whilst their respective interventions were successful in identifying some people at risk, those targeted by both schemes were already known to care services and others at risk within the community may have remained unidentified.

3.9.2 Theme 2: Tackling cold in the home.

Most interventions identified in the present review (n=11) focused on practical measures and aimed to reduce the likelihood of people living in cold homes in three ways. Firstly, by making homes more energy efficient - therefore easier and cheaper to keep warm. Secondly, by encouraging people to heat their homes more by reducing the cost of their domestic fuel. Thirdly by providing personal practical resources to help people keep warm in their homes.

3.9.2.1 2.1 Improving the energy efficiency of homes

Interventions intended to improve the energy efficiency of homes aimed to do this by upgrading the heating systems and/or property insulation.

Warm Front was a government-led scheme in England to help people identified as vulnerable to old-related harm, due to poor housing conditions, by providing energy efficiency improvements up to the value of £3,500. Oreszczyn et al (2006) conducted a large quantitative study to evaluate Warm Front's effectiveness in raising indoor temperatures to the recommended levels for daytime and night. Indoor temperatures (in °C) were taken every half hour over a period of three weeks in 1604 houses awaiting improvements across five areas in England, to create a mean baseline, and following receipt of improvements to measure change. The results were standardised by correcting for factors such as external temperatures and individual household energy efficiency ratings. Demographic and socio-economic data and the household's ability to meet fuel bills was collected via quantitative survey.

Oreszczyn et al (2006) found that the improvements led to a small overall increase in median indoor temperatures. Houses that received both heating and insulation improvements saw the most gain (average of 1.7 °C) whilst those receiving either heating or insulation had slightly less gain (average of 1.6 and 1.7 °C respectively). The greatest increase in temperature across all the homes within the study was observed at night and the increase was greater in the previously coldest homes at an average of + 3°C.

Of significance was that whilst the median temperatures across the homes receiving interventions showed a slight increase, the improved energy efficiency did not translate into people living in temperatures above those considered to reduce the risk of cold-related harm. The median standardised temperature post interventions in the homes of participants over 60yrs was 19 °C in the daytime and 17 °C at night. Although Oreszczyn et al (2006) found no correlation between indoor temperature and area-based markers of socio-economic deprivation, there was a correlation between low indoor temperatures in post interventions homes and self-reported anxiety about paying the fuel bills. These findings suggest that wider contextual and behavioural influences, as well as housing conditions, are contributory factors leading to people living in cold homes. This contention was supported by findings from the KWILLT project (Tod et al 2012).

The KWILLT project used semi-structured interviews and focus groups with 50 older people and 25 health and social care staff in South Yorkshire to illuminate the factors that might lead to an older person being cold at home. The study identified a series of factors which the authors argue that, in isolation or in combination, can increase the vulnerability of an older person to cold-related harm. Although housing conditions and low income were significant factors, individual behavioural influences also presented risk and reduced the participants' propensity to engage with interventions aiming to increase home heating. For example, 'coping' in the face of adversity was ingrained into the psyche of some participants who attributed positive value to stoic behaviour such as not putting the heating on and which, in some participants, was regarded as admirable.

The effect of individual behavioural influences upon under-heating practices is addressed more thoroughly in a study which examined an Australian Government programme comparable to the Warm Front initiative. This scheme funded insulation measures to the value of AU\$2,500 and targeted low-income and older households. Willand et al (2017) used a mixed-method approach to carry out a trial in 16 (13 control) homes of people over 70yrs, who had a longstanding disability, to explore the intervention's impact in reducing under-heating within the homes of these recipients. Temperatures and energy consumption within the homes were monitored at half hour intervals (pre-and post-intervention). Data about how the participants coped with cold weather and kept warm was also collected using standardised questionnaires and qualitative semi-structured interviews.

Like Oreszczyn et al (2006) and Tod et al (2012) above, Willand et al (2017) also shed light upon the wider factors influencing under-heating behaviours. The study found that post interventions, the participants continued to engage in at least one under-heating practice for example, turning heating off at night, keeping the thermostat no higher than 18 °C, not heating all rooms and wearing more clothing. Results from the qualitative element of the study suggests that these behaviours were influenced by the desire to save energy and to 'cope' with cold rather than use the energy efficiency afforded by the interventions to maintain higher indoor temperatures.

Willand et al (2017) note that the under-heating behaviours corresponded with those advocated by a climate change campaign delivered by the Australian Government at the time of interventions encouraging households to reduce their carbon emissions by, for example turning the heating thermostat down. The messages were in direct conflict with public health messages that advised older people to keep warm in winter. Willand et al (2017) propose that the environmental messages may have legitimised and reinforced long-established 'risky' behavioural norms within some respondents who had maintained low indoor temperatures and 'coping' behaviours post interventions.

The findings by Willand et al (2017) support earlier assertions made by Lloyd (2013) in his discussion paper highlighting the potentially contradictory nature of public health messages which advocate putting the heating on, and environmental campaign messages urging people to help tackle climate change by using less energy. Lloyd (2013) suggests that the increased energy efficiency that interventions might afford, may be turned to reducing energy usage rather than increasing warmth in the light of the environmental messages and/or in combination with the fear of debt and caution with money exhibited by some older people.

In a study by Harrington et al (2005) some reductions in risky heating behaviour and gains in self-reported health and wellbeing are reported post interventions. The study employed a mixed method randomised trial to assess how living in a fuel poor household affected health and well-being by measuring the impact of energy efficiency improvements provided through the Warm Homes Project. The 535 participants were randomly divided into two groups and all given a package of measures (the trial group first, and the control group one year later), depending on the property needs; including loft insulation, cavity wall insulation and central heating system upgrades. The qualitative element of the study used three waves of 10 semi-structured interviews post interventions to explore how a sample of 30 participants coped with cold and their behavioural responses to the energy interventions.

Harrington et al (2005) found that the interventions had increased the energy efficiency of the homes by an average 15 points (using an industry-standard scale, which rates heating efficiency on a scale of 1 to 120 points – 120 being

the highest efficiency level). Actual temperature levels were not recorded but there were some self-reported improvements in wellbeing including greater levels of thermal comfort and less anxiety about fuel costs. In some cases, participants reported using the heating more in the morning and evenings rather than spending longer in bed to keep warm. Some also reported heating previously unheated rooms. Despite some positive outcomes, Harrington et al (2005) also reported that within some participants, the improvements had not resulted in increased use of the heating due to the moderating effect of lay beliefs about the benefits of cold air indoors and beliefs that warm indoor temperatures might exacerbate existing respiratory conditions.

Grey et al (2017) further examined the relationship between energy efficiency interventions (in low-income areas) and mental and physical health. The study ran a pre-test/post-test trial with 364 recipients (418 control) of heating or insulation improvements under the Arbed scheme in Wales between 2013 and 2015. Measures used in the study included the SF12v2 physical and mental health composite scale for self-reported health and wellbeing and measures from The World Health Organisation and European Community Respiratory Health Survey for Respiratory Health. Whilst there was no significant improvement in physical health or reductions in self-reported respiratory illness symptoms at follow-up (between one to 10 months), participants reported behaviour changes comparable to those in the Harrington et al (2005). Additionally, Grey et al (2017) report participants experiencing fewer financial difficulties, higher thermal satisfaction and overall improvements in self-reported wellbeing.

Bennet et al (2016) also report improvements to self-reported health and wellbeing within a sample of low-income, elderly and/or disabled people receiving insulation and heating improvements as part of the Warm at Home Programme. The scheme was funded through a large fine levied by Ofgem upon a national energy provider and delivery was managed through an existing community network of housing improvement agency (HIA) staff.

Besides measuring the programme outputs, Bennet et al (2016) collected quantitative baseline data (316 surveys) and post-interventions quantitative survey data between 3 and 12 months after interventions (156 follow-up

surveys – 31% 3 to 5 months and 69% 6 to 12 months). Self-reported health and wellbeing and experiential data was collected using semi-structured interviews with a purposive sample of eight HIA staff and a convenience sample of 20 interventions recipients who agreed to participate in the study.

In findings comparable to those of Harrington et al (2005) and Grey et al (2017) above, the post-interventions survey reported an increase in people who felt warmer and experienced greater satisfaction with the temperature in their homes (12% at baseline to 36%). Bennet et al (2016) also reported a correlation between the interventions and an overall improvement in housing problems associated with poor health outcomes. Condensation had reduced by 24%, damp by 24%, mould by 14% and draughts by 33%.

Of particular interest within the Warm at Home Programme was how latent community knowledge and networks were highly instrumental in identifying people at risk of cold-related harm and referring them into the scheme. Bennet et al (2016) estimate that 20% of the individuals helped by the scheme were referred into it by social care staff. They report that the staffs' knowledge of individual client risk factors and their relationship with their clients was a significant factor in the referral into, and engagement, with the interventions by their clients.

Three studies explored the factors that influence the engagement with interventions to prevent cold-related harm in those at risk in more depth. Armstrong et al (2006) examined statistical data and qualitative interview responses from older LA tenants in London who were offered the free installation of central heating. Of the 1181 initially offered the interventions, 456 expressed interest in the scheme and 304 declined. A further 155 declined once they had received a site visit from a heating engineer and 301 went on to receive the interventions. A stratified sample (n=210) of those agreeing to take part in the research was selected at random to represent those accepting and declining the offer at first contact and those who declined after initial site visits.

The study found that the participants' attitudes and beliefs had significant influence over their engagement with or uptake of the interventions. Some participants had declined the offer of central heating in the belief that it would

increase their fuel bills or exacerbate their existing respiratory conditions; whilst some cited their fear of mess and upheaval. Lay belief also had an opposite effect in some participants and 51% of those accepting the offer felt that the central heating would improve their health; of these, 76% had a long-standing health condition. Armstrong et al (2006) report that their analysis of the participants' decision-making processes, leading to either acceptance or decline of the offer, was influenced by social contacts in some cases. This included the heating engineers who carried out the initial site visits and social contacts such as family and care staff.

Stockton et al (2013) examined the influence of social connections and 'social-connectedness' upon the engagement of older people with energy efficiency interventions. The study employed quantitative survey and telephone interviews with 200 older people and qualitative interviews with nine representatives of community-based organisations supporting older people. In findings comparable to Armstrong et al (2006), Stockton et al (2013) report that the fear of large fuel bills and debt led to participants under-heating their homes. Stockton et al (2013) make the link between low income and social connectedness. Those participants with limited funds, or expressing caution about spending money, had limited access to leisure activities and technology. This in turn reduced their social connectedness and, in some cases, access to information and advice, for example: about cold-related harm or how to get help with heating costs.

For some participants, who relied upon care services, there was regular contact with their carers who made up most of their clients' social interactions. In these cases, Stockton et al (2013) propose that the relationship between carer and client might be close, and the carers may hold a position of influence in the participants' lives. In this respect, they suggest that carers are 'gatekeepers' for those wishing to communicate with older people and could be an ideal channel through which to offer health advice or assist with referral into preventive interventions. The interviews carried out with the representatives from community-based organisations support their thesis indicating a universal recognition amongst participants of the potentially influential position that care staff hold in the lives of their clients. However, many of the community-based

organisations interviewed also reported that lack of capacity and competing organisational priorities severely limited their ability to provide this kind of support to their clients.

Papers by Goodwin (2007), Lloyd (2013) and, Allmark and Tod (2013) suggest that whilst combatting under-heated homes through practical interventions is the preferred approach to tackling cold-related harm, these approaches do not consider individual behavioural and/or contextual influences that may affect outcomes. For example, a significant contextual influence is eligibility to interventions. The findings from KWILLT (Tod et al 2012) question the efficacy of socio-economic status alone as a reliable means to identify and engage with people at risk. Although many energy efficiency interventions aim to engage with low-income households, many low-income participants in the KWILLT project lived in warmer homes than their home-owning peers. The assumption that only the poorest pensioners are at risk may exclude others at risk. This was partly because some low-income participants lived in social housing, which was well maintained by the LA, whereas some of the privately-owned homes in the study had not benefited from any energy efficiency interventions.

The findings by Willand et al (2017), Oreszczyn et al (2006) and Harrington et al (2005) suggest that socio-cultural factors also influence behaviours which moderate heating choices and therefore affect intervention's outcomes. Allmark and Tod (2013) propose that the interplay between these contextual and behavioural influences are 'risk regulators' and that these variables will determine the risk level experienced by an older person vulnerable to cold-related harm. Goodwin (2007) concludes through discussion that most intervention design does not consider how these risk regulators might inhibit the effectiveness of the interventions. He argues that unless the effect of behaviour upon the successful implementation of interventions is considered, England will continue to experience high levels of cold-related harm in older people. Making recommendations for future policy and practice, Goodwin (2007) calls for a more anticipatory and preventive approach within the community setting including clear leadership from commissioners and managers of community-based services to identify those at risk and deliver preventative interventions.

3.9.2.2 2.2 Reducing the cost of domestic fuel

Three studies examined the effectiveness of interventions that aimed to reduce cold-related harm by providing money to cover fuel costs or by reducing the cost of fuel.

The Winter Fuel Payment (WFP) is a universal non-means-tested automatic cash transfer into the bank account of eligible people (over 65) in the UK to help them pay for domestic fuel. Iparraguirre (2014) examined the pre and post-interventions effect of the payment on excess winter death using a time series statistical analysis of national population level data between 1970 and 2012. This included numbers of excess winter deaths (ONS), mean outdoor temperatures from UK Meteorological Office data, mean indoor temperatures and annual spend on domiciliary gas in the UK taken from the Department of Energy and Climate Change Domestic Data Tables. His analytical findings support the efficacy of the WFP in reducing excess winter death suggesting that the payment accounts for 46% of the total recorded reduction in excess winter deaths since its introduction.

Crossley & Zilio (2018) also examined the causal effect on health outcomes of the WFP using statistical analysis of UK excess winter death totals combined with health data from the Health Survey for England, Scottish Health Survey and English Longitudinal Study on Aging. Individual health data was compared against socio-economic variables of income and educational attainment level. Except for self-reported chest infections, their analysis indicated a decline in the incidence of illness in line with WFP eligibility. The study found a 6 percentage-point reduction in the high levels of fibrinogen and reductions in other disease markers; however, these estimates were less robust. The Institute of Fiscal Studies data used within the analysis indicates that within the study period, 41% of the payment was spent on domestic fuel. Crossley & Zilio (2018) argue that this fact in combination with their study findings, suggest it likely that the WFP has contributed to the reduction of excess winter death in the UK. However, there was a lack of direct correlation between excess winter deaths and socio-economic status suggesting that a combination of contextual and/or behavioural influences is likely at play in determining risk given that the benefit is universal, but the health outcomes vary at individual level.

A pilot fuel credits programme in New Zealand adopted a different approach to the population level cash benefit offered by the WFP. Firstly, the money (NZ\$500) was credited directly into the recipient's electricity supplier account. Secondly, chronological age, combined with long-standing morbidity, was applied to determine risk and eligibility rather than just age alone. In this case, older people (n=522 - median age 71yrs) with chronic obstructive pulmonary disease (COPD), were targeted. Thirdly, frontline community-based staff were used to refer eligible individuals into the scheme (rather than an automatic population level eligibility approach) as well as targeting using data collected from primary health care organisations and voluntary groups assisting COPD sufferers.

Viggers et al (2013) conducted a community-based trial using mixed methods to explore if the fuel credits programme pilot would increase indoor temperatures and reduce the exacerbations of COPD. Although the study was interrupted by an earthquake, the initial findings indicate self-reported improvements in respiratory health and a link between improved indoor temperature and improved lung function. Viggers et al (2013) tentatively offer that their evidence, albeit limited, advocates that targeting illness exacerbated by cold to prevent the exacerbation of symptoms may be feasible. However, they caution that multiple fuel providers involved in delivering the interventions in this instance, created a heavy administrative burden for the trial.

'Tariff switching' is a way to reduce fuel bills by moving to a new supplier that charges less per unit of fuel (tariff) or negotiating a lower priced tariff with the existing supplier. Hughes and Natarajan (2019) used a longitudinal mixed methods study to explore how 43 older people in Bath, England, managed cold indoor temperatures and if energy tariff switching, amongst other interventions, was an effective way to reduce under-heating. Temperature recordings showed that 11 of the households had average indoor temperatures below recommended levels and these households were selected, as a subset, to explore the reasons which prevented them from attaining the recommended temperature and/or thermal comfort.

The study found that despite awareness of the benefits of tariff switching, these participants exhibited a reluctance to do so. They spoke about tariff switching

with emotive language and associated the process with panic and powerlessness. Some regarded the energy companies with mistrust and feared exploitation whilst others felt their inability to use the internet left them lacking knowledge and prevented switching due to most switching options being online. However, some offered that they would feel more confident to switch tariffs if they were given support from community-based organisations or social care staff who they perceived as non-judgemental and trustworthy.

3.9.2.3 2.3 Providing personal practical resources

Two studies (Madden et al 2014, Adedeji & Jepps 2014), report the distribution of personal practical resources such as blankets, hot water bottles and indoor thermometers to older people. However, their effect in reducing the risk of cold-related harm to health is not reported and is assumed to be unmeasured.

One study, Pollard et al (2019), examined the effectiveness of providing temperature loggers placed inside wearable brooches, or in stands, to explore if this simple device could be used to prevent cold-related harm. A mixed methods trial was conducted in the home of older people (n=34) living in Cornwall with a long-standing health condition, and who had received energy efficiency measures to their homes. Temperatures were logged at 15-minute intervals by the devices which then triggered a flashing light alert should the temperature fall below recommended levels. The participants were given basic advice on what to do should the low temperature alarm go off. This included switching the heating on/up, making a hot drink, wearing extra clothing and closing windows. In addition to pre and post-interventions temperature levels, quantitative data was also collected on self-reported health and wellbeing and use of health services.

The low temperature alerts resulted in some participants maintaining increased indoor temperatures. However, some participants still maintained low temperatures, and of concern were some households that recorded indoor temperatures as low as 5°C. Within these households, the participants had visited the GP more with respiratory, cardiovascular and mental health issues than those participants maintaining higher indoor temperatures. Although Pollard et al (2019) add to the body of evidence which links indoor temperature

to health outcomes, they do not provide a robust link between the use of the interventions and improved health outcomes as other confounding factors could not be accounted for, for example the structural condition of the home and its energy efficiency rating. Pollard et al (2019) note that the study could not account for individual behavioural influences that affected indoor temperatures such as choosing not to use the heating or personal thermal comfort preferences.

3.9.3 Theme 3: Raising awareness and knowledge of cold-related harm to health and providing advice on keeping warm.

Five interventions aimed to reduce excess winter deaths by influencing behaviour through communications. This was addressed in two ways. Firstly, by providing information and advice to professionals delivering care services which aimed to increase awareness of cold-related harm to health and encourage them to deliver preventive interventions. Secondly by providing information and advice to people encouraging them to take preventative measures to reduce their own risk.

3.9.3.1 3.1 Interventions aimed at health and social care staff

Three papers, Glasper (2010), Peate (2008) and McLafferty (2009) provide discussion on cold-related harm to health to a health and social care professional audience. Glasper (2010) brings the Keep Warm Keep Well communication campaign and online resources to the attention of frontline health care staff. Glasper (2010) suggests that community health workers visiting older patients in their own homes are well-placed to deliver preventive interventions in the form of advice and support to those who may be at risk. Similar expert opinion is provided by Peate (2008), who includes all health and social care staff and managers in his discussion. He argues that health and social care staff have regular contact, often daily, with people and are often held in a position of trust and influence by those they care for. This opinion is also offered by Goodwin (2007) and evidenced by Stockton et al (2013) and Bennet et al (2016) above.

Peate (2008) goes on to posit that health and social care managers have a critical role in preventing cold-related harm in older people by ensuring that care staff are appropriately trained to recognise people at risk, including adequate home heating within care plans and ensuring that staff have the knowledge and ability to support referrals. McLafferty (2009) also raises the issue of knowledge arguing that whilst frontline staff might be well-placed to provide preventative interventions, they must possess the skills and knowledge to do so.

3.9.3.2 3.2 Interventions aimed at the public

Two studies examined the effect of providing information advice and guidance to the public. Gascoigne et al (2010) developed a booklet to test if providing information on what to do to keep warm and well on receipt of a cold weather warning could change behaviour and reduce the risk of cold-related harm to health. Using a field trial, the effect of the booklet on behaviour was tested using pre and post-interventions interviews with 37 participants who received the booklet, and subsequent notifications when cold weather was due.

Although the study was successful in raising awareness of cold-related harm to health in some participants, in others a distancing effect was reported meaning that participants did not consider themselves to be the ones at risk and believed that only 'old people' or those who were sick should take heed of the messages. Within others, Gascoigne et al (2010) report an opposite effect in that the interventions had given some participants permission to act and take their own risk much more seriously. In most cases the most significant changes to behaviour were subtle, such as wearing more clothing and leaving the heating on for longer at night.

Gascoigne et al (2010) found that despite an increased awareness in some participants about the risk of cold, poor heating systems, lack of money or fear of the cost of fuel bills presented barriers to changing home heating behaviour. In others, the resistance to change was created by a clash of contemporary advice and a legacy of the earlier health wisdom of their past. For example, when tuberculosis was common and fresh cool air was considered salutogenic. In some cases participants simply rejected the advice as patronising or nannying.

A similar distancing from advice or guidance was noted by Day & Hitchings (2011), who question the effectiveness of communication messages targeted at older people. Using qualitative interviews, written and photo diary analysis, their study aimed to identify individual behavioural influences that may block the effectiveness of energy efficiency interventions and advice campaigns aimed at those who are vulnerable to the effects of cold due to aging.

Although most participants in the study accepted that they felt the cold more as they grew older, some were reluctant to act upon the advice within communications that suggested the use of blankets and hot water bottles to keep warm. They believed this conferred aging and was something that '*only old ladies would do*'. Lay beliefs also influenced behaviour in some participants who felt that opening windows to let in fresh air boosted mental alertness and reduced the possibility of odour that might be associated with old age. In some cases participants continued to exhibit risky behaviour despite advice to the contrary or improvements to the thermal efficiency of their homes. This behaviour was driven by socio-cultural influences which led to people wishing to distance themselves from practices that might reveal their aging to both themselves and others. Day & Hitchings (2011) conclude that much of the advice given to older people clashes with their own perceptions of self and projected identity and may therefore fail to modify risky behaviours.

Summary

Within this review most preventive interventions in response to cold-related harm to health caused by living in a cold home has centred on practical measures to improve home energy efficiency or reduce the financial burden of fuel costs. Other responses have included policy to galvanise preparedness within health and social care and the delivery of preventive interventions at local levels. A further approach provided information and advice to those at risk and those who care for them.

These findings provide some evidence of the efficacy of these practical measures. However, the review also found variables that had significant impact on the successful outcomes of the interventions reviewed. Firstly, macro environmental forces inhibited the prevention of cold-related harm through

problems of funding and policy prioritisation. At local level, systems and policies inhibited data sharing to identify people at risk and the loci of responsibility was also problematic. At an individual level, housing conditions, personal finance and eligibility for interventions were identified as significant variables affecting outcomes. Behavioural influences also created variability in outcome with knowledge, fear of large bills and debt, values and beliefs all being significant influences. Given the socio-economic factors outlined in Section 2.4, these behavioural influences are likely to become increasingly significant.

Within these findings there is some reporting, albeit very limited, of how social care staff contributed to interventions to preventing cold-related harm by identifying people at risk and referring them into interventions programmes. However, most of the literature referencing the role of the domiciliary care system in the prevention of cold-related harm in older people is based within discussion and professional opinion. This does provide a theoretical recognition that social care has a potentially pivotal role to play, being ideally placed to recognise risk, provide a conduit for information and advice and deliver interventions. However, any actual evidence of how the domiciliary system contributes to the prevention of cold-related harm in older people through the consideration of cold and/or delivery of preventive interventions is very hard to find and indicates a clear gap in the knowledge. This study aims to contribute to filling this gap by answering the research question, aims and objectives below.

The research question:

- ‘Does the domiciliary care system prevent cold-related harm in older people?’

Aim of the research:

- To gain detailed insights into whether the prevention of cold-related harm is incorporated into domiciliary care services for older people, if so how, and what are the influencing factors.

The research objectives:

1. To identify the nature of any interventions within the domiciliary care system intended to prevent cold-related harm caused by living in a cold home.
2. To explore if and/or how the prevention of cold-related harm is considered within the domiciliary care system.
3. To consider the factors influencing the domiciliary care system's interventions in preventing cold-related harm in older people caused by living in a cold home.
4. To deliver a set of findings and recommendations in relation to the domiciliary care system that will contribute to preventing cold-related harm in older people.

The following chapter will now describe the research approach taken to meet these aims and objectives.

CHAPTER 4: The research approach

4.1 Introduction

The previous chapter exposed a gap in the current knowledge about if, or how, the domiciliary care system delivers interventions to prevent cold-related harm and the factors that influence if or how this happens. This study sought to contribute to addressing this gap by employing an interpretive qualitative approach, using a thematic analysis methodology based within a constructionist epistemology.

This chapter describes the research approach by firstly presenting the conceptual framework developed for the study. Next, the four elements that Crotty (1998) describes as informing research design have been broadly used as headings to describe the research choices and the rationale behind these choices. Beginning with the ontological and epistemological underpinnings to the study, this is followed by the theoretical perspective and methodology. Finally, the methods used are detailed. The chapter ends by describing how rigour was assured and enhanced within the research process.

4.2 The conceptual framework

Developing my approach to meeting my research aims and objectives began by creating a conceptual framework for the study. Miles and Huberman (1984 p. 33) describe conceptual frameworks as '*... the researcher's map of the territory being investigated*'. Developing a conceptual framework supported the identification and explanation of the main things to be studied, the key factors or variables within this territory and any presumed inter-relationships among them.

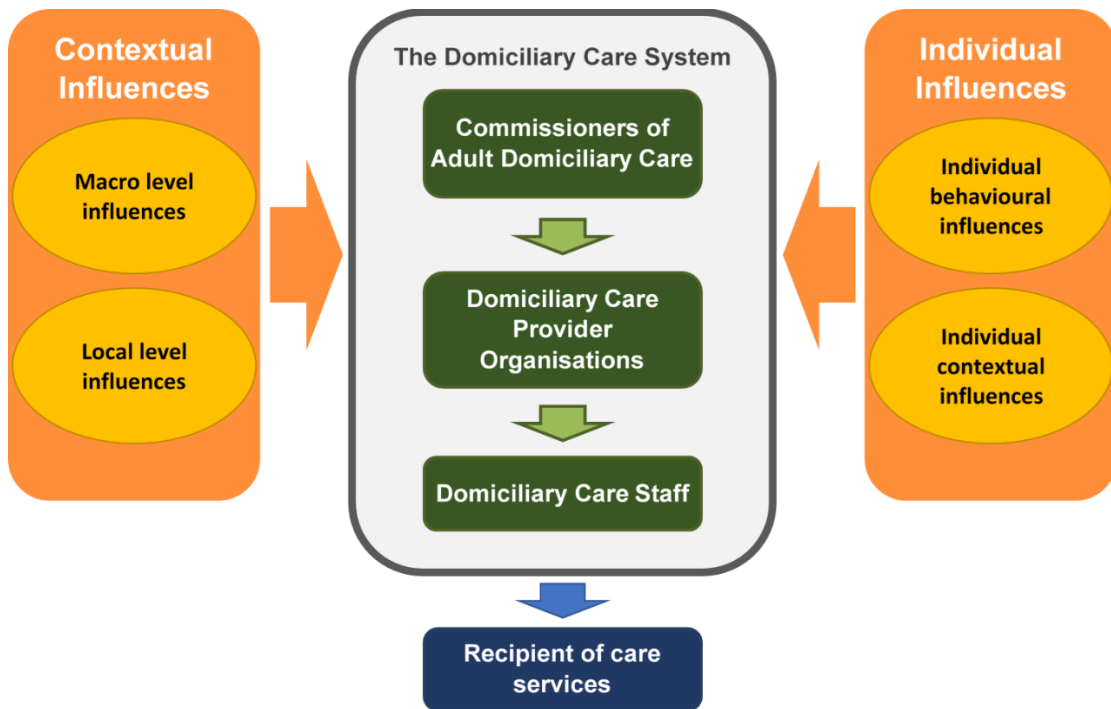
Viewed through a system theory lens (Montuori 2011) domiciliary care is a complex system made up of elements defined by role, responsibility and the relationships between them. Importantly, each element within the system does not operate in isolation but is intrinsically related to other elements within the system. Behaviour within the system is a result of individual and group interaction within the system environment both interpersonal, proximal and external (Mullins 2016). Thinking in this way helped me to establish the scope

and boundaries, or the 'what, who and why', of the research. The 'what' of the study was established as that of the system as an entity and the 'who' being those operating within this system. Most formal domiciliary care services are commissioned in two ways. Firstly, domiciliary care that is organised through the LA system and secondly, individuals who organise their own domiciliary care directly from care provider organisations (Bottery 2018). Those individuals who purchase care directly, be that from a provider organisation or through a personal assistant, have a dual role of both commissioner and recipient of care services and I decided to exclude this group. Whilst exploring this group would provide interesting data, this would be from an individual perspective as a direct purchaser of care and not useful to meet the study aim of gaining insight relating to the wider formal domiciliary care system. Given considerations of the study aim, and the practical resources of myself as a single researcher, I limited the scope of the research to the formal domiciliary care system including LA commissioning systems, LA and privately-funded care provider organisations and their care staff.

The findings from the literature review in the previous chapter suggest that interventions were influenced by contextual factors at macro and local level and individual contextual and behavioural influences. As such these influences represent the 'why' of things in respect to interventions and their outcomes. I incorporated these influences into the development of the conceptual framework reflecting the research objectives to explore and consider key factors or variables that might influence the consideration of cold within the domiciliary care system and the system's interventions in preventing cold-related harm in its clients.

The conceptual framework is illustrated in Figure 2 below.

Figure 2 - The conceptual framework for the study



Developing the conceptual framework provided the platform from which to consider my choices about the most appropriate approach to employ to meet the research aims and objectives. I discuss how the considerations of ‘who’, ‘what’ and ‘why’ shaped the research approach choices further below within the next four sections beginning with the ontological and epistemological stance.

4.3 Ontology and epistemology

Ontology is concerned with the nature of reality; epistemology is the theory of what constitutes knowledge about reality (Sullivan and Forrester 2019).

Ontology and epistemology are interrelated. If people have differing views about the nature of reality, they will likely have differing views about what counts as knowledge within that reality and therefore, are likely to use differing approaches to gather knowledge about that reality (Moses & Knutsen 2012).

Together the researcher’s ontological and epistemological position can be described as the researcher’s philosophy of science, or their philosophical stance. Rosenberg (2016) ponders the arguments in support and critique of the differing philosophical stances, often referred to as paradigms; a debate

which spans time back to ancient philosophers and remains a topic of contemporary contest. Put simply, if the opposing camps in this battle over reality were placed along a naive epistemological spectrum, positivism would occupy one end and constructionism the other. However, describing philosophical stance in this polarised and divergent manner belies the fact that there are differing paradigms lying between the two ends of the spectrum which draw upon and incorporate the ontological and epistemological positions of both these camps to a greater and lesser extent (Moses and Knutsen 2012).

Advocates of positivism seek knowledge about reality objectively and maintain that the researcher and participant remain independent of each other. Enquiry within this paradigm is based on scientific observation about the data for analysis; for instance occurrence, size or reactions. Findings are presented as facts not 'values' and developed using deductive logic which is generally accepted to mean a logic which uses existing knowledge or tests pre-established hypothesis or theory (Delanty & Strydom 2003). This type of systematic and empirical enquiry is broadly referred to as quantitative research and could be described as focusing on numbers and frequencies rather than meaning and experience (Guba & Lincoln 1994).

To take a truly positivist stance maintains that reality exists independently of consciousness; that the truth exists regardless of human feelings, imagination or interpretation (Clarke & Braun 2013). In contrast, those aligning to constructivism contend that unlike tangible objects within the natural world, such as molecules or animals, meaning cannot exist in an external world and cannot be discovered. Rather, meaning is constructed by the subject's interaction with that world and this reality resides in a world of our own making (Berger and Luckmann 1991, von Glasersfeld 2013). Different individuals interpret meaning in different ways, even in relation to the same occurrence or situation, and therefore the study of factors influencing human action, society, systems and those therein requires a different logic to studies about the natural world.

Social researchers may seek patterns within the social world, but unlike positivist approaches, they are not reduced to averages or numerical points. An inductive logic process is applied to create knowledge about the world by using data and/or observation in an interpretive manner with the implicit

understanding that there is no one correct version of reality (Clarke & Braun 2013). This approach is broadly referred to as qualitative research and is more interested in meaning than measures (ibid). By taking a qualitative research approach the social world can be illuminated by examining the social setting and the people or groups of people within (Berg & Lune 2012); for instance, the structures, activities and people that make up the domiciliary care system.

The findings from the literature review, within the previous chapter, demonstrated the value of taking a quantitative approach in some cases; for example: in measuring the effectiveness of interventions in raising the temperature of houses. The interventions examined by Oreszczyn et al (2006), Harrington et al (2005) and Crossley & Zilio (2018) within the literature review were based on the deductive hypothesis that providing practical interventions to heat homes would result in warmer homes. Although these interventions were found to be successful in some cases, their research found that despite receiving similar interventions, some people chose to not heat their homes to a greater temperature than pre-interventions. In these cases, the quantitative research approach provided answers to 'what' was happening but could not shed light upon 'why' (Benton & Craib 2011, Rosenberg 2016), which were the individual influences affecting the behaviour of study participants.

My research objectives aimed to explore 'if' the prevention of cold-related harm is considered within the domiciliary care system, the nature of any interventions delivered by the domiciliary care system and the influencing factors. Taking a quantitative approach may have supported the achievement of these objectives by illuminating the 'if' and 'what' but would not address the 'why'. To meet the objective of delivering a set of findings that will contribute to preventing cold-related harm in older people, the factors influencing any interventions by the domiciliary care system must be known. Only by exploring the interactions between people, individually or within social systems, and their view of the world can this be illuminated (O'Leary 1985, Denzin and Lincoln 2011). In this way we can answer questions that cannot be explored by objective measurements and provide insight where these gaps in the knowledge arise; for example: the contextual and individual behaviour factors leading to a person living in a cold home explored by Tod et al (2012) or, why communication

messages do not resonate with some older people as suggested by Gascoigne et al (2010) and Day & Hitchings (2011).

The simple reporting of fact or phenomenon would leave the findings lacking and unable to meet the research objectives. By delving deeper and gaining insight into the 'why' of things, the findings can contribute to preventing cold-related harm to health by considering the factors that influence preventive interventions within the domiciliary care system and delivering a set recommendation for practice. Therefore, a qualitative approach examining the domiciliary care system by exploring the actions and influences of those within was considered the most appropriate to meet the aims and objectives of this study.

4.3.1 The role of the researcher within qualitative study

Qualitative research rejects the positivist notion of an unbiased scientist as an objective observer of fact. Within qualitative research, the different elements of data are examined by the researcher and interpreted into an emergent reality beyond the reporting of frequency or statistics. The researcher is therefore not only an observer, but the instrument of knowledge creation (Marshall & Rossman 2016), and knowledge creation becomes a creative process. Qualitative researchers regard this active and subjective role of the researcher in knowledge creation as a strength (Clarke & Braun 2013, Finlay & Ballinger 2006). This strength was utilised to meet the study objectives by gaining understanding beyond the 'what' and reflecting upon the data to gain insight into the factors influencing 'if' or 'how' preventive interventions is included into the domiciliary care system.

The active role of the researcher within qualitative research means that the researcher transports bias into knowledge creation by bringing their own experiences, identity and values to the process. This must be recognised and made available to the reader who can then make their own judgments on how the study was affected by the researcher/s (Marshall & Rossman 2016). The process of reflecting upon the knowledge we have produced in a critical manner, and examining our role in producing that knowledge, is commonly

described as 'reflexivity' and is a concept which has become central to qualitative research (Hertz 1997).

My early career was set in the highly performance-driven private sector of the 1980s and 1990s. Whilst my roles in business management and marketing gave me invaluable skills in managing myself, others and organisations, I also developed skills in using data and research findings as a marketing tool. However, overtime, the relentless goal of profit above all and the commodification of everything, including people, into financial return on investment began to increasingly grate against my own personal values and principles. This personal dilemma led to my move to the public sector where I could put my skills in marketing, or changing behaviour, to social good.

As I described in Chapter 1, my subsequent career in social marketing was the route which led me to this research. However, it cannot be denied that this route was guided by my own experiences and choices. The social injustice brought by cold homes that my involvement in the KWILLT project revealed to me, resonated deeply and my personal need to understand 'why' and 'what' can be done to address the issue shaped both the focus of this research, as well as the research approach I chose.

How reflexivity was recognised and used within the study is discussed in greater detail in Chapter 7.

4.3.2 Constructionism

A plethora of epistemological approaches and research methods are included under the umbrella of qualitative approaches. However, a common premise is that scientific enquiry is not just about revealing possible truths, as might a positivist, but is about how truths are 'constructed'. One approach to the creative generation of knowledge is described as constructionism or taking a constructionist approach.

Constructionism initially came to the fore in the US through Berger & Luckmann's seminal work 'The social construction of Reality' (1991). Constructivists see society as the outcome of agency (Clarke & Braun 2013) in that each of us '*sees different things and that we see is determined by a*

complex mix of social and contextual influences' (Moses and Knutsen 2012 p. 9). The constructionist approach allows us to gain insight into this world through the rich and reflexive analysis of our world that this approach provides (Flyvbjerg 2001). This is a creative, rather than theory building, process which brings elements of data together such as issues, facts, values and beliefs, resulting in an emergent reality (Delanty & Strydom 2003).

Sokal & Bricmont's (1999) critique of constructionism claims that the approach neglects the importance of the natural sciences. Purist social constructionists deny the influence of biology on behaviour and culture and posit that they are unimportant to achieve an understanding of human behaviour (ibid). However, advocates of a broader constructionist approach are situated within a reality in which what is real, is precisely the capacity to construct both the social and natural worlds (Delanty & Strydom 2003). Constructionists aligning to his broader approach do not deny that somethings are real and exist in a tangible world. For example, in the previous chapter where the findings of the literature review suggested that both social and contextual influences affect behaviour (Tod et al 2012, Day and Hitchings 2011). In this respect, advocates of broader constructionism are moving from the extreme end of the epistemological continuum towards a position held by realists.

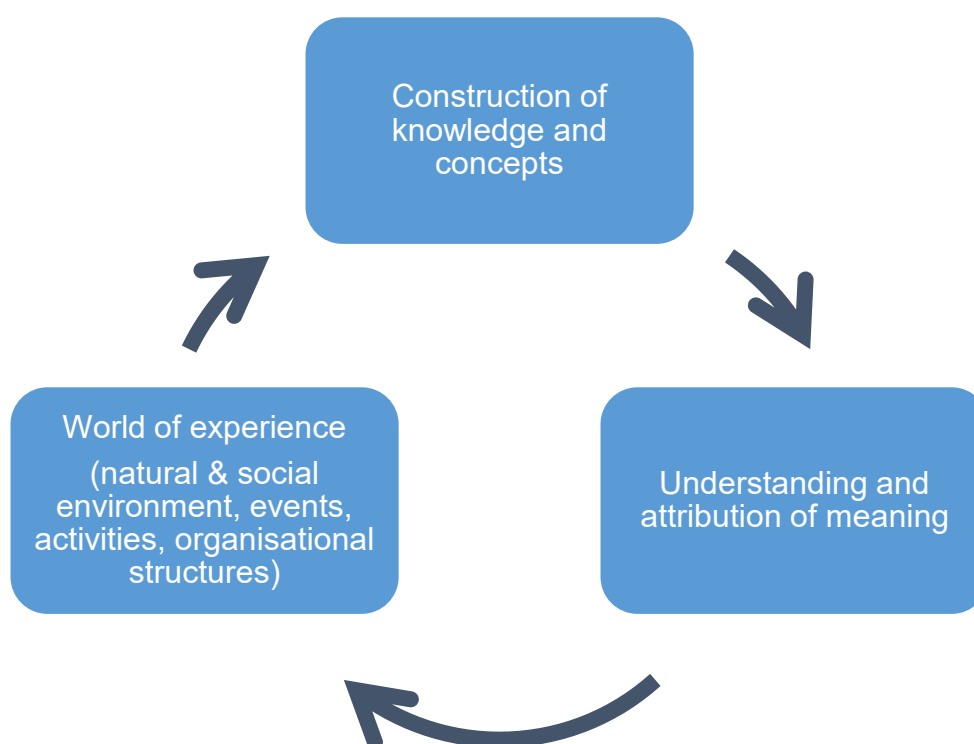
Both realists and constructivists may seek answers to 'what, who and why'. However, realists do this with the aim of iteratively testing and building theories and must not relinquish the goal of explanation (Clarke & Braun 2013) by using logical analysis to interrogate theory with data (Pawson and Tilley 1997). This study did not begin with or aim to develop theory. Therefore, taking a broadly constructionist stance supported the examination of 'what' was happening but also exposed the reality being constructed by those within the domiciliary care system and how this determined considerations and actions in respect to the prevention of cold-related harm to health.

4.3.3 Theoretical perspective

Interpretivism is a theoretical perspective drawn from a constructionist position and provided a useful lens by which to view the study data. Interpretivism holds the central tenant of constructionist approaches that knowledge about the social

world is constructed and emergent. Our knowledge of the world is gained through interactions with our world and individual knowledge and the attribution of meaning within that world emerges through subjective interpretation of the events, activities and structures within (Crotty 1998). Flick, within Flick et al (2004), contends that by adopting a constructionist approach and using an interpretive lens, we can access the world of experience, gain understanding and attribute meaning within the world of experience as illustrated in Figure 3 below.

Figure 3 - Construction and interpretation as a means of access to the world of experience (Adapted from Flick et al 2004, p. 90)



Taking a constructivist approach, using an interpretive lens, provided access to the world of experience within the domiciliary care system by moving beyond the simple observation and charting of the phenomenon (the 'what') to thinking about the 'how' and 'why' of things; how things are constructed, their interdependencies and how the phenomena are embedded in the wider social world (Delanty and Stydom 2003). For example, how people perceived role and responsibility within structures and systems such as domiciliary care, how social norms develop and how these might influence the behaviour of those within (Hitchings and Day 2011). Likewise, how perceptions of risk and consequence

may impact upon our actions in response to cold weather (Wright 2004, Wolf et al 2010).

Having described the philosophical stance taken, the next section will describe the methodological approach used and the rationale for this choice. Delanty & Strydom (2003 p. 2) describe methodology as the theory of the way knowledge is acquired; how research should proceed to produce valid knowledge about the world or in this case, the focus of the study. The differing methodologies provide a well-equipped toolbox providing different '*ways of knowing*' and the methods within ensure the researcher has '*the right tools for the job*' (Moses and Knutsen 2012 p. 1).

4.4 Methodological approach

Having explored the literature, several methodologies stemming from a constructivist interpretive approach were critically evaluated in terms of meeting the knowledge requirements namely, Interpretive Phenomenological Analysis, Grounded Theory and Thematic Analysis. Interpretive Phenomenological Analysis focuses upon the individual subjective experience and the meaning people attach to those experiences (Smith & Shinebourne 2012). Although this approach would undoubtedly have yielded valuable data for the study, this narrow focus on the individual might have neglected the 'how' and 'why' of things at system level in respect to the domiciliary care system and the interdependencies therein.

Grounded Theory was also considered which focuses on understanding a phenomenon in its entirety (Strauss & Corbin 1994). Although this fitted well with analysis of domiciliary care as a system, this might neglect the detail of the possible complexities of factors influencing the consideration of cold at both individual and system level. Moreover, the commitments made in applying the methodology of true Grounded Theory, requires analysis to be directed towards theory development (Braun & Clarke 2006). My study did not set out with this aim and so I considered the approach that would best meet my needs, and reflected and incorporated my interpretive constructionist stance, was Thematic Analysis.

4.4.1 Thematic Analysis

Thematic Analysis was first claimed as a methodological approach by Braun and Clarke in 2006. The approach remains relatively new and emerging compared to other qualitative methodologies, such as Interpretive Phenomenological Analysis and Grounded Theory, and has less history within the literature to amass credibility (Nowell et al 2017). Thematic Analysis is somewhat unique within methodologies as it only provides the analytical approach and is not epistemologically nor theoretically bound (ibid). This newness and flexibility has led to debate and critique around a lack of substance compared with some more established, tried and tested methodologies and Attride-Sterling (2001), whilst espousing the validity of Thematic Analysis, do this in the context of Thematic Analysis as only an analytical tool.

Whilst Thematic Analysis's flexibility is useful for qualitative researchers (Clarke & Braun 2013), Thematic Analysis as a methodology needs to be set within a philosophical and epistemological framework to move beyond a straightforward analysis. Thematic Analysis can be used within realist approaches, for example to report the experiences and causation of participants' reality. Likewise, Thematic Analysis can be used within a social constructionist approach, such as discourse analysis, to examine the ways in which reality and meaning are the effects of discourses operating within society (Braun & Clarke 2006). The freedom and flexibility to use within differing epistemological frameworks that Thematic Analysis offers has contributed to its growing use; for example: by Grogan et al (2009) to examine smokers' concerns about appearance or by Hayfield et al (2014) to examine sexuality. However, without applying epistemological rigour, it would simply become a simplistic account of the participants' concerns, opinions and experiences, as offered by Attride-Sterling (2001).

Although Thematic Analysis shares, with Grounded Theory and Interpretive Phenomenological Analysis, the aim to explore qualitative data with an open mind, it does this for '*a different purpose*' (Bell & Waters 2018 p. 38). Both Grounded Theory and Interpretive Phenomenological Analysis seek patterns, but both are theoretically bounded and relatively inflexible compared to

Thematic Analysis (Braun & Clarke 2006). Rather than generating theory from the data Thematic Analysis develops themes. Themes represent a pattern or item of importance within the data in relation to the research question. Within Thematic Analysis themes do not emerge ready formed from the data, rather they are constructed through the judgement or interpretation of the data by the researcher (Clarke and Braun 2013). All themes should be '*salient*' to the research question, may occur several times or only once, be important and make sense when considered singularly and as part of the '*interrelated web of findings that forms the overall analysis*' (Buetow 2010 p. 123).

Clarke and Braun (2013) distinguish between two types of themes within Thematic Analysis: salient and latent themes. A salient theme describes the surface meaning of the data beyond that of a mere description. Latent themes are those which dig deeper and explore the concealed processes and notions occurring within the data to make sense of the data and develop insights. For example, within the literature review, where behavioural insights revealed that ageist discourse within society had led to older people concealing their need for greater warmth for fear of being considered old (Day and Hitchings 2011).

Rather than searching the data to support pre-conceived ideas, using an interpretivist constructionist Thematic Analysis approach examined individuals' experiences and their interactions across the domiciliary care system in an inductive manner. This approach developed findings that are data driven yet insightful in relation to answering the research question. Meaning being formed by moving beyond the explicit content of the data and constructing assumptions about what underpinned what was said in the data. This meaning being the mechanism by which to meet the study objectives.

The following section now explains the detail of the research process and the methods used to gather and analyse the data so that the reader can follow and make judgements upon them.

4.5 Methods

This section begins with identifying the choice of data collection method, considerations of ethics and sampling approach as these aspects of the

research methods were common across the study. The details of the data collection process including how the participants were identified and recruited, development of interview guides and the interview process varied in accordance with each of the three participant groups. These are therefore presented separately for each.

This section ends with a description of how the data was captured, stored and analysed.

4.5.1 Data collection method

After careful consideration of several alternatives, I considered semi-structured qualitative face-to face interviews the most appropriate to meet the research aims. Interviews aligned well to the constructionist approach which sought to explore experiences, understanding, perceptions and views from participants in their own words. Being face-to-face, rather than telephone interviews, aided rapport building and the opportunity to observe facial expression and body language which can add nuance to the spoken word. The intimate nature of an interview also provided confidentiality for respondents to speak openly with less fear of judgement and without waiting for a turn or being dominated by other participants as could be the case in a focus group.

If conducted well, qualitative interviews generate rich, meaningful, detailed, and sometimes unexpected data, from a relatively small sample size (Clarke & Braun 2013). Semi-structured interviews were considered the most appropriate to meet the data requirements. Open interviews, without any structure, may have provided interesting data but may have missed data pertaining to the 'why' of the study and the considerations of factors or variables influencing the system. Likewise, a standardised interview may have provided a too narrow focus and missed opportunities to explore the participants' responses (Gillham 2000).

I designed an interview guide for the three participant groups reflecting research the objectives and relevant findings from the literature review. For example, the incorporation of NICE guidance (NICE 2015) into commissioning practice or the influence of macro forces on commissioning practice created by fiscal

constraints (Stewart & Dhesi 2016, Madden et al 2014). Bowling & Ebrahim (2005 p. 218) recommend using a small number of closed *'biographical'* questions as icebreakers to settle the participant at the beginning of an interview. However, these may also be used to collect useful data as Clarke & Braun (2013) advise, and a series of questions such as *'how long a participant has been in their role'* and *'what experience they had before their current role'* were included in the interview guide for all participants.

I carried out all the interviews. I included prompts into the interview guides to aid deeper delving into responses or act as an aide memoire to examine specific areas of relevance to the study (Bowling & Ebrahim 2005). I considered my ability to capture the participant's voice through question construction and, in the main, I asked open, non-leading and non-assumptive questions.

4.5.2 Pilot testing

I trialled a prototype interview guide using a pilot test. Following reflection upon the pilot interview and discussion with the supervisory team, I made several changes to the guide including simplifying some questions to aid participant understanding of the question, removing one question which led to repetitive answers and adding prompts for myself to ensure I explored each question thoroughly. As data collection progressed, I made further small changes to the interview guides for each participant group to aid better interview flow and probe deeper into recurring themes or interesting items of data.

The pilot study also informed other practical considerations for the interviews; for example: to settle the participant and build initial trust that supports data collection (Bowling & Ebrahim 2005). As such, I chose interview locations to provide a comfortable, safe and appropriate setting free from excessive background noise and distractions.

4.5.3 Risk analysis and safety considerations

I considered risk and safety in two ways; firstly, risk to the individuals within the study, and secondly to the study itself.

I took several practical steps to protect the safety and wellbeing of participants and myself. This included the time of day and location of the interview as well as travel arrangements (Sullivan & Forrester 2019, Hammersley and Atkinson 2007). I carried out all interviews during daylight hours and although the settings afforded privacy, other people were present in other parts of the building. In all cases a third party was informed of times and locations of each interview (British Psychological Society 2018, National Research Ethics Service 2017).

Being involved in research can be stressful for the people concerned (Hammersley and Atkinson 2007). Whilst conducting research, people can be exposed to prejudice or may see or hear things that concern or distress them. The researcher may also become concerned about the participant or could be placed in difficult positions where they feel subject anonymity must be sacrificed if they fear for a person's health or wellbeing. I reviewed best practice examples for guidance (National Institute for Health Research 2014, National Research Ethics Service 2017) and discussed the safeguarding approach by using scenarios, with supervision staff and fellow researchers to assist in mitigating risk. Any concerns were to be immediately flagged to the supervisory team for discussion, and if required referred to the Sheffield Hallam University - Research Ethics Committee.

I considered risks to the study by developing a risk assessment and mitigation matrix which can be found in Appendix 9.

4.5.4 Confidentiality

The participants of this study had a personal or practice-based stake in the subject matter of the study which could have impeded data collection (Patton 2002, Arksey & Knight 1999). For instance, possible concerns about commercial sensitivity or organisational practice or in the case of care staff, fear of the repercussions of relating their experiences of delivering care. I explained confidentiality and anonymity to each participant during initial contact which was also included in the participant information provided to participants (Appendix 10). The choice of one-to-one interviews supported participant confidentiality in conjunction with the anonymity measures taken within the study. However, I

also alerted each participant to the limitations of confidentiality that could occur; for example: if participants informed colleagues about their participation in the study or where a participant had been recruited via snowballing. Whilst I could assure the participant that their transcripts would be anonymised and all identifiable data would be redacted, I made the participants aware of the 'accidental' identification risk that colleague knowledge of their involvement could bring (Allmark et al 2009).

4.5.5 Anonymity

Assurance of anonymity was vital to gain an honest response from participants and create a rich and relevant data set. This was particularly the case where views and concerns might have been contrary to organisations' policy and practice guidance (Rubin & Rubin 2011, Patton 2002). Anonymity was also an important consideration within the study for reasons of commercial sensitivity and potential loss of reputation whilst working with organisations competing within the social care market. The information given to participants in the recruitment procedures, outlined below, included assurance of confidentiality and anonymity (Appendix 10) and this was re-affirmed verbally at the start of each interview.

A single encrypted file, accessible only by myself, held the identity of participants and all references in analysis and thereafter was by pseudonym. Given the small population of commissioners within the geographical area of the study, I considered the accidental identification of participants through reference to their LA area town or colleagues. Also, any possible identifying words, phrases or names were redacted. Likewise, other identifiable data was considered for provider organisations and care staff. This included the redaction of any client names used (British Psychological Society 2018).

Despite precautions, I recognised that readers with 'inside knowledge' might identify participants, a problem highlighted by Allmark et al (2009) in their review of confidentiality and other ethical considerations within interview-based studies. I considered this through the sensitive presentation of the study findings.

4.5.6 Ethical approval

I gained the following ethical approvals:

- Sheffield Hallam University - Research Ethics Committee in line with SHU policy following completion of SHUREC1 checklist and SHUREC2A – (Approval letter in Appendix 11).
- Local Authority adult social care approval of research using local approval mechanisms. As no formal committee as such was in place, I sought local governance through appropriate person/s (Example in Appendix 12)
- Provider organisations and domiciliary care services staff - Formal approval sought to participate in research through consent forms (Appendix 13)

4.5.7 Sampling approach

The development of the conceptual framework (4.2) established the specific groups of people who, by virtue of their roles and experiences of organising, providing and delivering domiciliary care services to older people, could provide the information required to investigate the research question (Tuckett 2004, Padgett 2012). Although it is accepted that a sample of research participants cannot represent the wider population, purposive sampling is ideal when the researcher seeks to enhance understanding of selected individuals or groups and was the approach used (Patton 2002, Marshall & Rossman 2016).

Purposive sampling is a technique allowing the deliberate selection of 'information rich' participants for study, be that individuals, organisations or groups (Devers & Frankel 2000). There are multiple types of purposive sampling to meet differing research aims (Palinkas et al 2015); for example: sampling to select participants with the maximum variation to discover unique or diverse examples, occurrences or experiences. In contrast, purposive sampling can be applied to create a homogenous group of participants to reduce variation and simplify the analysis of a single phenomenon. Describing the sampling decisions fully is important to provide an understanding of what can and cannot be claimed about the data and the comparability of the findings for other

researchers (Clarke & Braun 2013). I used two purposive sampling approaches.

Firstly, I used convenience sampling to define the geographical boundaries of the study which was confined to West, South and East Yorkshire, in the North of England (with one exception of a very senior commissioner of adult social care included due to the limited population of individuals able to supply this senior level data within domiciliary care service commissioning) (Padgett 2012). The rationale being:

- Building on my previous work and existing networks within the area thus aiding contact and access to research participants.
- Complementing and supporting wider work being done by the South Yorkshire Collaboration for Leadership in Applied Health Research and Care and possible post-doctoral research and development.
- The geographical areas reflect comparable geographies which also have relatively high instances of excess winter death (Office of National Statistics 2020).

Due to personal constraints, these areas provide an achievable scope of research.

Secondly, I used purposive sampling to create diversity within the participants. My aim being to gain a rich sample in terms of experiences and information (Mason 2010) and a comprehensive set of insights and perspectives (Padgett 2012, Bryman 2016). For instance, by exploring the impact of variables such as size and type of provider organisation or, in the case of care staff, the possible impact of variables such as age, gender, experience, size and type of employer.

Regarding sample size, the literature reveals this to be a much-debated topic and provided no definitive answer to the question of how many participants are enough within qualitative research; the point at which data saturation might be achieved (Guest et al 2006). Mason (2010) provides a useful guide offering that within quantitative research the frequency of an observation or occurrence is much more important whilst in qualitative research and analysis even as little as one occurrence is enough to become part of the analysis. However, he goes on

to state that samples must be large enough to give reasonable confidence that all, or most, of the key perceptions around the subject being investigated are uncovered. Braun and Clark (2021) challenge the thesis of reasonable judgements about 'how many' is enough as a simplistic when viewed through the lens of reflexive thematic analysis. As meaning is generated through interpretation rather than being a result of data excavation, judgements about when data collection should stop are situated in that interpretation and are subjective; meaning that 'how many' cannot wholly be determined in advance (ibid)

I began constructing the sample frame by creating a table estimating the possible participant population within the sample geography and my considerations of their relative importance of the population in answering the research question. Following supervisory discussion, I created a target sample size that I believed would provide the diversity of experience sought, determined through the sample frame criteria, whilst keeping the data manageable to achieve a detailed analysis (see Appendix 14). The sample frame was based upon examples from Clarke and Braun (2013) and a completed example can be found in Appendix 15.

As the research progressed, and embryonic themes began to form within the data, I reviewed the sample frame to ensure that I explored alternative perspectives and context. I identified self-employed care staff as a gap, and added to the sample frame following interviews with commissioners and providers.

4.6 Data collection

I collected the data using 22 semi-structured interviews between September 2015 and July 2017.

Table 6 - Breakdown of participants by role and gender

Interview participant role	Gender - Male	Gender - Female	Total participants by role
Commissioners of adult social care	2	3	5
Providers of adult social care (organisational owners and/or manager)	2	5	7
Care staff	0	10	10
Total participants by gender	4	18	Total Participants 22

The methods I used to identify and recruit participants, collect data, including the development of interview guides, and incentives for taking part in the research varied across the three participant groups and are presented in-turn below.

At this point I note the gender bias within the participants being predominantly female. Whilst this is not representative of the general population, it does reflect the female gender bias within adult social care at provider and care staff level (Skills for Care 2020). The limitations of the study sample are discussed further in section 7.7.2 below.

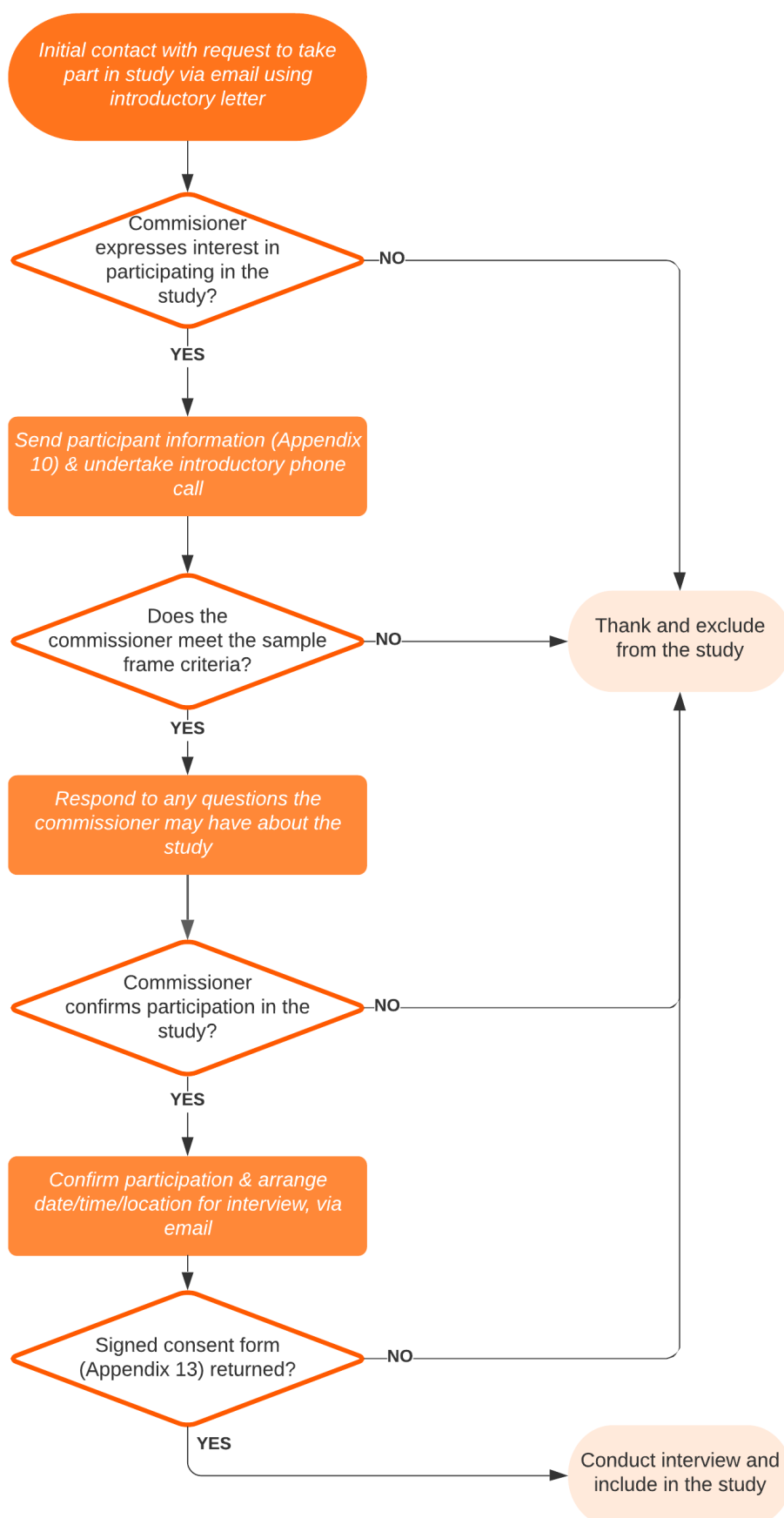
4.6.1 Commissioners

Firstly, I recruited and interviewed commissioners which allowed me to consider how the commissioning process and practices influenced decisions, actions and reactions throughout the system. In this way I could incorporate any significant data or embryonic themes arising from commissioner interviews into the interview guide for providers and/or staff where appropriate.

4.6.1.1 Recruitment

Identifying commissioners to participate in the study was simplified by the small target population. My own professional experience, and previous research collaborations, facilitated approaches to potential participants, either directly or through my professional network and contacts. I approached them all by email in the first instance. The diagram below depicts the recruitment process I followed to recruit commissioners into the study, provide participant information and gain signed consent to participate. All commissioners who expressed interest met the sample frame criteria, none were rejected, and interested parties were recruited until the sample frame was achieved.

Figure 4 - The recruitment process for commissioners



4.6.1.2 The interviews

In total, I recruited six commissioners. One dropped out of the study due to change of role, and I interviewed five between September 2015 and November 2015. The final commissioner interview took place in February 2017. The time between first contact and interview ranged from one to four weeks. The length of the interviews varied between 35 minutes and one hour and five minutes. All the commissioner interviews took place during working hours at the commissioner's workplace; three in their own office and three in a private room within their office building. The interview guide for commissioners can be found in Appendix 16.

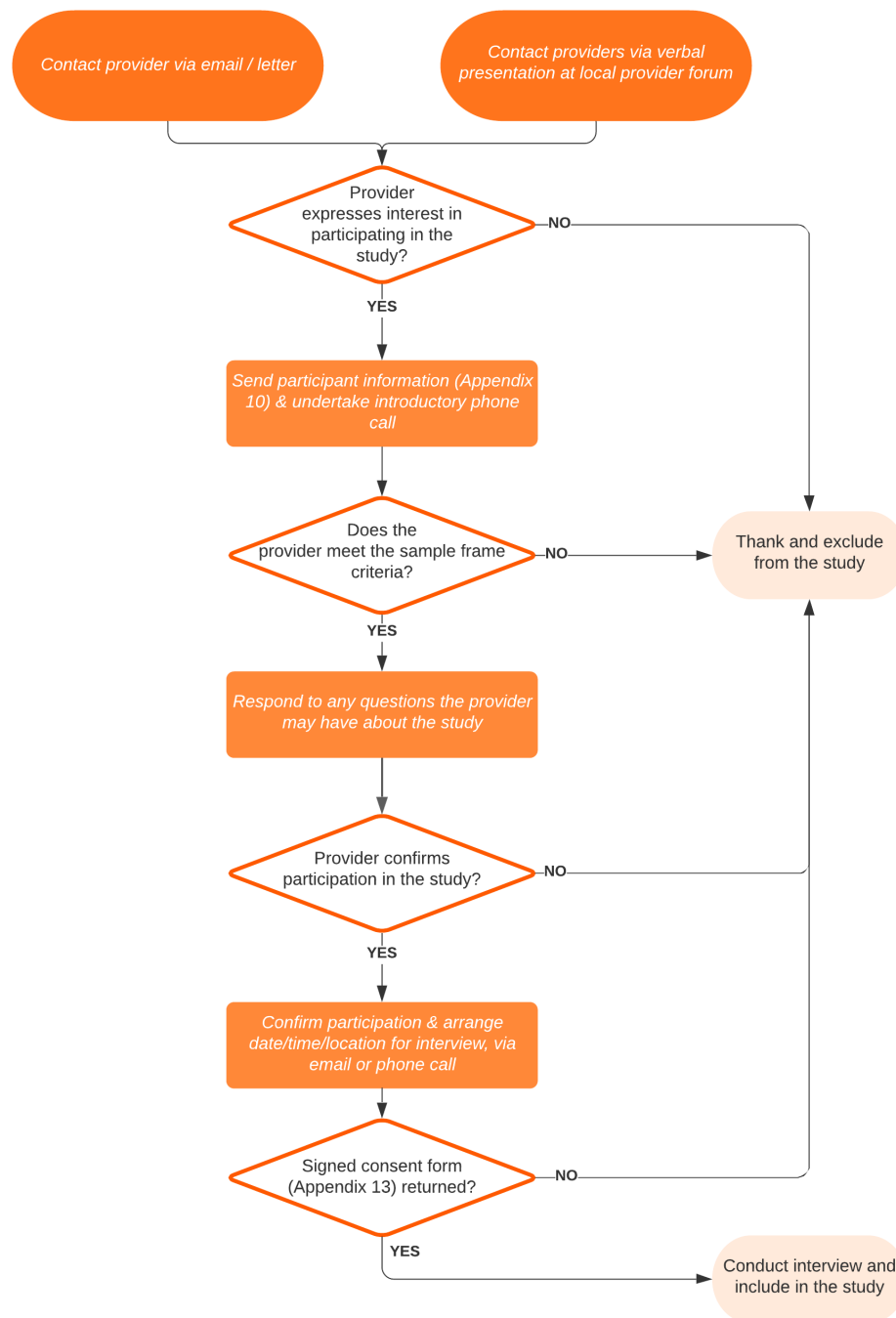
4.6.2 Provider organisations

Providers were the second participant group to be recruited and interviewed. Although the data from commissioners was not fully analysed at this stage, embryonic themes and data of interest were identified from the commissioner interviews meaning they could be explored with providers. These included issues around commissioning practice, training of care staff, staff turnover and fiscal challenges.

4.6.2.1 Recruitment

I used several strategies to recruit providers. One commissioner supplied a list of permission-granted contact details of providers interested in participating in the research. Other providers within the geographical sample frame were contacted by email or by post using a list of provider contact details provided on the CQC website (CQC 2021). All interested parties were followed up by an introductory phone call. I also attended a provider forum meeting where I spoke to providers about the research and recruited one interested party. I identified and recruited one participant following an opportunistic meeting. The diagram below depicts the recruitment process I followed to recruit providers into the study. As interested parties came forward, recruitment continued until the sample frame was achieved.

Figure 5 - The recruitment process for providers



4.6.2.2 Interviews

In total, I recruited and interviewed seven providers between April 2016 and September 2017. The time between first contact and interview ranged from one to two weeks. The length of the interviews varied between 35 minutes and one hour. All the provider interviews took place during working hours at the provider place of work. The interview guide for providers can be found in Appendix 17.

4.6.3 Care staff

Finally, I recruited the care staff. They are at the 'coal face' of the system, providing the direct care the domiciliary care system is organised to deliver. Recruiting and collecting data from this group last meant I could collect data pertinent to the consideration of cold within care provision and make comparisons between the views of commissioners and providers about the domiciliary care system and considerations of cold, with those of the care staff.

4.6.3.1 Recruitment

By aiming to utilise informal channels and associates through which to recruit participants, people who knew care staff or whose family use services, I hoped to minimise any apprehension about taking part in the research that care staff may have, and I could then use a 'snowball' sampling approach (Patton 2002). I believed this approach would encourage the identification, through knowledgeable referral, of participants who were potentially rich in information relevant to the subject area (Marshall & Rossman 2016).

Whilst the use of personal contacts to gain access to potential participants can provide an effective means to overcome some of the challenges of recruiting participants, it does however, open the possibility of selection bias. Recruitment methods which rely upon personal resources and contacts; for example: colleagues or professional networks, risk becoming distorted. That is, the reliance upon a small number of 'seed participants' (Parker & Scott 2019) may lead to bias as participants may put forward referrals who match their own gender or ethnicity or are from the same social background (ibid).

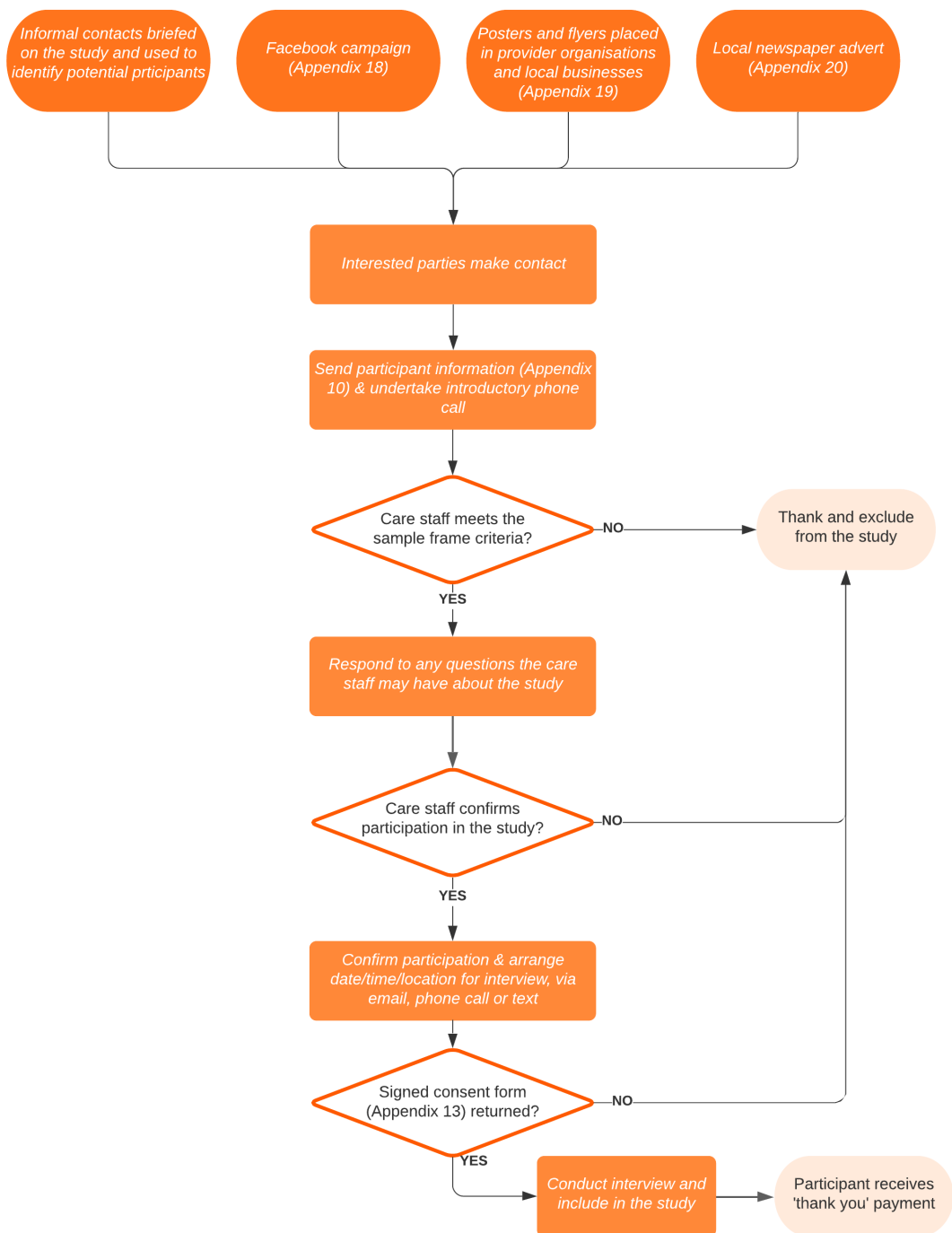
It transpired that my concerns about potential bias within sampling were founded as the approach proved unsuccessful and provided only one candidate. Following this, ethical approval was granted to run a small and locally targeted Facebook advertisement (See Appendix 18 for ethics approval and campaign material). This also proved unsuccessful. Next, I approached provider organisations who had taken part in the study to gain their permission to advertise for participants using posters and flyers placed within the providers' premises (Appendix 19). The posters were placed in staff toilets and rest

areas and included a contact phone number for staff to use in private to maintain confidentiality. This approach proved more fruitful, and I recruited seven more participants.

I identified self-employed care staff as hidden or harder to engage participants through their isolation from commissioning systems and care provider organisations (Clarke & Braun 2013). I placed a newspaper advert to generate participants from this group using a dedicated email address and mobile phone number which was deleted following data collection (Appendix 20). This resulted in two more study participants who completed the sample frame.

I made an introductory phone call to all interested parties.

Figure 6 - The recruitment process for care staff



4.6.3.2 Interviews

In total I recruited and interviewed 10 care staff between August 2016 and July 2017. Eight staff were employed by provider organisations and two self-employed. The time between first contact and interview averaged one week. The length of the interviews varied between 25 minutes and 45 minutes. Five

interviews took place in the employer's offices, four in the private homes of the care staff and one in the private dining room of a hospitality venue.

The interview guide for employed care staff can be found in Appendix 21. This guide was amended to interview self-employed care staff and can be found in Appendix 22.

4.6.3.3 The use of payments to participants

Payments is a thorny and much debated issue in qualitative research and many researchers report their own conflicts on the matter (Clarke & Braun 2013). Some argue that paying people fundamentally alters the nature of the research whilst others believe it confers value upon people's time and input through financial recognition (ibid). Head (2009) argues that payments may undermine the ideas of the common good of research through transforming participation into marketised exchange.

I resolved the matter by considering barriers to participation rather than creating incentives which 'tempted' people to take part on financial grounds alone (British Psychological Society 2018). Care staff are generally paid by the hour and respond to working hours imposed upon them by their employer. So, for most, participation would have to be outside working hours and in their own time. Those viewing this from a feminist standpoint could also raise the issue that not paying care staff for their time could raise inequalities within the study as the majority of care staff in the UK are female and low paid (Skills for Care 2020, Thompson 1996). Therefore, I paid a compensatory or 'thank you' amount of £25 to care staff, which was considered small but adequate, to reduce potential barriers to participation and facilitate their 'right' to be involved in research (Health Research Authority 2021:1.1).

Commissioners and providers (owners and managers) in the main were free to diary their own time and were in salaried (or guaranteed income) positions of employment. Their incentive for taking part was the advancement of knowledge that would benefit their role or sector. As their choice to do so was not inhibited by lack of earnings or through use of their own time, I did not offer them compensatory payment (Thompson 1996, Head 2009).

4.7 Data capture and storage

I digitally recorded all interviews and made field notes immediately after each interview to capture broad themes or specific points of interest or observations from the interview. The literature contains some evidence that the process of recording can affect the data collected due to participant awareness of their words being recorded and therefore are not fully engaged in revealing or honest discussion (Al-Yateem 2012). As a single researcher, I felt that my ability to listen and record the discussion manually would create considerable interruption in the flow of discussion as well as potentially miss important data. My focus on writing would further limit my ability to further probe and dig deeper into the participants answers. However, I did have a note pad with me for each interview, and made a brief note of interesting items which I expanded upon directly after the interview.

As it transpired, following the opening questions which were designed to settle participants as described above, all participants appeared to forget the recording device and appeared comfortable in speaking freely in response to my questions.

In accordance with my data management plan (Appendix 23), and best practice guidance, I stored data in encrypted files on a PC. I provided safety backup through an external storage device and an additional password protected cloud account (Health Research Authority 2021).

4.8 Data transcription

Transcription is not a minor technical concern, and the product of transcription is a selective arrangement produced for the purpose of analysis (Gillham 2000, Berg & Lune 2012). I considered my options; to employ a transcription service or to transcribe the interviews myself, and I chose to employ a professional transcription service. This decision resulted on reflection upon the benefits and potential draw backs of each approach. The act of transcribing interview data by the researcher can provide a beneficial immersive experience and familiarisation with the data. However, I made judgements about the amount of

data that the interviews would produce, against my time restrictions and my word processing skills.

To ensure an accurate account of the interview, I agreed a pre-determined set of notations with the transcriber to note verbatim speech, gaps, sounds and incorrect grammar as people do not speak in sentences, and I needed to record everything to ensure the data represented the meaning of the speech (Clarke & Braun 2013). As I did not transcribe the interviews myself, I tested the transcription's accuracy by reading it in conjunction with the interview recordings. This checking also began the process of my immersion into the data.

4.9 Data analysis

This section explains how I used Thematic Analysis to analyse and interpret the data using Braun and Clarke's (2006) seven stages of thematic analysis as steps to guide, and provide transparency to, the analytical process. The steps I followed were:

1. transcription
2. familiarisation with the data set
3. generation of initial codes
4. searching for themes
5. reviewing themes
6. defining and naming themes
7. writing and finalising analysis

The process of repeated, thoughtful and careful reading of the data is essential to Thematic Analysis and once the transcripts had been quality checked against the recordings, I read them for familiarisation several times (Rice & Ezzy 1999). During these readings, I manually noted anything of interest or potential relevance to the research objectives directly onto the hard copy of the transcript.

Following the manual analysis of the data set I loaded the interview transcripts into NVivo 10 (later updated to NVivo 11), an electronic data management and analysis tool designed for use with qualitative data. I used the software to store, organise and manage the transcripts, code sections of data and electronically record my thoughts and reflections on the data.

I used complete coding. This meant that I included the whole of the transcript in the analysis rather than searching for specific or pre-determined data items (Braun & Clarke 2006). At first, I found it difficult to let go of the temptation to look for data that supported pre-conceived ideas and to dispel ideas of where the analysis might go. Letting the data dictate the journey was initially quite challenging. However, discussion with my supervisory team and diving back into the data helped me to develop this skill.

I initially grouped sections of the transcripts that I had identified as providing items of relevance or interest to the research question and coded them using the node filing system within the software. I did not exclusively code data and coded some against several different nodes to which the data may have been relevant. These initial nodes provided the building blocks for further analysis. I grouped the nodes into embryonic themes reflecting both the semantic and latent content of the data. Semantic codes were data-driven in that they mirrored the participants' language, experiences or perceptions; in other words, little interpretation was applied around their words. Latent codes went beyond the explicit content of the data; identifying implicit meaning by constructing assumptions about what underpinned what was said in the data. In practice, the separation was not pure and nodes within the study contained both semantic and latent elements.

Clarke & Braun (2013 p. 248) argue that '*writing goes hand in hand with doing qualitative analysis*' and the act of writing is analysis. The writing of analytical memos facilitated the organisation of nodes into initial thematic groupings. The relationship between themes can be hierarchical or non-hierarchical and this was reflected in the grouping and organisation of themes within NVivo. Using a technique for analysis suggested by Novak and Gowin (1984), I completed the final development of themes manually through creating mind or concept maps to define themes and locate their inter-relationships (Berg & Lune 2012).

I finalised the themes through discussion, sense checking and challenge from my study supervision team. This was a long and arduous process with many back to the drawing board sessions and deeper data analysis until the resulting themes credibly represented my interpretation of the data and provided insight and illumination upon the study question.

The next section describes how rigour was assured and enhanced. The role played by reflexivity in ensuring and enhancing rigour within my study will be discussed separately in Chapter 7.

4.10 Ensuring and enhancing rigour in qualitative research

As qualitative research has become increasingly recognised, and valued, so has the keenness of those who align with the qualitative tradition to demonstrate the robustness of methodology and method and the trustworthiness of their findings (Nowell et al 2017, Horsfall et al 2001).

If claims are to be made about qualitative research, and offered as the basis of recommendations for practice knowledge, the rigour underpinning the research design must be demonstrated for others to make judgments about the validity of the findings (Higgs et al 2004). Within qualitative research this is achieved by providing sound reasoning and argument about the methodological approach, the choice of methods and their validity to meet the research aims and objectives (Rice & Ezzy 1999). Whilst quantitative research is often evaluated through criteria such as validity of data type collected, reliability of the experimental method and generalisability of the findings, the literature contains much debate on the application of these criteria to qualitative research. Bailey (1996) offers that validity, reliability and generalisability are applicable to all forms of research, but they are applied differently depending on the methodology and methods used. Whilst Rosenberg (2016) defends a position that the study of human action proceeds in a different way to that of the natural sciences and needs then to be appraised with different standards.

Lincoln and Guba (1985) aligned with the later view and refined the notion of trustworthiness within qualitative research. They offer a set of criteria to demonstrate rigour in qualitative research by demonstrating credibility,

transferability and dependability of the research and providing clear audit trails. Also, in agreement with Shenton (2004), being explicit about the role of reflexivity within the study. These criteria have been applied to reflect upon rigour and bring trustworthiness to this study.

A COREQ (COnsolidated criteria for REporting Qualitative research) Checklist, can be found in Appendix 24 which I used to check my reporting of the methodology and methods further demonstrating transparency and credibility.

4.10.1 Credibility

According to Lincoln and Guba (1985), credibility of research is the fit between the data and the researchers reporting of it. This affords the reader 'confidence' that the research findings provide an accurate understanding of the truth in the context they were set in; albeit through the interpretation of the researcher (Hammersley 2018).

Providing clear evidence of data collection and analysis as above, discussion of the findings and demonstrating how the study conclusions were reached, has provided detail by which others can evaluate the credibility of this study. Credibility was also enhanced through the supervisory team who were chosen carefully to match the needs of the research and my learning needs as identified within a development needs analysis (Appendix 25).

Throughout the study, the supervisory team aided reflection and provided guidance through discussion and debate. The supervisory team also supported the development of knowledge and skill through challenge; for example, my initial 'face value' acceptance of the data. The arduous processes of analysis described above were littered with the external challenges of the supervisors that sent me 'back to the data' to examine my interpretations and reflect on my interpretation of its meaning. These conversations helped to explore alternatives, check my initial tendency to extrapolate and confound findings through the checks and balances, support and guidance the supervisory team provided (Sambrook et al 2008).

4.10.2 Transferability

Transferability is gained by the detailed description of the research process so that the approach can be transferred to further research or others can make judgements upon its utility and transferability. In quantitative research, transferability relates to the extent to which aspects of the research can be transferred to study another phenomenon (Lincoln and Guba 1985). Within qualitative research this has not traditionally been the aim. However, as discussed by Wang et al (2006), dwindling resources available for novel research each time a decision must be made to inform policy and practice, has brought the subject of transferability to the fore.

Although transferability was not a principal goal it has been enhanced within this study by providing a detailed description of the methods used, the participants and their role in the context of the study. This detail allows the reader to make decisions in relation to their own study, the context and participants and to make judgements upon its utility and transferability (Lincoln and Guba 1985).

4.10.3 Dependability

Dependability in the research context is usually understood to be about the level to which the findings could be replicated if the study were repeated using the same methodology and methods. Although an important aspect of quantitative research, this is less important in qualitative research where replication is neither the goal nor often feasible (Guest et al 2012).

By using a constructionist interpretive paradigm within my study, I accept that there are multiple views of reality, and this version is my interpretation of the truth within the context of the checks and balances of credibility described above. Nevertheless, the trustworthiness of a study must be made transparent for readers to make their own judgements about the study and value for themselves its dependability.

The study adhered to the rules and conventions of qualitative research by drawing upon the literature and using frameworks or stepwise examples. For instance, the sample frame developed to recruit participants and developing the analytical approach and subsequent themes using Braun and Clarke's (2006)

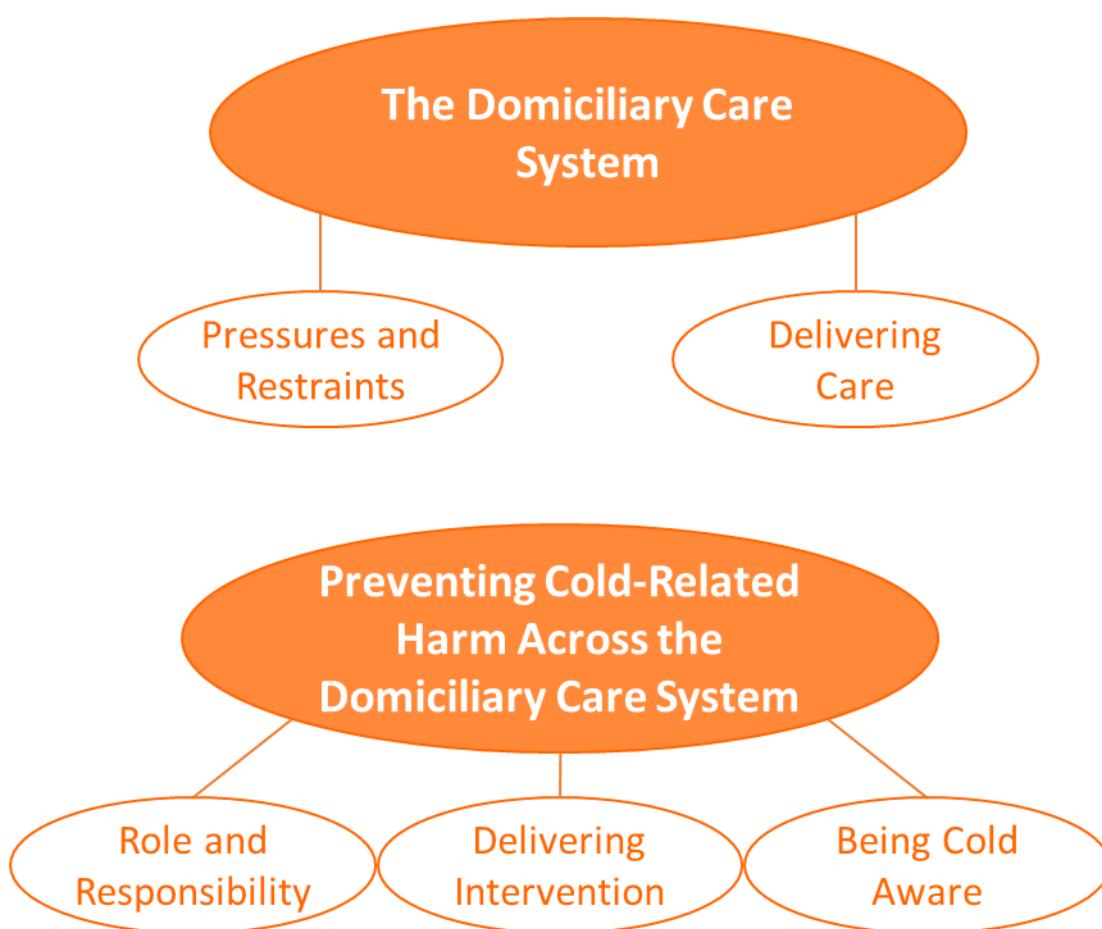
seven stages of thematic analysis. The recording of decisions about the theoretical, methodological and analytical approaches, coding and development of themes through memos, analytical notes (example in Appendix 26) and administrative records contained in the site file created for the study provide transparency and an audit trail for the study.

CHAPTER 5: The research findings

5.1 Introduction

This chapter presents the findings from the data analysis. Two themes and five sub-themes were identified.

Figure 7 Diagram of themes



Theme 1: '*The domiciliary care system*', explores the influence of pressures and constraints upon the domiciliary system and the day-to-day challenges of commissioning and delivering domiciliary care services; factors which influence the likelihood that the domiciliary care system will deliver intervention aiming to prevent cold-related harm in its' clients. Theme 2: '*Considering cold*' explores how cold-related harm to health is considered within the domiciliary care system at commissioner, provider and delivery level.

These themes, and related sub-themes, will be explored in turn following an introduction to the study participants.

5.2 The study participants

Table 7 below provides an overview of the research participants. The characteristics of each participant are detailed in a series of mini-pen portraits found in Appendix 27.

Table 7 - Study participants

Pseudonym	Role*	Client base	Organisational size *
June	LA Commissioning Manager	N/A	N/A
Kate	LA Commissioning Manager	N/A	N/A
Ruby	LA Commissioning Manager	N/A	N/A
Anthony	LA Commissioning Manager	N/A	N/A
Simon	LA Chief Executive with commission lead for region	N/A	N/A
Eleanor	Manager	LA	Large
Mike	Owner/manager	LA	Large (via franchises)
Tina	Manager	LA	Medium to Large
Geoff	Manager	Private	Small to Medium
Nadia	Owner/Manger	LA	Small to Medium
Natalie	Owner	Private	Small to Medium
Corrine	Owner/Manager	Private	Small to Medium
Elizabeth	Domiciliary Carer	LA	Large
Jane	Domiciliary Carer	LA	Medium
Heidi	Domiciliary Carer	Private	PA

Pseudonym	Role*	Client base	Organisational size *
Tracey	Domiciliary Carer	Private	Small to Medium
Winney	Domiciliary Carer	Private	Small to Medium
Zara	Senior Domiciliary Carer**	Private	Small to Medium
Emily	Senior Domiciliary Carer	Private	Small to Medium
Cathy	Domiciliary Carer	LA	Large (via franchise)
Sharon	Domiciliary Carer	LA	Large (via franchise)
Judy	Domiciliary Carer	Private	Self-employed

*Based upon Griffiths et al (2018) classifications

Large – > 250 employees

Medium to Large - > 50 and < 250 employees

Small to Medium - < 50 employees

Self-employed – operates as a sole trader

PA – an individual directly employed carer

**Senior domiciliary care staff are those performing additional duties above the provision of care to clients; for example: overseeing groups of new staff, providing in-field management and/or training to other care staff.

Within the reporting of findings, letters are used following the pseudonym to identify the role of the participant as follows:

- Commissioning Manager or LA lead for domiciliary care services - (C)
- Domiciliary care service provider organisation owner and/or manager - (P)
- Domiciliary care service delivery staff or senior care staff - (S)

5.3 Theme 1: The domiciliary care system

This theme presents findings illuminating how the participants operated in a domiciliary care system which was being constrained and moulded by external forces, internal LA systems and the practical realities of delivering home care.

These influences, and their consequences, were realised throughout the system; affecting how domiciliary care services were commissioned, the amount and type of care clients received and the providers and care staff's flexibility to meet care needs. Within these findings some clients had unmet care needs, others had reduced care packages and domiciliary care service staff had less time to deliver the care needed. This meant staff were often rushing, facing conflicting priorities and making choices about what aspects of care to deliver.

5.3.1 Sub-theme: Pressures and constraints

'Pressure and constraints' explores how the domiciliary care system was caught in the crossfire between increasing pressure from external forces and the restrictions placed upon the commissioners by reduced funding and LA systems and practices.

An increasing demand for domiciliary care services was reported by commissioners, providers and care staff alike and three fundamentally linked factors were regarded by most participants as being responsible for creating the increasing demand pressure. These were demographic and social changes and national policy response to diverting demand pressure from other areas within the wider health and social care system.

Some participants reported how the increasing life expectancy within the UK population meant more people living with the multiple co-morbidities associated with longevity and was leading to more people who were *"infirm"* and who could not *"...support themselves"* (June C) without help at home. These care needs were creating an increased demand for domiciliary care services. In tandem with this increased demand social changes, such as family structures and employment, also reduced the supply of informal care and as such exacerbated the demand pressures. For instance, when families are geographically dispersed, the distance to travel to their relative's home becomes a limiting factor in providing informal care.

"I've got some [clients] that have got family but live away. So, it's a bit hard for them to like come over [and visit their relatives] all the time."
(Sharon S)

Working patterns may also inhibit peoples' ability to visit relatives at the time they need care "...it's difficult doing [care visits] mornings, lunches, teas and beds if you work isn't it..." (Tina P). Some people had no family at all which led to some clients being highly dependent upon formal care. "...you get quite a few elderly ones where they haven't got any family." (Cathy S)

Policy response to manage demand within the wider health and social care services had led to a funnelling of people needing care into the domiciliary care system. This was reported by participants in two ways. Firstly, through the policy ambition which favoured supporting people to remain living at home as they age rather than being placed into residential social care settings. This was considered by commissioners as beneficial in retaining a greater level of independence for some people but was also regarded as a more cost-effective means to manage care needs.

"...we [local health and social care system leaders] would want to see a world where people are staying at home for as long as they can." (Ruby C)

Secondly, policy and practice intended to protect NHS resources had become a priority for some local health and social care systems.

"Everywhere I go to owt, council meetings with [LA name], they're all [professionals in the health and social care system] going on about wanting to keep people out of hospital." (Eleanor P).

The Delayed Discharges Act (Legislation.Gov.UK 2003), aimed to protect NHS resources by reducing in-patient capacity demand in NHS hospitals. It legislated that councils with social services responsibilities are responsible for facilitating the timely discharge of patients from hospitals back into community settings to free up hospital bed space. Should a lack of social care result in delayed discharges, LAs can incur financial penalties (Shardlow and Nelson 2005). To meet this requirement one LA commissioner had stipulated, within

the service specification, a time scale of less than one day in which domiciliary care service providers should respond to their request and have a care package in place.

Community and home care service responsibilities:

16.4: The Community and Home Care Service will ensure that service delivery commences within the following time frames:

Hospital Discharge – within 12 hours

(Extract from Service Specification: Not referenced for reasons of anonymity)

The pressure placed upon providers to meet the demand for domiciliary care services was leading to a high-pressure working environment where LA care packages were arranged as quickly as possible. *“It’s [arranging care packages] fast and it’s quick and it’s a quick turnover.” (Tina P)*. Providers reported that, in some cases, facilitating the speedy discharges from hospital had been at the cost of disregarding the clients care choices; for example: what time they were helped to get out of bed in the morning. In an example given by Tina (P) discharge from hospital to avoid a delayed transfer of care had surpassed the concerns raised by the provider about the client’s inadequate housing conditions. In this case a lady with an existing respiratory condition was discharged from hospital into a cold home.

“...we [the provider] were overruled, and they [local health and social care decision makers] allowed her to go home...She died...the house was very old and very [cold] – they had no central heating or anything like that. “

Interviewer: She had respiratory illness?

“Yeah, it was awful really.” (Tina P)

The increased demand for, and dependency upon, the domiciliary care system at health and social care system level had expanded the type of care being delivered by providers and their staff *“...it’s [care] getting more medical...”*

(Geoff P). Some care staff were supporting clients with complex and/or high levels of specialised care needs.

“...we’ve got somebody with a tracheostomy... We’ve got somebody PEG [percutaneous endoscopic gastrostomy] feeding care...It is very complex and challenging to administer’.” (Natalie P)

The dependency of the wider health and social care system upon the domiciliary care system was also mirrored by an increasing dependency within clients. Some people needed help with even the most essential aspects of living for example: eating or being able to go to the toilet: *“...we take her to toilet, and we feed her, and we give her a drink.” (Cathy S)* Some clients could not move unaided and were totally dependent upon domiciliary care services.

“lot of our customers sometimes don’t move, once we put them somewhere they don’t move...[name] is transferred from her commode to her chair and she stays there until we come back again...” (Winney S)

In some cases, the domiciliary care service staff played a significant role in their clients’ daily lives, and a close and influential relationship was established between the client and the care staff.

“...they [clients] become part of your family... because you see them more than what you do your family, if you know what I mean? I’m going there four times a day”. (Cathy S)

“Some of them [clients] listen to us more than the families sometimes...” (Emily S).

Amongst all participants there was a clear recognition that the increasing demand and dependency upon the domiciliary care services was pushing the system into crisis, operating at or above capacity, and would lead to major repercussions for the care sector and those needing care.

“I think it’s [the domiciliary care system] bursting... Something’s going to give, something’s going to blow.” (Natalie P)

*“We get calls all day...we probably have got 30 customers on our books [waiting list]...Some sadly will die before we get to them...”
(Nadia P)*

However, the increased demand for care being experienced by participants was being met with reducing resources to meet care needs and all commissioners described ongoing year on year reductions to social care budgets within their LA. *“There’s less and less money [for social care].” (Anthony C).*

One LA area included within this study had overspent its annual Adult Care and Housing Budget by £3 million in the previous year which was attributed to *“...increased demand for services - residential and nursing care and domiciliary care packages”*. Despite increasing demand, an additional savings target was set for commissioners within this LA over the following three years which amounted to a reduction of around 11% of their existing budget.

“...over the next three years we’ve got £20 million [savings to make] just from adult social care...” (June C)

The scale of the budget reductions, coupled with the increasing demand for care described above, had led to reduced services. This was reported by all providers and three distinct approaches to reducing services were apparent from the data.

The first approach was to distinguish between 'care' tasks and 'social' or 'domestic' tasks and then use this as a basis to reduce what was included as part of the commissioned care package. Those tasks deemed to be essential care tasks, which included personal care, providing simple meals and administering medication, were retained as part of the packages. The reductions had been applied to the 'social or 'domestic' tasks such as shopping and cleaning. In one example cited by a manager from a provider organisation, a client had four hours of LA-funded support for shopping, and other domestic tasks, withdrawn despite being unable clean, shop or leave the house unassisted. As a result, the client had funded some of the lost care herself, but

to a lesser extent, which left the staff rushing to complete the tasks in half the time.

A further example provided by Tina (P) illustrated the second approach which was to reduce the length of the care calls. Morning 'shower calls' could involve getting the client out of bed, showered, toileted, dressed and making their breakfast. In one LA area, commissioners had reduced shower calls from 1 hour to 30 minutes. This again created time pressures and a rushed approach to care.

"... shower call should always be an hour...get up, have your breakfast, get your medication, have a shower and get dressed in half an hour, without rushing someone it's not going to happen is it?"
(Tina P)

Elizabeth (S) provided a similar example where a 'tea call' to a client with dementia had been reduced by half, from 30 minutes to 15. Following the reduction of the time allowed for this call, there was not enough time to complete all the tasks she had previously provided for her client. So, rather than leaving the client with unmet needs, Elizabeth (DS) chose to complete the tasks in her own time (unpaid) driven by her conviction and personal belief that she was a 'good' carer' and a good carer would not leave a client with unmet needs.

"...the tea call has been reduced to 15 minutes which I go to, to give her her tea and tidy round and I'm there always half an hour but I'll get paid for 15 minutes...at the end of the day if you're a good carer you'll not leave a house until you've sorted everything out that needs sorting." (Elizabeth S)

The third reported approach was to reduce certain types of care call. 'Nights' involved visiting the client during the night; for example: to help them get up to go to the toilet. One LA had stopped all care calls at night. In this instance, leaving a potentially harmful unmet care need.

“...the chap [Tina’s client] used to get up twice to go to the toilet and the wife wasn’t able to get him out of bed and he’d fall...They’d [the care staff] take him to the toilet...we did loads of them [‘nights’] and then they [commissioners] stopped them all...” (Tina P)

Some commissioners and providers expressed a view that the reductions to care packages had limited the choices of those receiving LA-funded care to a greater extent than for those who had the funds to pay for their own care. Choice about the amount and type of care they would receive were made at commissioner level and therefore, due to fiscal restrictions, the care provided was more limited.

“... if you're poor or you're deprived you haven't got a lot of finances, then you don't deserve a good service, because you'll only get what the council can provide and the council can't provide you with a lot because it's all about savings. So you get, you know, you get your Asda Smart Price service rather than your Extra Special shall we say.” (Ruby C)

Those who can fund their own care also face choices about their care as the limits of their finances, and their willingness to pay, will ultimately govern the number, and length of time available for care staff to deliver care. However, this choice is their own to make. As is the choice of which services are included, or not, in their care-package. Should they be able, and willing to do so, those funding their own care could buy ‘social’ and ‘domestic’ support and bespoke care packages from some providers.

In addition to the impact of reduced resources, all commissioners reported that their ability to respond flexibly to care needs, and maintain a viable provider market, was hampered by commissioning systems and processes which in turn reduced choice for commissioners and those needing care. In some cases, leading to unmet care needs.

The ‘provider framework’ was the collective term used for the system by which the commissioners employed a group of ‘pre-selected’ providers to deliver care for the LA as described in Chapter 2. (2.3.1). All commissioners reported that

on some occasions the restrictions created by the framework system had made it difficult to respond to individual care needs and/or choices. Should a framework provider be unable, or unwilling, to meet particular care needs, purchasing this care from an alternative provider outside the framework was difficult and involved a long and convoluted tendering process.

“...the council can’t buy, can’t spot purchase individual things [packages of care]...we have to go to a tender thing or an award process” (Anthony C)

Sometimes this limited commissioner choice led to compromises in client care. In one instance, the framework providers inability, or unwillingness, to meet a client’s care choices caused the client to stay in bed for an extra 4.5 hours a day which was unwanted and increased her time spent immobile.

“... we’ve recently had a lady who wanted to go to bed at eleven. The latest call we could get for her was half seven to put to bed...staying in bed more than 12 hours. It’s unhealthy.” (Ruby C)

The lifespan of frameworks was also reported as problematic by providers and commissioners. As agreements remain in place for several years, contractual conditions can become increasingly outdated. One framework had been created five years before data collection. *“...that was done [framework established] back in 2011...” (Ruby C)*. If the payment rates within a framework agreement are not made subject to a contract variation, the purchase price for care packages becomes increasingly out of step with the running costs of providing that care. Legislative changes such as the Minimum Wage, a legally-mandated minimum hourly rate for all paid employees within the UK (Low Pay Commission 2021), would therefore erode provider profit margins, on top of normal inflationary increases to running costs. Some commissioners had not, or had been unable to, increase their provider remuneration levels.

“I don’t think that £13.20 is enough as it is now... national research is that to meet the minimum wage...the living wage, we should be paying [providers] £15.75 an hour.” (Ruby C)

The friction between public sector fiscal restraint and the private sector business model made it difficult for some commissioners to maintain a viable provider market. Some care organisations had chosen to stop working for the LA: *“A couple [of providers]...have stopped working in [LA name] totally because of the costings and fundings...” (Tina P)* and in other cases, the payment rates led to difficulties in attracting new providers to work with the LA. This restricted both the commissioner and client choice in respect to care provider.

“...and we struggle to get new people to come in and invest in [LA name] they've [possible providers] just said no we wouldn't [work in the area] because of your fee structure...” (Ruby C).

In one LA, these difficulties resulted in substantial unmet care needs as the commissioner failed to secure any providers to deliver a large package of care.

*“...we've had up to 400 hours [of care requirements] over the summer that we haven't been able to get anybody to take, to tender.”
Ruby (C)*

All commissioners used the ‘time and task’ approach, as described in Chapter 2. (2.3.1), to commission and specify the content of care packages.

“...the [LA] system, it's quite restrictive, quite prescriptive...So you'll visit for 15 minutes on this day, you'll do tablets, you'll do this, you'll do that...” (Ruby C)

Under this approach, care packages are designed to deliver a series of pre-determined tasks rather than allowing the providers and staff flexibility to meet a range of client care needs pertaining to their health and wellbeing. Provider performance is also measured against task completion rather than measuring overall performance based upon the clients' outcomes.

“...they've [providers] been asked to go in and provide a particular task, rather than focus on the outcomes.” (Anthony C)

Ruby (C) and Anthony (C) had worked on plans to use an alternative model of commissioning giving the providers, and those receiving care, more choice and flexibility. Ruby (C) proposed that her LA moved to a more *“outcome-based approach”*.

“It [the new commissioning model] wouldn't just be about traditional domiciliary care; it's about their [clients'] holistic needs.” (Ruby social care).

Under her proposals, providers would have greater freedom and flexibility to work with clients and use care funds to rectify problems that might affect their health and wellbeing; such as being cold whilst in bed.

“So if they're cold and their bedding isn't up to standard...there wouldn't be any reason, why the provider couldn't utilise part of that personal budget pot, with agreement...with the person [client], to buy better bedding....”

However, both Ruby (C) and Anthony (C) described challenges hindering their plans to move to outcome-based commissioning practices. Some of the challenges were the result of external macro influencers such as funding reductions which had stifled longer term strategic thinking.

“But if we're driven by savings it [her plans] all gets lost because the money becomes the dominant factor...The here and now money...” (Ruby C).

However, most of the roadblocks they encountered arose from within their own LAs and stemmed from organisational systems and culture. Within LAs role and responsibility are constructed through function. This meant that changes in the practices and processes by which care is put in place require the input and approval of several different directorates, for example: legal, finance and contracting. Also, strategic plans require the approval of the LA's elected members before they can go ahead. Elected members or 'councillors' are democratically elected members of the public who represent their local communities in LA matters. Approval for LA plans is granted by majority vote at either a meeting of all councillors or by a group of senior elected members

called 'the cabinet'. For the commissioners, this created a complex working environment in which changing systems and processes, such as commissioning practice, could be a drawn-out and problematic process.

"there's been a lot of resistance to it [proposed new model of commissioning] ...Procurement don't like the model. Legal don't like the model. Finance don't like the model." (Ruby C)

"...they [the cabinet] never understood the model." (Ruby C)

A pervasive fear of blame and public scrutiny within the LAs also encouraged resistance to making changes to how care was commissioned *"it [fear of blame] pervades the whole ethos and the whole culture of the council..." (Anthony C)*. This fear influenced LA decision making. Ruby (C) described how her colleagues would make *"a decision which is safe"* rather than risk making changes to practice, as they were fearful of the consequences to themselves should a problem arise. Consequently, trust in others, both internal colleagues and external providers, was lacking and there was fear in relinquishing the control that the time and task model afforded. Hence the tried and tested ways of commissioning care were prevailing.

"...[other directorates] ..telling us exactly how you want it done and when you want it done and what colour you want it and what shape you want it so what opportunity is there for innovation?...people feel that well if I don't put them into four calls a day...if something happens to them [the client] I may lose my job or I'm going to get hauled over the coals.." (Anthony C)

"We're stuck in the very traditional way of looking at it [commissioning], and that reflects onto the internal practice, i.e. four calls a day...boom, sorted..." (Ruby C)

5.3.2 Sub-theme: Delivering care

'Delivering care' explores how delivering domiciliary care services is shaped by the nature of providing these services and the challenges of maintaining a care workforce able and willing to work within the practical and emotional demands of the care role. The impact of these challenges is felt by providers who also reported the impact on their clients.

The participants described the demands of the care role in two ways; those that were *'practically'* demanding, and those that were *'emotionally'* demanding. The practical demands were a result of, and governed by, a combination of client care needs and delivering the care in the homes of the clients; for example: working hours, constant shifts changes and travelling from home to home.

The care staffs' working hours fell outside the commonly accepted definitions of normal working hours in the UK (9am to 5pm Monday to Friday) *"care doesn't stop, it's not a nine to five job...because people need support...."* Corrine (P) and which participants described as working unsociable hours. Scheduling the working hours to meet client care needs often required care staff to work an extended working day. Although care staff worked relatively normal numbers of hours per week (up to 40 hours per week in the UK), for some staff the hours were split into shifts across the day and sometimes spanned up to 15 hours. For some staff this meant work dominated most of their waking hours.

"...the first call is twenty past seven on a morning, and we work through until eleven o'clock. Then we get a break, and we start back at half past twelve ... then we have a bit of a break. If we're not running over as well, we start about quarter to four until five, half past five, and then I go back out for quarter to seven on a night, [until]...well twenty to ten on a night. (Cathy S).

Care packages can be highly time sensitive and cannot be re-scheduled as some clients are highly dependent on the care services and can be at risk of harm should they not be delivered *"... there's a four-hour gap before safe administration of medications."* (Geoff P). To ensure all care calls were delivered, the providers would often need to change staff schedules at very

short notice. This meant that staff constantly travelled to new places and visited different clients. Some care staff found this stressful.

“they’re [employer] on phone to you constantly, can you cover this call, can you cover this call and everything... they’re [employer] expecting them [care staff] to go to different areas, and they don’t give you enough travel time, and it’s a lot of pressure on people...”
(Cathy S)

Delivering home care requires staff to travel from home to home rather than work in a single location, for instance a residential care home. Some respondents thought that this made the job more difficult and less attractive than other roles in health and social care *“If you’re based somewhere for five hours it’s easier than travelling from home to home.”* (Tina P).

The emotional demands of the care role were a result of lone working and the need to maintain a professional persona in the face of distressing or unpleasant aspects of the role. Lone working presented psychological demands upon the care staff who did not have colleagues on hand to check and challenge where a potential mistake could occur, for example with medication, or be witness to their actions should an accusation be made about their work or behaviour. This impacted considerably on some care staff through the anxiety and fear of reprisal it created *“...you’ve always got to be covering yourself all the time...”* (Elizabeth S).

The timeliness characteristic of delivering domiciliary care services, combined with the dispersed and isolated working conditions, made it difficult for staff to come together as a group for meetings and training sessions where they could benefit from the social and peer-to-peer support that ‘*get togethers*’ might offer *“...because obviously you can’t have all your carers because they’re always going to be out doing care...”* (Cathy S). Dispersed working also created challenges in providing supervision to care staff in the field. One large provider employed ‘*field supervisors*’ whose single role was to support, coach and manage care staff and did not (in the main), deliver care. However, several of the smaller organisations within the study had ‘*senior carers*’ who took on multiple roles within the organisation including staff supervision; which some

participants believed led to conflicting priorities and a potentially detrimental impact on the care being delivered.

“... they're [senior carer] providing support to a vulnerable person... their phone's potentially going to ring and it's a member of staff saying please help me. Who's the more important? How do you make the decision not to answer the phone or to stop supporting the individual?” (Mike P)

The care staff often talked about the emotional demands of their role. The term ‘*emotional labour*’ was first used by Arlie Hochschild who described emotional labour as having to “*induce or suppress feeling in order to sustain the outward countenance that produces the proper state of mind in others*” (Hochschild 2012 p. 20). Participants reported how they had to maintain a professional persona during their work despite experiencing grief, revulsion or trying to spare a client from embarrassment.

“...obviously it's going to happen that their [clients] going to pass away...[I have to] be strong for family and friends...and then come out and have a little cry” (Sharon S)

One provider commented that despite believing they could cope with the level of emotional labour required, some staff found that once faced with the situation, they could not.

“...they [new staff] think, do you know what I know they [the providers] mentioned incontinence but now I'm actually dealing with it I realise that I can't...” (Mike P)

Although all respondents recognised the demanding nature of the care role, this was not reflected in the staff remuneration and many staff were paid the minimum wage “*They [care staff] get paid the minimum wage.*” (Tina P). Some providers believed this made the care role unattractive compared to other sectors, when the demands of the role and the level of responsibility were considered, and fuelled staff turnover.

“...So for them [care staff] to get £7.20 an hour, or go to Aldi [retailer] where you don't have to drive your car, you've got no responsibility except for making sure you're bending properly to stack a shelf, to get £10 an hour for it” (Eleanor P)

One provider paid above the minimum wage. She stated this would not be possible if she delivered LA-funded/organised care where the fee structure would not allow her to maintain her profit margin which she maintained by increasing the fees to her clients as and when her operating costs increased.

“...what they [LA] pay..., it will not provide me with the right funding to be able to train, to support, to actually ensure my workers are paid properly...so our carers are paid between £8 and £8.30; from April 1st we're reviewing our prices again and we're going to increase them again.” (Natalie P)

Contractual employment conditions were also considered problematic by some participants. At the time of writing, the percentage of people over 16 years old in full time employment in the UK who were on zero-hour contracts was circa 3%; for domiciliary care service staff the figure is estimated to be 58% (Griffiths et al 2018). One provider offered set contracted hours to his staff which he believed to have reduced his staff turnover.

“We do that [offer contracted hours of work] for the simple reason is it gives a sense of value to our staff. That then encourages our staff to stay...None of them [care staff] are on a zero hours contract...” (Geoff P)

Staff turnover was, or had been, a problem for all providers *“It's a very fickle industry ...people [care staff] are going to go [leave]...” (Natalie P)*. For those who delivered LA care packages, the problem was incessant *“So yeah we've got a turnover issue...” (Mike P)*. Eleanor (P) likened the regularity of staff leaving and new staff joining as being like *“a revolving door”*. For these providers recruitment was a constant cycle of activity.

“We recruit every two months...we have spaces for 15 brand new staff every two months...” (Tina P)

For Tina (P), her requirement to recruit circa 90 new staff per annum to sustain a workforce of circa 120 care staff suggests that two out of three staff may have left each year. In detailing the financial cost of employing new staff, Eleanor (P) stated that her recruitment and basic training cost for each new staff member was “£1,100 for one candidate”. A similar cost structure would have resulted in Tina (CP) spending circa £100,000 per annum on employing and preparing new staff to deliver care for her organisation.

Several ‘suitability’ criteria were identified within the data which providers used to ‘screen’ applicants for their vacancies. The providers believed this approach would help them recruit people who could meet the demands of delivering domiciliary care services and would consequently lead to reduced staff turnover. Although the providers had plentiful responses to their recruitment adverts, “*we probably get about 100 enquiries each week to join our team...*” (Mike P), all providers reported difficulties in “*...finding the right people.*” (Corrine P) who they believed met their criteria.

“We’ve interviewed last week, I think, and we’ve said no to all of them [applicants]...” (Nadia P)

These criteria included having a genuine interest in care work and being able to work within changing shift patterns. Some providers felt people claiming benefits were not genuinely interested in the roles they applied for and were simply applying to meet a specific requirement of the UK benefit system. This being that those receiving unemployment benefits must be seen to be actively applying for jobs and be able to evidence those applications at the request of benefit agency officials. “*So it looks like they’re looking for a job if they apply for a job.*” (Tina P). As such, applicants who were not in paid employment at the time of their application, or were applying through the Job Centre website, were often dismissed as unsuitable during the initial stages of recruitment by several providers.

Natalie (CP) also felt that young people [under 25] were not genuinely interested in care.

“...they’re [young people] more likely to see it as a job and just come in and work; whereas we want someone in who wants to care...”
(Natalie CP)

All providers considered a candidate’s ability, and willingness, to work the constantly changing and unsociable hours associated with delivering domiciliary care services a key criterion of suitability and all providers reported difficulties in finding people who could accommodate the changing shift patterns *“...it can be challenging to find flexible people...”* (Corrine P).

Only one provider used pre-designed tests within the selection process and the majority appeared to rely upon their own perceptions and measured suitability against their own norms and values. Eleanor (P) described ‘using her gut’ (short for gut instinct) to screen applicants and deselect those not fitting her ‘ideal’ or ‘stereo-type’ of who she believed was able and capable of being a carer.

“So I always go with my gut feeling...if I interview somebody, I can tell with my stomach that they’re right or wrong. Yeah, and if they’re wrong, then I won’t hire them.” (Eleanor P)

Some providers also used client preference as a rationale for seeking to employ more mature care staff. A comment by Cathy (S) did support this to some extent. However, the comments also suggest that this may be based more on social attitudes towards younger people and not their actual ability in the care role.

“...and I find, I mean a lot of my customers do prefer the middle aged [carer], if you know what I mean, not young’uns and whatever, but some are good...” (Cathy S)

Geoff (P) offered an opposing view to most providers stating that his clients enjoyed the young carers visits *“...a lot of older people do like younger workers because they like the gossip and they like what they’re doing in their lives...”* His comments suggest that attempts to reduce staff turnover were more likely the motivating factor for most providers when seeking an older candidate.

“You find there's a lot at the younger end will move on quicker than the older end...a lot [young people] do use that as a platform to further their career in different aspects of care...” (Geoff P)

Some respondents framed suitability around gender, again citing client preference. However, one provider held very firm views about who was capable, and suitable, to be a care worker and believed that male applicants generally did not meet her suitability criteria.

“We have enquiries from men, but they generally don't pass the muster [UK phrase meaning to be accepted as adequate or satisfactory].” (Winney S)

Despite providers applying selection criteria to find suitable applicants, the criteria did not appear successful in ‘finding the right people’ as turnover remained high in some cases and some new staff left after a very short time.

“...you wouldn't believe how many people come through training then just disappear at the end of the week...” (Winney S)

The high staff turnover meant that most providers could not provide their clients with the same care staff on a regular basis, and some clients experienced many changes in their care staff.

“Yeah it's difficult to have people in, the same people in every day...it [high staff turnover] doesn't give us consistency in a customer's care.” (Nadia P)

“I went to a lady and she'd had like 12 [different] carers in two months...” (Sharon S)

There is no one consensus on the conceptual definition of continuity of care (Sparbel & Anderson 2000), but there are two important perspectives relating to continuity of care and both are focused on the quality of care over time (Gulliford et al 2006). The first relates to care delivery across multiple providers and professionals, and quality is achieved through the seamless integration and coordination of the individual's care. The second, and more traditional and

pertinent, is that which concerns itself with a constant relationship (ibid) between an identified carer and client through care being delivered by the same care staff to the same people on a regular basis. This was the definition of continuity of care used by participants in this study.

All participants recognised the benefits of providing continuity of care and reported this in several ways. Firstly, the sustained contact with a client supported the development of a relationship which facilitated a better understanding of the clients care needs.

“...you find that easier then to help them [the client] with their care and their needs...you get to know them better...because you get to build the relationship up...” (Tracey S)

Secondly, regular contact with clients built the care staffs' knowledge about what was 'normal' in respect to their client's health and wellbeing, behaviour or environment. If care staff visited clients on a regular basis, they might detect even subtle changes in the client's physical or behavioural norms. *“...their mood, whether they're just a bit confused.” (Eleanor P)*. This provided opportunities to initiate preventative interventions and Eleanor (P) used the example of a potentially serious illness and how staff could spot very quickly that there was a problem. She described these opportunities as 'early warnings.'

“So we're picking up on early UTIs [urinary tract infections], just early signs [of illness]...they [care staff] can pick straight up when somebody's not well...so we call it an EWS [early warning system]” (Eleanor P)

Having the same staff, or small team of staff, visiting a client meant that problems arising could be shared between staff, monitored and action taken if deemed necessary.

“...one of my customers she's got a bit of a cold at the moment and my other partner is working today, so I've said if she's no better today [name], phone doctor and get doctor to come out to see her (Cathy DS).

Elizabeth (S) used the example of when a client's heating might not be working properly offering that regular care staff would know that the temperature of the house was not at the normal level, and they would realise something was wrong.

"So if I went in to say [client name] and it were cold...I know for a fact that [client name] house is red hot..." (Elizabeth S)

Finally, continuity of care also aided working relationships with others involved in client care, for example families, and other professionals within the community. Some providers and staff used these relationships to initiate preventive interventions and/or refer clients at risk of harm into other services. For instance, as Jane (S) explained, if a client's house was cold or the client needed medical attention, her relationship with her client's families and community staff meant she had someone to refer any problems to.

"... if it's too cold or they've got a chest infection or anything, then we'd ring the office and say ... I've made an appointment, the doctor's coming out, can you contact the family... or because I have got quite a good rapport with mine [clients & their family], I would ring the family anyway and say you know, you need to come in and see... the house needs to be warmer. (Jane S)

Jane (S) and Elizabeth (S) were the only care staff who reported seeing the same clients for most of the time. Jane (S) explained that she felt this was the exception and was a result of her raising the issue with her employer. She felt she could do this because she was experienced and confident. Additionally, she had used the provider's own claims within their marketing materials as leverage as the extract from her interview below illustrates.

Interviewer: Do you tend to see the same clients?

Jane (S): "I do, yes. I do because I put my foot down...I have got experience and I was able to go in there and I was able to lay the policies and procedures down and say like, where's your person-centred care, where's your continuity in care, where is all this that you promise in your books..."

Interviewer: "Do you think other clients are not getting the same person all the time?"

Jane: "No, no, they don't."

5.4 Theme 2: Preventing cold-related harm across the domiciliary care system

This theme explores how cold was included in the domiciliary care system and the influencing factors. Considerations of cold were not included in commissioning practice nor in the training of care staff. Consequently, any preventative interventions were at the behest of providers and their care staff and dependent upon having the opportunity, ability and motivation to do so.

5.4.1 Sub-theme: Role and responsibility

This sub-theme examines how cold was considered in the domiciliary care system through the lenses of role and responsibility. Notions of who is responsible for preventing cold-related harm, and considerations of whose role it is to deliver preventive interventions, were reflected in commissioning practice. The commissioners were responsible for, and made decisions about, care for those in receipt of LA-funded and/or organised care services. Yet none had a clear sense of how cold-related harm to health should be included within commissioning practice and whose role or responsibility it was to prevent cold-related harm in older people. Anthony (C) did not see the inclusion of 'health' related matters into commissioning practice as his role. He, like his colleague Ruby (C), regarded the prevention of ill health as the remit of the Public Health Directorate within their LA.

*"I think the only people that would see it [preventing cold-related harm] as their responsibility would probably be the public health."
(Ruby C)*

Within Anthony's (C) LA, Public Health did not input into the commissioning process and the LA departments worked in relative isolation to each other in some cases. As such, best practice guidance on the prevention of cold-related harm to health, for example NICE Guidance on the prevention of excess winter deaths (NICE 2015), were not considered in the commissioning process as the following extract from an interview Anthony (C) illustrated:

Interviewer: "Are health issues fed into those commissioning issues decisions; are they actually a part of those decisions at present... things like the public health, NICE guidance...?"

"Not directly, no."

Interviewer: do you see it as your role?

"Well, I think it could be. It depends how we approach commissioning. At the moment, we're quite - what's the word - segregated really. So you've got different teams doing different things and never the twain shall meet."

There was no clear agreement on loci of responsibility for preventing cold-related harm amongst participants and no agreed ownership of the problem. Opinion varied with most offering that responsibility lay with everyone who might come into contact with a vulnerable older person.

"I would say it's the individual's responsibility. I will say it's the family's responsibility, and also the care or the person who goes in there to provide that care, so it's a shared collective responsibility."
(Anthony C)

"... surely there's a joint responsibility from benefits agencies to energy suppliers to neighbours..." (June C)

One commissioner offered a more considered opinion on where the responsibility to prevent cold-related harm in those receiving care currently lay. Initial care needs assessments (usually carried out by social workers in conjunction with community health professionals) are normally used by LAs to inform care package decisions. These assessments include ensuring that where the person lives is an adequate and safe environment for their care needs (Clarkson et al 2009). In Kate's (C) opinion, this placed responsibility within the remit of social workers. However, after some deliberation, she then questioned this and offered the limitations that a one-off assessment presents; suggesting that care staff might be better placed to identify risk within the client's environment such as that presented by living in a cold home.

"[responsibility lies] In social work land, definitely... because they've got to take in all the environment and people around them...and if it's cold then they should be helping to try and fix it... [pause].....But the social worker and assessment officer don't go around every day, two or three times a day, [as care staff do] they're [care staff] in there: they're feeling it; they're seeing it." (Kate C).

One LA set out the requirement for providers to assess the clients' environment for risk as part of setting up care plans. Within this LA, this requirement was included in the service specification for providers as the following extract illustrates.

Section 11: Community and home care service responsibilities:

11.3: The completion of a risk/hazard assessment in relation to the care/support plan and the environment.

(Extract from Service Specification: Not referenced for reasons of anonymity)

However, none of the commissioners could recall any specific reference to cold indoor temperatures within the service specifications and, unlike the risk of fire or the risk of infection, living in a cold home was not detailed as a reason for concern to the health and safety of clients.

“I would hope it [the risk of cold] is [included in the service specification], but I couldn’t say for definite.” (Kate C)

“I can’t hand on heart say it’s [cold] in but...I’m sure somewhere we take their environment into consideration...” (June C)

Two of the commissioners felt that if cold-related harm was not identified as a potential hazard, and was not included in service specifications, then it would be left to the individual provider to make the choice whether they considered cold as part of their hazard assessments “...around domiciliary providers, I’m not sure where they see their remit starts and finishes”. (Kate C).

5.4.2 Sub-theme: Delivering interventions

This sub-theme describes some preventive interventions reported by providers and care staff. This included both practical interventions, and those intended to change risky behaviour that might lead to cold-related harm in their clients.

One commissioner shared a weather alert warning of severe weather to providers in the previous winter. Two providers, albeit a recent development for one, sent digital communications to staff to alert them to potentially harmful weather conditions such as prolonged or extreme cold. Another provider included information about the harm to health that can be caused by living in a cold home in a newsletter circulated to staff and clients.

“...we got a text out a couple of times saying it’s really cold, the forecast is really cold tomorrow, even forecast for snow...can you please make sure that all service users are warm, heating’s on, they’ve got a warm drink and everything.” (Jane S)

When bad weather was forecast Nadia (P) distributed emergency food supplies via her care staff.

“...if there’s somebody out on their own they are high alert. You know they’re isolated, there’s possibly more risk and things like that... when we have got bad weather, prior to that I’ll fill up the boot with soups, tins, bread and get some milk...and will give it to the carers [to take to clients].” (Nadia P)

Two providers took simple practical measures to prompt staff to encourage clients to keep their homes at, or above, recommended temperatures. One placed thermometers into their clients’ homes with a colour-coded scale indicating the ideal indoor temperatures to prevent cold-related harm.

“We supply them for free to our service user because then the staff can keep their eye on it [indoor temperature]” (Tina P)

Another created signage to be placed next to heating controls to discourage clients from turning their heating down. In the case of one client with dementia, the provider had included instructions to check the heating controls into the care plan as the client constantly switched the heating off.

“...she [the client] has got memory problems...and she’ll always turn the dial of the thermostat down. Always down to nought...So we like put laminated sheets, please do not touch this... it’s in the care plan for the carer, to make sure that thermostat is between 20 and 30...” (Geoff P)

The same provider also included information regarding the clients’ heating system in care plan notes, such as the control circuitry location and records of telephone numbers for staff to call heating engineers if there was a problem.

“...we can open up that individual’s care plan and we can say... the boiler’s located in such a place, the fuse box is located in such a place and the gas cut-off is there...” (Geoff P)

During the interview, Geoff (P) pointed to the number of electric heaters in the corner of his office for emergency use should a client’s heating stop working.

“...we have storage heaters...and we've actually put them out into the community...like a weekend when it's really difficult to get an engineer out...at least that client is going to be warm in the main parts of their house (Geoff P)

In some cases, participants provided client support clearly outside the care package remit. Participants stepped in to provide support through advocacy when a lack of coordination in the wider health and social care system left them with substantial unmet care needs. In one example Eleanor (P) described how, after receiving a new client with very serious health problems, she immediately identified a series of gaps in the client's care and began to coordinate aspects of the wider health and social care system to ensure the client had the required care. This was very time consuming and frustrating for Eleanor (P) and, although outside the care parameters she was contracted to deliver, she commonly advocated for clients in this way. Other respondents also reported how they advocated for clients in a range of circumstances. Jane (DS) felt this placed her in a significant and potentially influential position within some of her clients' lives.

*“I go to core meetings for people with disability and learning disability and become like their main carer and things like that.”
(Jane S)*

In another case, a member of care staff attended an emergency call out at a client's home following a kitchen fire. Social Services were alerted to provide respite care for the client, however, they decided to leave the client at home. This was despite her kettle, hob and oven being badly damaged in the fire, and having no means to prepare hot food or drinks.

“So I got called out... the fire brigade had been. They removed the kettle and the stove and then I had to wait for the social worker who was supposed to be taking her into emergency care. But when the social worker got there ...they said that she could stay. But I said well she's not got anything for a hot drink...You can't leave somebody with no hot food. But they did.” (Elizabeth S)

Elizabeth (S) reports providing a temporary solution, in her own time and using her own resources *“So I went home and filled a flask of tea and left it on the side for her.”*

Some providers and care staff recognised risky behaviour within their clients that may have resulted in cold-related harm, and some described using a range of techniques in relatively sophisticated ways to positively influence their clients' behaviour. One care provider took a creative and collaborative approach with staff and family members when a client with dementia became very cold in the night due to him taking to sleeping on the floor. Together, they made a special quilt encouraging him to sleep under it by sewing pictures of his family and life into it.

“So it’s trying to work out creative ways to keep him warm and to make him comfortable.” “So we’ve cut the pictures up and did a patchwork quilt...when he’s sleeping now he has this patchwork quilt...he’s got his life story on it.” (Winney S)

Jane (S) reported delivering several interventions to encourage clients to keep warm. She reported changing the behaviour of several clients who were reluctant to switch their heating on, and who she believed to be at risk of cold-related harm. Jane (S) described how some clients exhibited stoic behaviour around heating and how they often referred to behaviours observed throughout their childhood to justify their own behavioural norms. These included using more blankets to keep warm. She related this within the interview by mimicking some of the comments she received from her clients regarding their use of heating.

“He had been through the wars and he didn’t need no heating. He’d been in air raid shelters and survived bombs and this, that and the other. He didn’t need no heating. They didn’t have none of these fandango things when I was a kid. We had blankets...” (Jane S)

To overcome these behavioural norms and encourage her clients to keep warm, Jane (S) reported providing advice by using a drip feed of information about the impact of cold on health using her own tacit knowledge of cold-related harm.

Besides exhibiting tenacity and patience, she also reported using her own time and resourcefulness to gather and use information materials.

“I just kept talking to him and advising him and telling him...” “This is why you’ve constantly got a cough or your chest infections..” “Then I got some leaflets from Help the Aged and just left them on the side by accident and things like that.” (Jane S)

Once she had achieved a positive change, Jane (S) offered examples of how she had used her clients’ improved health to re-enforce the modified behaviour.

“I did eventually get him to keep his house warm. Eventually, it took me a while but I did.” “I said to her oh, you haven’t had your cough this year, have you?” (Jane S)

In addition to using a range of positive influencing techniques, Jane (S) described how she had, on one occasion, resorted to elaborating upon the truth to encourage a client to keep his home warm. In this example, she used the client’s care dependency as leverage to modify his behaviour by implying that if he did not change his behaviour, the care services he depended on might be withdrawn.

“...said it has to be a certain temperature for staff to come in, which it does have to be a certain temperature...” (Jane S)

In contrast to Jane (S), some care staff believed their clients’ behaviour could not be changed.

“They’re set in their ways and that’s it... it’s their way and that’s it. You can’t change somebody at 80 years old.” (Zara S)

One client lived in a home that was so cold the care staff could not take outdoor clothing off when they visited. Rather than switch the heating on, the client wore hats and coats indoors and, although staff tried to turn the heating on a couple of times, his behaviour was regarded as immovable and no more was done to try and resolve the problem.

“...the house is always cold, you can’t take your coat off...He actually wears coats and hats... he won’t...[change] - yeah he’s like that.”
(Tracey S)

Within some care staff, their propensity to try and address cold temperatures within their clients’ homes was regulated by notions of encroaching upon their client’s rights of choice.

“it’s their [clients] home at the end of the day, you don’t want to be going in and laying rules and laws down, do you? It’s their home.”
(Zara S)

For some providers and care staff, perception of their place within a supplier and customer relationship set boundaries about what they should, and should not do, as part of the client care they provided. Corrine (P) described her company as providing “...a very bespoke service.” Despite the obvious signs of her client’s distress Corrine (P) observed whilst delivering personal care such as showering “She was getting a little bit upset...she was saying that she was cold...”, Corrine (P) did not feel it was her place to pursue the matter “we can’t go into people’s homes and demand that they have the heating on.” She rationalised the client’s choices about heating as being habitual and entrenched behavioural norms which she accepted through comparison to her own behaviour.

“...like myself they [client] have a bit of a traditional view of let’s keep it [the heating] off for as long as we can...” (Corrine P)

5.4.3 Sub-theme: Being cold aware

This sub-theme examines how there is a marked difference across providers in the extent to which care staff are prepared for their role through training and ongoing professional development. Importantly, the sub-theme examines to what extent staff are trained in cold-related harm and what information they receive about ideal indoor temperatures to prevent cold-related harm.

Although all care staff received induction training, two findings were significant. Firstly, there was marked variation in the content and length of this training. The largest organisations in the study gave their new staff a three to four-day induction. In contrast, one provider offered a much longer induction training period of nine to ten days described as “...*a brilliant induction...*” and was assured in her convictions that her staff were well prepared for their role “...*they’re really well trained*” (Tina P). The content of the induction training also varied, and some participants described a variety of subject areas covered whilst others described induction training as only covering the minimum requirements for staff to begin working with clients “...*obviously the basics just for getting out there...*” (Winney S).

Secondly, respondents reported that cold-related harm caused by living in a cold home, or the recommended indoor temperatures to prevent cold-related harm, were not mentioned during induction training “*We don’t have any training on it.*” (Jane S). Neither was any training given to care staff about what action to take should a client live in a cold home “*No, I don’t think they [staff trainers] cover anything like that No...*” (Zara S).

The training content was mandated in several ways. All staff were trained in areas mandated by UK law and/or sector specific including “...*fire,...health and safety, infection, moving and handling, medication*” (Eleanor P). One staff member thought that cold environments might have been covered under the health and safety aspect of her training but, like the other care staff interviewed, did not recall any reference to the recommended temperatures to prevent cold-related harm. Another remembered some reference to temperatures but only those in relation to food hygiene.

“I think it [cold] comes under, with health and safety to make sure that they’re not cold and stuff...but I don’t think, I can’t remember temperatures being mentioned.” (Sharon S)

“I think the only temperature question I remember is like the temperature of the fridge or the freezer. (Tracey S)

Although Winney (S) appeared confident in her response that the possible harm to health that can be caused by living in a cold home was included in her organisation's training; replying "*Yes definitely*", when questioned further about this, she was less sure and reported that the recommended temperatures were not included in training.

"I don't suppose they're [trainees] told that this temperature is the ideal temperature..." (Winney S)

For some providers, training staff was a requirement to meet LA contractual agreements "...so we make sure that the service specification highlights that they've [provider staff] got to undertake the care certificate" (June C). The Care Certificate was used by most providers to demonstrate their compliance with the mandated standards for staff training required by the national social care regulator the CQC. However, in some organisations the Care Certificate was not being fully implemented.

"..although they're [the employer] a bit lax in doing it and finishing it. I know one who has been there nearly two years and still hasn't finished". (Jane S)

Most respondents voiced concerns about the efficacy of the induction training to prepare staff for the realities of working alone delivering care in clients' homes "...it [induction training] doesn't learn you for wide world." (Sharon S). Several participants reported training being intense and raised doubts about the trainee's ability to absorb and comprehend the training "*they [trainers] cover that much...it's, it is remembering it all*" (Cathy S). Others regarded theoretical classroom-based learning as inadequate in providing staff with the practical skills required for the care role.

"it [classroom-based training] gives you the theory but it doesn't give you any practical help..." (Corrine P)

Kate (C) noted that some provider organisations within her LA area began to favour a move away from the classroom-based training environment and were moving to more self-directed and digital based learning. However, she reported

that cost was the primary motivator and questioned the suitability of these approaches in providing staff the knowledge they needed to deliver care.

“... they providers] don’t want classroom training. They want to do it quick, cheap, simple... Yes, because they’re having to pay for people to go out and do the training or whatever. So they’re [providers] looking around workbooks, e-learning...not always the best way of getting the message across.” (Kate P)

All care staff were observed delivering care following induction training and before being permitted to commence working alone. This was referred to as ‘shadowing’, but there was a considerable variation in what providers considered an adequate time for staff to be shadowed. This varied between two shadowed care visits (a possible minimum of 30 minutes) and two full days (circa 16 hours).

“...we [supervisory staff] normally say two shadow calls and then they should be alright to go out on their own”. (Emily S)

There was also significant variation in the provider approaches to ongoing staff professional development. Some providers delivered staff training following their induction on specific health conditions *“We’ve done lots of really credible accredited dementia training” (Mike P)*. However, none of the participants provided any examples or evidence of any training following induction in relation to cold-related harm.

For staff working for two of the largest providers in the study, ongoing training following induction consisted of a one day annual or bi-annual update to comply with legal or contractual mandates *“You do it [up-date training] annually...it’s only a one-day thing” (Cathy S)*. Some staff regarded these updates as a matter of compliance and of no educational value *“...you can do it [update training] with your eyes shut.” (Elizabeth S)*.

The data suggested a potential gap in the system in relation to the training of self-employed or directly employed care staff (personal assistants). Judy (S) was a self-employed carer who previously worked for a third sector employer contracting to a local authority. She received training within this previous role,

but since becoming self-employed 6 years previously, this had not been updated at all. She also indicated that previous checks carried out upon her to assess her suitability to work with vulnerable adults were now also out of date. When asked how she kept updated with new policies, procedures and information around care, she replied, *"I don't"*.

"...all my certificates will be out of date, all the training...There's that CRB check that we had to have, now I think that's got a sell by date on it". (Judy S)

The data contains numerous examples of staff using their own personal judgement, based upon behavioural norms, beliefs and thermal comfort, to 'know' if a home or client were cold and to decide what actions to take. This was described as using their *"common sense"* (Elizabeth S). One staff member cited a lack of information for care staff providing guidance about cold-related harm and the actions to take should a client be living in a cold home.

"...when we're out in field most of it is common sense. It's just making sure that they're warm and like if they have got a problem with heating you report it straightaway, or an extra blanket, if it's night-time...it's a bit of common sense as well, isn't it? If you are cold at home, you grab an extra blanket or a cardigan don't you? (Sharon S)

"...but there is nothing out there for guidance or for anyone, unless, it's all about using your own common sense at the moment (Jane S)

One staff member believed that most carers could make reasonable judgements within their work *"I mean carers are not daft"* (Sharon S). Nonetheless, in the absence of training or guidance on recommended temperatures, she offered that most care staff used their own thermal comfort as a guide to make judgements about if the clients' homes were too hot or too cold.

“...if they’ve [care staff] got ... like a sheet from like a training and a bit of acknowledgement of what temperatures are suitable and what’s not, I think it would help them [the care staff]. Because at the minute we just go on ourselves, if we’re hot they’re [client] hot. (Sharon S)

What we describe as ‘feeling cold’ is a basic human response to the air temperature around us; a feeling of thermal discomfort brought about by exposures to certain temperatures below which our bodies feel comfortable. Elizabeth (S) offered that she never felt the cold *“I don’t feel cold at all...”* and many care staff believed that most of their client’s homes were uncomfortably warm *“...most homes are too hot really.” (Winney S)*. In an example given by Emily (S), her own thermal comfort led to the client’s partner turning the heating down despite the client stating that he was comfortably warm.

“I always go into someone’s house and think it’s too hot... I said yes [to the client’s spouse], it’s really warm...her husband [the client] is like no, it’s just right for me...” (Emily S)

Some care staff recognised the limitations of using their own personal comfort as a guide and appreciated that although they may require lower temperatures to feel comfortably warm, older clients may need higher temperatures to feel comfortable.

“...your more elderly, they feel cold more than what we do...and sometimes it [the temperature of the client’s home] can be a bit overpowering, but it’s just all right for them.” (Cathy S)

In one organisation, care staff were told by trainers to rely upon the client to raise any concerns they had about the temperature of their home and/or their thermal comfort.

“All they [trainers] say really in the training is if the client says to you they’re cold then check everything and if you feel it’s cold you ask them how they feel. It’s all about what they, how they feel ...” (Elizabeth S)

The reliance upon the client to speak up if they were cold was problematic in some cases. For instance, one carer described a client who, due to her paralysis, did not realise that her body was becoming cold, and, in this case, the care staff routinely made sure she had extra clothes and blankets to keep her warm.

“...you touch her skin and she’s really cold...because she’s paralysed down one side, she can’t feel it...we’ll put shawl on her if she’s in wheelchair, or she’s got blankets for her knees and her arms when she’s in bed...” (Sharon S)

The following chapter will summarise these findings and discuss their implications.

CHAPTER 6: Discussion

6.1 Summary of findings and introduction

Responding to a gap in the literature, this is the first study to examine how the domiciliary care system contributes to the prevention of cold-related harm in older people. This was achieved by meeting the objectives of identifying the nature of any interventions delivered by domiciliary care to prevent cold-related harm within its clients; exploring if the prevention of cold-related harm is considered within the domiciliary care system; and, what are the influencing factors.

I found that the delivery of interventions to prevent cold-related harm was reported. However, the findings expose a range of factors, operating at both system and individual level, which influenced the likelihood that the domiciliary care system would detect and act upon the risk of cold in their clients' homes. My study offers insight and a theoretical contribution to the literature about how organisation structure, systems and culture impede ways of working. Silo working and the fragmentation between LA directorates all work to compound the problems of funding, capacity and workforce faced by social care; problems that have been further exposed and exacerbated by the COVID-19 pandemic (Bambra et al 2020, Beatty and Fothergill 2016).

At system level, the participants were facing increasing demand pressure and increasingly complex and medical care requirements with tightening resources. The result was shrinking care packages and less time for staff to deliver care. This meant that during care visits, attention was focused mainly on delivering priority tasks, such as medication and personal care. The time and task approach, used by commissioners to design and purchase packages of care, perpetuated the focus upon tasks within care delivery and provided no incentive, or room for manoeuvre, in which providers could address wider care needs.

The high staff turnover, experienced by some providers, meant they could not deliver continuity of care for their clients. This was particularly apparent within providers working for LAs and their attempts to recruit and maintain a stable

workforce were failing. In many cases, providers blamed the demands of the care role and conditions of employment. However, the restrictions of the framework system limited their flexibility to make choices about how they ran their business; for example: increasing staff wages.

Within the study participants, there was no consensus about who was responsible for preventing cold-related harm in older people and national best practice guidance and evidence was not routinely translating into local practice. This lack of accountability and response to the evidence base was reflected in the findings that cold was not considered in the commissioning or delivery of care in any structured or formal manner and cold was not included in care staff training.

Despite the above limitations, some providers and care staff reported choosing to deliver interventions to tackle cold-related harm which were outside the requirements of the contracted care packages. Importantly, I found these choices were made at the discretion of individuals within the domiciliary care system.

This chapter will explore these findings, and their contribution to knowledge, in greater detail. The chapter will first discuss, in relation to Objective 1, the nature of the interventions delivered. The next two sections, related to Objectives 3 and 2 respectively, examine how the prevention of cold-related harm was considered within the domiciliary care system and the influences which reduced the likelihood that the system would deliver preventive interventions. The following section brings the discussion full circle and returns to interventions, exploring the reasons why some providers and staff delivered interventions despite limitations within the system. The chapter ends with a summary of the discussion.

6.2 Interventions delivered by the domiciliary care system intended to prevent cold-related harm in older people.

Several providers and care staff reported delivering interventions to prevent cold-related harm which were simple and practical in nature and were, in the main, delivered in response to the recognition of obvious hazards within a

client's home. Of importance within these findings was that the providers and care staff appeared to use their own time and resources to do this. Additionally, there was little evidence of activity to reduce the risk of cold-related harm at commissioner level, other than one commissioner who recently shared cold weather alerts.

These findings are of significance for several reasons. Firstly, they contribute to the gap in knowledge about the role of the domiciliary care system in the prevention of cold-related harm in older people. The potential for the domiciliary care system to deliver preventative interventions is recognised within the Cold Weather Plan which states that in many cases, "*simple intervention*" by health and social care practitioners, including those delivering domiciliary care, could avoid much of this death and illness (Katiyo et al 2018 p. 12). However, most of the evidence reviewed within Chapter 3, about interventions to prevent cold-related harm by the domiciliary care system, was discursive and advisory in nature and provided little evidence of what was happening in practice. This finding is also supported within a rapid review, commissioned in 2019 by Skills for Care, to explore the wider prevention role played by social care in light of an increasing focus on prevention within health and social care policy (Wavehill 2019). Wavehill (2019) conclude that currently, very little is known about prevention within the domiciliary care system and that the '*quality and rigour*' of this evidence base requires improvement (ibid p. 29). My study contributes to the evidence base with findings about what happens in practice but also provides new knowledge about the nature of the interventions delivered by the domiciliary care system to reduce cold-related harm and importantly, who is delivering them.

Several care staff reported delivering interventions that moved beyond a practical response to an obvious hazard and claimed to tackle risky heating behaviour in their clients by using a mix of techniques over a sustained period. This finding is significant as these interventions were reported to have addressed some individual behavioural influences, identified in the literature review (Chapter 3), which led to some older people being cold in their homes; for example: stoicism (Tod et al 2012), lay beliefs about cold and health (Harrington et al 2005) and habitual under-heating behavioural norms (Willand

et al 2017). Most of the interventions within the review focused primarily upon improving heating systems and/or insulation or reducing the cost of domestic fuel. Whilst these interventions provided benefits in terms of improved heating efficiencies, they sometimes failed to consider behavioural influences affecting heating usage and did not always translate into improved indoor warmth as identified by Tod et al (2012). These findings are highly relevant in the current climate of rising fuel prices and behaviour changes to mitigate the risk of high fuel bills (ONS 2022).

I found that some care staff claimed to have successfully encouraged their clients to heat their homes more and increase indoor temperatures. The care staff involved exhibited an awareness of the risk to health caused by living in a cold home. They had incentivised their client to use their heating to keep warm by leveraging the potential for improved health and by providing advice, encouragement and information from trusted sources. When this behaviour change proved beneficial to the client, their improved health was used as reinforcement to sustain the change. In the main, the care staff acted upon their own initiative to deliver these interventions and often used their own time and/or resources. Again, as described above, these findings are highly significant given that fear of debt could lead to clients, at risk of cold related harm to health, reducing their heating usage rather than keeping themselves warm (See for example: Oreszczyń 2006, Tod et al 2012, Willand 2017, Lloyd 2013).

My findings exposed how recommendations provided within the Cold Weather Plan (Katiyo et al 2018) and NICE Guidance (NICE 2015) were not translating into the domiciliary care system in a systematic or organised manner. Both these policy documents are clear about the actions for adult social care commissioners, yet I found that commissioners did not consider this guidance or include it in commissioning practice. This finding has implications for preventing cold-related harm in older people given that the literature review (Chapter 3) found some evidence, albeit it very limited, that when the domiciliary care system is formally supported to engage with interventions, this proves a useful and effective means to help reduce risk. For example, Bennet et al (2016) described how care staff held vital knowledge about their clients,

identified older people at risk and referred them into an interventions scheme. Adedeji & Jepps (2014) and Bull et al (2010) also described how social care staff referred clients into interventions programmes and were a conduit for information and advice after receiving training. Within the participants of this study, the delivery of interventions rested upon the discretion, moral choices and commitment to their role of the individual providers and care staff. My findings provide unique insights into how these choices were influenced by factors operating at system and individual level. The following sections discuss these findings and their meaning further.

6.3 The factors influencing the domiciliary care system's interventions in preventing cold-related harm in older people caused by living in a cold home.

The findings presented in section 5.3.1. under the sub-theme *Pressure and constraints*, explored how the domiciliary care system was caught in the crossfire of increased demand pressures and reducing resources, which resulted in shrinking care packages. Fernandez et al (2013) are amongst many who report the tightening of eligibility for care services and the falling numbers of people receiving local authority-funded care within the last decade. Lewis (2001) and Westwood & Daly (2016) also explore how the increasing demand pressures and fiscal constraints have led to tightening eligibility by raising the thresholds of need and describe the detrimental impact upon choice and personalisation within care. The findings reported within *Pressure and Constraints* (5.3.1) provide additional perspective to these discussions. The reductions to care packages were made in several different ways, but common to all was the effect upon care staff time in contact with the client and how this focused their attention during the care visit. This brings new insight by exploring the effect that the shrinking care packages had upon the likelihood that the domiciliary care system will deliver preventative interventions aimed at reducing the risk of cold-related harm.

Where the length of care calls was shortened, staff were rushing to complete the tasks required. Time pressures can lead to conflicting priorities (West & Michie 2020). Mason et al (2010) recognise the importance of competing

priorities as a modifier of behaviour which, they suggest, often leads to compromise through prioritising some tasks above others. I found this situation was intensified by the increasingly medical nature and complexity of the clients' care needs. Also, by the contemporary policy focus protecting NHS resources which created a fast-paced environment in which some care providers within the present study were contractually obliged to put care packages in place within as little as twelve hours. Within this rushed and fast-paced environment urgent care needs, such as administering medication and personal hygiene, will inevitably take priority over providing support to address wider care needs.

These findings expose a prevention paradox within the domiciliary care system. The sub-theme *Delivering care* (5.3.2) reports high levels of client dependency and how some care staff held pivotal positions in their clients' lives who relied upon them for even the most basic of life's needs. Stockton et al (2013), in reviewing factors influencing older people's engagement with energy efficiency interventions, argues that this dependency often puts care staff in a trusted and influential position; one conducive to identifying risk and supporting the delivery of preventative interventions such as providing advice and/or referral. Likewise, Armstrong et al (2006) also found that social contacts, including care staff, could be influential in the home heating decisions made by older people. However, I found the situation care staff worked in meant they focused necessarily on pressing tasks. This limited their capacity to think outside immediate care needs. Lloyd (2006 p. 1178) argues response to need within care results from the ability of care staff to '*see what is going on and comprehend that there is a need*', which she describes as attentiveness. As capacity for attentiveness reduces, so will the likelihood that care staff can recognise potential risks and run a dual agenda of care and prevention. Given the increasing numbers of older people who are potentially at risk of living in a cold home as described in Section 1.1 of the thesis, having the scope for attentiveness within care visits is increasingly important in preventing cold related harm to health.

Additionally, my findings provide evidence that this prevention paradox was being exacerbated and perpetuated by the systems and practices used to commission and deliver domiciliary care services which did little to support the

delivery of preventative interventions. The commissioners within this study all used the time and task approach. By commissioning care in this way, provider performance is measured upon the completion of tasks in a set time rather than considering the quality of care delivered from the clients' perspective. Additionally, the choice about what care looks like and how the care funds are used remains at commissioner level. Therefore, there is no room for providers to tailor the care to better meet clients' needs, or any incentive to do so. As such, the likelihood that staff will deliver care and support to their clients outside that prescribed within these boundaries is reduced.

The literature is abundant in critique of current commissioning practice and much of the argument centres around the effects of the 'marketisation' of care (Westwood and Daly 2016 p. 19). The increasing dominance of the private sector in the supply of care is reflected in the adjustments made over time to commissioning practice to accommodate a market-based model (Davies et al 2020c). Within this arrangement, the supply care has become a commodity and reduced to a '*function*' (Curry & Oung 2021 p. 30) within a commercial transaction between the supplier and the purchaser of care. This has resulted in practices such as the use of time and task (Hudson 2019). Reflecting upon how the COVID-19 pandemic has further underlined the problems within the social care system, ADASS (2020 p. 7) call for "*a complete review of how care markets operate*". ADASS advocate moving to outcomes-based approaches citing the current system's failure to deliver a "*person-centred approach*" to care. Outcomes used in this context meaning improved client health and wellbeing, or improvements at locality level; for example: reduced use of emergency or hospital services (Harlock 2014).

Over the last two decades, the literature has contained a growing evidence base pertaining to the benefits of outcomes-based approaches to commissioning, in which the choice of how care funds are used sits with the client and/or provider. Sawyer (2005) investigated the benefits and barriers to outcomes-based commissioning within domiciliary care services considering the increasing focus upon prevention within health and social care policy. She cites that whilst the approach is beneficial for those receiving care, funding and culture within LA presented problems. Since then, several models have been

developed and evaluated across Europe (See for example Back & Calltrop 2015, Centre for Public Impact 2018 and Walsh 2010). Common to all the models are reported improvements in the quality of care, reductions in the cost of care and fewer emergency hospital admissions. However, like Sawyer (2005) the report by Walsh (2010) also questions the viability of such approaches within the UK given funding issues and local practices within social care.

Comments by commissioners reported within *Pressure and constraints* (5.3.1) highlighted the restrictions created by reducing budgets and the current short-term funding settlements from Central Government to LAs which are widely regarded as stifling strategic long-term planning and reform within social care (National Audit Office 2021 p. 8). According to Cheetham et al (2017 p. 104) these fiscal constraints create a “*challenging context*” in which any attempt to re-design services becomes problematic. My findings also exposed an organisational culture based upon the fear of reprisal and blame within one LA. These findings are echoed by Bennet et al (2020), in discussion of the social care commissioning system, who offers that much is currently based upon a lack of trust. This is reflected in current ‘principle/agent’ relationship which Davies et al (2020a) suggest characterises associations between commissioners and providers and, according to Cheetham et al (2018, p. i66), this is reflected in the performance monitoring of providers which is “*overburdened providers with data recording activities*”. The literature suggests that a move to an outcomes-based approach might offer a solution to some of the problems created by the current approaches to commissioning. However, my findings add further evidence supporting an increasing weight of opinion within the literature that changes within LA practices and national policy are needed; for example: moving away from time and task approaches, outcomes-based performance measures and increased funding levels enabling a sustainable provider market. Without these changes, moving to outcomes-based commissioning practices will be inhibited as will the realisation of the potential benefits this approach could deliver.

If the problems created by the current systems for commissioning persist, the ambitions and benefits of brief interventions initiatives are brought into question.

The 2014 Cold Weather Plan included recommendations that frontline health and social care staff should adopt 'Make Every Contact Count' (MECC) (Health Education England 2019). The initiative encourages frontline staff delivering care to use their time with clients to provide them with advice and support to improve their health and wellbeing. This includes advising them about the risk of living in a cold home, how to keep warm in cold weather, and helping refer people at risk of cold-related harm to health into interventions, schemes or other support avenues. Taken at face-value, the application of MECC to the domiciliary care system seems a simple and practical concept. The efficacy of MECC has been reported within the literature (Nelson et al 2013, Lawrence et al 2016). However, in an evaluation of MECC with health care professionals, Keyworth et al (2018) suggest that although frontline staff are ideally placed, due to one-to-one contact with clients, the implementation of the MECC approach to affecting behaviour change has met with barriers. These included a lack of time for staff to deliver preventive interventions and the deflecting effect of overwhelming workload which led to the prioritisation of immediate care tasks above prevention. If applied within the context of my findings, the barriers to the effectiveness of any brief interventions initiative created by lack of time and a focus upon task, are as equally applicable within the delivery of domiciliary care services.

The findings within the sub-theme *Delivering care* (5.3.2) provided evidence that regular contact with the same clients, or continuity of care, meant that the care staff got to know their clients well. This facilitated building both an influential and trusting relationship and a bank of staff knowledge about the clients environmental, health and behavioural norms. This was significant as this knowledge had been used to spot small changes in a client's health and wellbeing. This awareness, which was referred to as an '*early warning*' system, had triggered preventative interventions in some cases. Achieving continuity of care relies upon having a stable workforce so that providers are in a position where care staff can deliver care to the same group of clients over a sustained period. However, most of the providers in this study experienced high staff turnover and were in a constant cycle of recruitment; one provider reporting two out of three staff leaving each year. As such, most were unable to deliver continuity of care to their clients. This is an important factor when considering

the efficacy of continuity of care in supporting preventative interventions. In a critical review of forty studies, Saultz and Lochner (2005 p. 1) concluded that '*interpersonal continuity of care*', meaning seeing the same health care or care provider over a sustained period, was likely to improve preventative care and the need for hospital-based services. The benefits of improved health and wellbeing outcomes afforded by continuity of care are also reflected upon by Bennet et al (2020) who called for more attention to be paid to the impact of high staff turnover and the detrimental impact this has upon care and client outcomes.

I found that most providers' attempts to maintain a stable workforce were failing. Many participants put this down to a mismatch between the practically and emotionally demanding role, as illuminated within section 5.3.2, and the care staffs' conditions of employment, particularly staff wages. This was most apparent within the providers delivering LA funded and organised care. The findings within section 5.3.1 evidence the problems created by the provider framework approach to commissioning by exploring the restrictions this caused for LA providers to manage their profit margins. Hudson (2019) describes how private sector care providers answer to a complex mix of shareholders, investors, banks and other creditors. As such, the need to maintain a profit margin is paramount for the business to remain viable. The LAs within this study faced financial pressures and most were unable to raise the fees paid to providers under the framework agreements which, over time, were becoming increasingly out of step with the providers' increased running costs. The problem appears widespread and in a recent review of the adult social care market in England, The National Audit Office (2021 p. 8) notes that in 2019/20, the majority of LAs were paying below a "*sustainable rate*" to maintain provider businesses.

Frontline staff costs are the biggest single cost of providing adult social care and are estimated to make up circa 60% of overall operating costs (Hudson 2019). Therefore, any increases to staff wages have a significant impact on operating profit. Those providers within this study who did not provide LA care could increase their fees to cover any increased operating costs and all paid their staff above the minimum wage. Those working under framework

agreements could not increase their fees, and all paid their staff the minimum wage. A survey by Burns et al (2016) investigated the impact of fiscal pressure upon care provider employment practices. Their findings indicate that, in addition to paying the minimum wage, measures including keeping paid leave entitlement to the legislated minimum, and moving to unpaid training practices, were also used by care providers to sustain profit margins.

Maker and Sperin (2021) suggest that commissioners can use their buying power as leverage with providers to promote fair employment conditions and remuneration for care staff. However, my findings indicate that the commissioners were in a trade-off situation in which they were caught between their duty to provide care and their ability to pay providers a sustainable market rate. Like Curry and Oung (2021), my findings suggest that some LA commissioners are aware that their providers may have poor staff employment conditions but do not challenge their working practices, other than those which are legally mandated. The commissioners within this study did not include any requirement for providers to pay above the minimum wage in provider contracts.

6.4 How the prevention of cold-related harm is considered within the domiciliary care system.

Developing prevention within social care has been on successive Government policy agendas over the last two decades (see, for example, Department of Health 2006 & 2007, HM Government 2012). The 2014 Care Act specifically identified LA responsibilities to promote individual wellbeing and prevent escalating care and support needs. The transfer of the responsibility for Public Health into LAs in 2013, also provided an opportunity to address the “*silo working*” that had previously hampered the integration of prevention from the NHS and Public Health into services contributing to “*the wider determinants of health*” (Cheetham et al 2017 p. 100) such as social care and housing. However, I found that recommendations for the prevention of cold-related harm within the Cold Weather Plans for England and the NICE Guidance (NICE 2015) for preventing excess winter death were not translating into commissioning practice within the delivery of domiciliary care services. The findings reported under the theme *Role and responsibility* (5.4.1) evidenced

how the commissioners did not consider the prevention of cold-related harm within their remit. The “*professional and sector boundaries*” which Cheetham et al (2017 p. 100) describe as inhibiting the integration of a more holistic approach into service provision remained firm, and there was no fixed position or agreement within commissioners about whose responsibility it was to prevent an older person being cold in their own home.

Marczak et al (2019) offer that historically prevention has been a concept associated with Public Health and what constitutes prevention, and what this means within social care, lacks clarity at national and local levels. They suggest that much preventative activity remains focused upon reablement services, following hospitalisation, to limit any escalating need for more intensive care and support. My findings provide new evidence about how the constructs of role and responsibility influenced how commissioners regarded prevention. The lack of perceived, or actual, responsibility for preventing cold-related harm meant there was no incentive for commissioners to consider cold in commissioning practice or build formal mechanisms into the delivery of domiciliary care services to create prevention accountability. The fragmentation of LA departments led to a lack of evidence from Public Health and national best practice documents being considered in commissioning practice. As such, considerations of cold were not included in the requirements of service specifications for providers within this study. Although the providers were under contractual obligation to carry out an environmental assessment for hazards as part of putting a care package in place, the hazards were limited to those mandated by Health and Safety laws, or those which presented as more ‘visible’ hazards that may lead to accidents; for example: exposed electrical wiring or frayed carpet edges that might cause a fall. Significantly, cold in the home was not included as a hazard. Extrinsic factors can be behavioural motivators including legal or contractual obligation (Locke & Latham 2002, Mullins 2016) as can the requirements of regulatory frameworks. Likewise, the lack of such incentives may also create behaviour disincentives. Without formal mechanisms in place to attribute responsibility and ensure accountability, any preventive action by providers to reduce the risk of cold-related harm in their clients would be their choice.

The CQC, the independent regulator for adult social care in England, uses an assessment framework made up of five key lines of enquiry (KLOE) to ensure providers meet fundamental standards of quality and safety; each with associated assessment criteria. The CQC states that providing 'safe' services means that people are protected from abuse and "*avoidable harm*" (CQC 2021a). Section S2.6 of the assessment guidelines for providers states that CQC inspectors will assess how the provider manages risk where they provide support in premises that they are not responsible for, such as the home of a domiciliary care services client. The CQC provide a list of the types of evidence that their inspectors will look for to evidence provider compliance with the KLOEs. In relation to risk within premises, the list includes conducting an environmental risk assessment. Whilst monitoring the temperature of the hot water supply within premises is mentioned as evidence of provider risk management, monitoring the indoor temperature of the premises is not included.

Prevention remains high on the Government policy agenda as demonstrated by The Department of Health and Social Care's legislative proposals for a Health and Care Bill: 'Integration and Innovation: working together to improve health and Social Care for all' (Department of Health and Social Care 2021). Under the planned changes, parts of the health and social care system will work closer together as Integrated Care Systems (ICSs). Although the detail on social care is currently lacking within these proposals, LAs will play a more significant role in improving the health and wellbeing of communities through prevention and greater integration between health, social care and public health (ibid).

Whilst the Department of Health and Social Care's proposals for local integration of health and care services might elevate the role of social care in prevention by removing some of the silo-working and fragmentation between LA departments evidenced within the sub-theme *Pressure and constraints* (5.3.1), Wavehill (2019) argue that harnessing this potential within social care places new demands upon care staffs' skills and knowledge. Within the sub-theme *Being cold aware* (5.4.3), the nature of 'knowing' is explored in relation to cold; how this knowing is constructed and comes into being within care staff. Also, what factors contributed to and supported the development of capability within

care staff to deliver preventive interventions. Knowing is an important prerequisite if, working from the reasonable premise that to prevent cold-related harm (and therefore take some form preventative action/interventions), care staff must first 'know' it is cold and know what they can do to reduce the risk of harm to their clients. Yet, within this study, the harmful effects of living in a cold home or how to prevent cold-related harm in clients were not included in the training any participants received. This study also exposed a potential gap in the system in relation to access to training for personal assistants. Although the study sample contained only one personal assistant, this participant reported receiving no training whilst working in this role. Whilst this is a single example, it suggests that the issue of direct payments and the use of personal assistants requires further exploration as the impact on the prevention of cold related harm is currently unknown.

The NICE Guidance (recommendation 8) on the prevention of excess winter deaths (NICE 2015 p.12) suggests that the training and ongoing professional development for health and social care practitioners should include:

- Detail on the effect on health and wellbeing of living in a cold home and the benefits of addressing this issue (for example, insulation could save money on heating bills).
- Ongoing training programmes to raise awareness of local systems and services to help people who are living in homes that are too cold for their health.

These recommendations are echoed in the Cold Weather Plan; Summary of cold weather actions for health and social care organisations and professionals (Katiyo et al 2018, p8). Also in the professional literature, which espouses the need for staff to be appropriately trained to recognise people at risk of cold-related harm to health and be able to take appropriate action; be that advice and guidance or referral to avenues of support (for example, see Peate 2008, McLafferty 2009 and Glasper 2010). Despite these recommendations being so clear in policy and guidance they are not mandatory. My findings suggest that the training care staff received was, in the main, limited to only that mandated by law or contractual obligation. Most providers used the Care Certificate to demonstrate the minimum training requirements by which the CQC evaluates

staff competency (CQC 2021a). However, Section 5.3 of the Care Certificate, which is the only section covering aspects of the client's environment, does not identify cold as a specific environmental hazard (Skills for Health 2020). The lack of responsibility or mandated requirement to address cold in the home of clients meant that there was no incentive, nor necessity, for providers to include cold within staff training.

There are some limited examples of LAs working with the domiciliary care system to develop workforce knowledge and skills around the prevention agenda (Wavehill 2019 p. 23: Health Education England and Hertfordshire and Worcestershire Council). However, Wavehill (2019) offer that some providers interviewed were unwilling to invest in staff training. Only one LA in this study offered any free training to support providers above that of the Care Certificate. Even here, the difficulties created by staff shortages evidenced in section 5.3.2, meant that most of the time it was only the care provider managers who took up the offer of free training.

Competence, or capability as described by West and Michie (2020), is having the skills, knowledge or resources to behave appropriately in each situation. Competence, about the prevention of cold-related harm within care staff, is brought into question given the lack of training or ongoing professional development for care staff (evidenced within section 5.4.3). Participants described the complex care needs of some clients, yet some staff were alone in the field delivering care after receiving basic induction training of only 3 to 4 days. My findings provide new insight into why this lack of trained knowledge is a problem. In the absence of an epistemic basis, or any other reliable means of assessing temperature, the care staff often used their own thermal comfort to judge the suitability of the temperature within clients' homes. Using personal comfort is unreliable and likely to leave some at risk of cold-related harm; given that most care staff reported that they never felt the cold (5.4.3), but some clients ability to feel, or let the staff know they were cold, could be impaired by illness and/or disability. Furthermore, the choices made about what to do should care staff believe a client's home was cold were driven by individual influences.

6.5 Making choices about delivering interventions

It is here that this discussion now comes full circle and focusses again upon the interventions delivered by some providers and care staff. Some aspects of care are mandated – the task to be completed and the time in which this must be done. Within these requirements, prevention of cold-related harm was not a mandated activity. Despite this, and the factors discussed above which reduced the likelihood that the domiciliary care system would act outside mandated requirements, some providers and care staff moved beyond these limitations and reported choosing to deliver interventions. Importantly, these factors, which appeared to increase the likelihood that care staff would detect and act upon the risk of cold in some instances, operated at an individual level. As such, the reported choice to deliver support to clients which fell outside the requirements of their care packages, was made by individuals within the system acting upon their own discretion.

Söderberg (2020 p. 372) describes discretion of action as “*a kind of reasoning that happens under conditions of indeterminacy*”. What she means is that people, in this case providers and care staff, are presented with a myriad of situations as they deliver care to their clients, and they make judgements about what they will do. What people ultimately choose to do or ‘*the alternatives of action*’ are based on these judgements (Wallender and Molander 2014 p. 1). In many cases, the care staff described how they made judgments about situations, and what to do, as using “common sense”. Common sense is a descriptor used in common speech in the UK however, the subject of common sense has its own raft of literature debating its existence, its meaning and how it is constructed. A useful description is proposed by Taylor (1995), who suggests a simple explanation of the phenomena would be that of reasoned sense in which the thought process is one of study of an issue based upon perceived fact and personal experience. Care staff using common sense to make judgements is an important consideration given, as Taylor (1995) goes on to say, perceived facts and personal experience may be insufficient to draw a sound conclusion about the right course of action to take. The findings within *Delivering interventions* (5.4.2) provide unique insights into how the care staffs’ response to cold was shaped by their personal values about their clients,

commitment to and experience within their role, and their own norms and beliefs.

The findings within *Delivering interventions* (5.4.2) also provided insight that whilst some providers had delivered practical interventions to reduce the risk of their clients being cold, this was in most cases the result of an issue being raised by the care staff. The care staff were the ones providing the early warnings which brought the problem to the providers attention, such as clients constantly opening windows or not sleeping in their bed, which led to interventions by the providers. The point being, that most of the interventions reported were delivered or initiated by care staff and in particular, those interventions which addressed problem behaviours and went beyond the efficacy of practical interventions alone.

In these cases, the staff concerned were experienced in their roles and displayed a commitment to both their role and to their clients. Those who had delivered interventions well outside the reasonable expectations of their role, had brought skills and knowledge from their previous employment and had the confidence to negotiate their working conditions with their employers for example, regularly seeing the same clients. Although the responsibility to act was not a mandated one, the actions of some staff were driven by their values in relation to their clients, their beliefs about what good care looked like and their own need to feel they were being a good carer delivering good care. In others, their recognition of the dependent nature of their relationship with the clients and the influential position which they held in their lives, endowed upon them a perceived sense of responsibility and motivated their actions.

Although some care staff recognised cold in their clients and/or their homes, their decisions not to act were also motivated by beliefs and values. Of note was how several participants held the belief that behaviour in older people could not be changed. They held the opinion that much behaviour in older people was immovable and the result of habits gained over a lifetime. As such, some care staff made minimal attempts to change the behaviour of their clients even when they felt their homes were cold.

Within other staff, their decisions not to act, any further than a brief mention about cold in their clients' homes, was driven by their notions of their clients' right to choose and their freedom of choice. Observing the client's right to choose is the focus of 'Work in a person-centred way'; Standard 5 of the care certificate (Skills for Health 2020). The workbook for the module focuses upon the values care staff should apply to their role when supporting clients. The workbook for Standard 5 (ibid) is clear that whilst people receiving care should be provided with information for them to make informed choices, a person's right to choose amongst other rights, should be respected. These constructs created boundaries and a line over which some providers and care staff felt it was wrong to step. Hence, even if a client's home was cold and their client was cold, this was regarded as the client's choice and not the place of the providers or care staff to intervene.

6.6 Summary

The literature provides evidence of the efficacy of interventions aiming to reduce cold-related harm in older people and, albeit limited, some evidence that the formal engagement of the domiciliary care system within these interventions can be beneficial. The domiciliary care system is in constant contact with older people who are potentially vulnerable to cold in their home and this face-to-face contact provides an opportunity to identify those at risk, for referral into interventions and the delivery of interventions. However, whilst this pivotal position within the lives of potentially vulnerable people and the opportunity to deliver interventions by the domiciliary care system is recognised at policy level, the recommendations aiming to prevent cold-related harm in older people were not translating into practice at commissioning level. Furthermore, the systems and practices used to commission and deliver domiciliary care services reduced the likelihood that the domiciliary care system would detect and take actions to reduce the risk of cold-related harm in its clients. Despite these factors, the domiciliary care system does deliver some interventions to prevent cold-related harm in older people and in the main, these interventions were instigated or delivered by care staff. The literature review (see Section 3.9.2) provided evidence that practical interventions, such as heating improvements and insulation, may not address the behavioural influences such as norms, values

and beliefs that can lead to an older person being cold in their home. Of significance were the interventions reported by care staff that claimed to tackle these behavioural influences. Given the greater risk of under-heating practices due to fear of debt created by current fuel costs (ONS 2022), these findings are increasingly important.

Notably, this study found that where interventions were reported to be delivered, or instigated, the choice to deliver interventions was made at individual level and influenced by notions of responsibility, values relating to clients and personal norms and beliefs. These influences are individual constructs, and as such their impact on the care staff's decision-making process is variable - meaning that their response to the risk of cold is also subject to variation.

Before moving onto recommendations in the light of these findings, the next chapter sets out the strengths and limitations of this study and my considerations and use of reflexivity.

CHAPTER 7: Strengths, limitations and reflexivity

7.1 Introduction

This chapter describes the research strengths and limitations. Following this, I examine the role of the researcher within the research process.

7.2 Strengths and limitations

A strength of this research lies in the use of a qualitative interpretive approach underpinned by a constructionist epistemology. Through this, the study provides illumination and insight delving deeper than a reporting of 'what' was happening across the domiciliary care system and explores the 'why' of things. The use of Thematic Analysis aligned well with the Interpretive Constructionist approach going beyond semantic reporting to interpret latent themes from the data and developing meaning.

To date there has been very little research involving domiciliary care workers and little systematic enquiry of their role, and their day-to-day work; this study contributes to addressing this gap and gives care workers a 'voice'. Within this study, the world of the domiciliary care system was constructed around the realities of those operating within the system and the choices made by those within it; thus, exposing the factors influencing the likelihood of the domiciliary care system delivering preventive interventions to reduce cold-related harm within its clients. Intervention to prevent cold-related harm in clients of domiciliary care stemmed from the individual choices made by those in the system. These are important findings revealing not only a potential variation in outcome for those at risk but also providing insight and implication for the development of interventions and the factors influencing their effectiveness in practice.

Each level of the domiciliary care system does not operate in isolation and this study uncovered the complexities of interactions across the system. Yet to date, much research has focused on individual groups within the system. This study provides insight at each layer of the system and in an integrated manner across the system; thus, providing a deeper understanding of the actions of those

within it and the impact these influences have on preventing cold-related harm. In this way, the knowledge created enhances the likelihood of the recommendations for practice being effective; for example: informing recommendations below in respect to the recruitment, selection and training of care staff and recommendations to promote and facilitate the consideration of cold within the delivery of domiciliary care.

I recognise that there are several study limitations related to my research choices. Firstly, I did not establish a formal advisory group for the study. This could have benefited the study in several ways including access to expertise in the field of social care and cold homes, methodological choices and in sense checking the recommendations. However, my attendance at LA social care provider meetings, regional fuel poverty network meetings and discussions with experts in NEA mitigated the impact of this limiting factor. My involvement in these communities of interest provided a proxy advisory group allowing me to benefit from the differing contextual perspectives and subject area inputs to the study this provided. This enhanced my understanding of the contextual setting for the study, my own theoretical sensitivity and provided a sense check via their input and feedback; a sounding board on which to explore my thoughts on the research question, the contextual framework for the study and the research approach.

Two further limitations are the sample and me as a single researcher. Whilst the sample of commissioners and providers contained both male and female participants from several ethnic backgrounds, the sample of care workers was only female and white British and presents challenges for generalisation beyond this group. Whilst this is relatively representative of the wider domiciliary care system worker population, in which the typical care worker is white British and female (Skills for Care 2020), the inclusion of male care workers and those from different ethnic backgrounds may have provided valuable insights from care staff that this study cannot offer.

Although the sample sizes used within qualitative research are generally smaller than those of quantitative studies, this presents limitations to what can be claimed about the data. Some providers and staff expanded their roles to support clients outside the requirements of their care packages. Given the

small sample size and limited geography, this study cannot be used to determine if the actions of these participants are in the minority and further research would be required to address the wider population. Additionally, whilst the rationale for the scope of this research population is outlined in Chapter 4. (4.2), it is acknowledged that by setting these boundaries, this creates limitations and a wider scope for future research could involve the voice of the service user for example.

As is the case with doctoral research studies, the collection and analysis of the data by a single researcher does not facilitate the development of multiple perspectives. However, it does mean that the coding and interpretation was consistent across the whole data set. The challenge and discussion from the supervisory team provided rigour throughout my analysis and interpretation.

7.3 Reflexivity

Reflexivity can happen in both a functional and personal form (Wilkinson 1988, Gough 2003). Personal reflexivity is about me, what I brought to the study and how this changed me. Functional reflexivity refers to practical measures for example, how my choices of research processes and tools may have influenced the research. The process or act of reflexivity is particularly important when adopting an interpretive constructionist approach where the researcher is not an observer but is the instrument of knowledge creation (Marshall & Rossman 2016). I have not simply reported facts but rather the analysis and findings are constructs resulting from my data interpretation. Personal experiences of the social world shape our opinions, values and beliefs and cannot be ignored given the potential they have to shape our approach to research (Mauthner & Doucet 2003). I therefore questioned how those interpretations were made given they were dependent upon my perspective as the observer and are not neutral (Hertz 1997, Palaganas et al 2017).

7.3.1 Bringing myself to the research

Although I am confident that my epistemological and methodological choices, described in Chapter 4., were appropriate to answer my research question, I appreciate that how I approached this research and the type of knowledge I

considered valid to answer my enquiry, was undoubtedly shaped by my personal and professional experiences. As a child I experienced poverty and social injustice which I believe gave me empathy and the ability to try and see things from other's perspective. Also, a sense of fairness, equity and a desire to make things better. My professional experience in social marketing was no doubt driven by my natural leanings to the qualitative tradition; my desire to not stand on the edge as a passive observer, but to dive in and gain understanding and insight. As such, my search for knowledge was not focused on the 'what' of things. Rather, it was concerned with gaining a deeper understanding of 'why' and the factors that influenced this to gain a deeper understanding of how the domiciliary care system can contribute to preventing cold-related harm and prevent what I felt to be a social injustice.

When I began my research journey, I had no idea of how this journey would make me feel, the enormity of the undertaking, how it would change me as a person and the impact it would have on my life. The process of becoming a doctoral researcher was rather like being painfully deconstructed and slowly put back together again. A key aspect of this was the move from using the findings of research to inform my work, to becoming a researching professional; able to see the gaps in the evidence base, deliver research to fill that gap and develop findings to inform practice. My work in social marketing had given me a solid grounding to understand the value of data and insight and the ability to apply this to effect behaviour change through the development of insight informed interventions. However, I reflected that at the early stages of that part of my career, I used other researchers' findings. That is not to say that this grounding was not extremely useful as I transitioned into being a DProf student. My career had instilled within me a passion for applied research, to gain understanding and insights that would ultimately help me to change behaviour for social good. My career in the private sector followed by the public sector allowed me to consider the social care system from both a commissioner and provider aspect for example and my experiences working across large and complex organisations, like the private sector business and the NHS provided reflection on organisational culture, systems, policy and processes; experience that aided my interpretation of the findings into recommendations spanning the domiciliary care system at commission, provider and delivery level.

My previous career and experiences no doubt shaped both the question I aimed to address and the approaches I favoured to do this. As I began my study, I took the wise advice from both the literature and those who have trodden the path before me (Etherington 2004, Ortlipp 2008), I maintained a reflective journal throughout the research process using notebook scribbles, typed notes on literature of interest, comments and musings on implication and meaning within the data and about my progress and challenges. Reading these back now, I see they were an instrument of self-debate and personal reflexivity and helped me to 'step outside myself' to develop self-awareness and reflective skills and understand my role and influence as researcher. I see that the experience vastly expanded my skill set providing me with the knowledge and ability to continue my path as a researching professional. Reflecting on the early days of my doctorate journey, my notes and comments highlight how I grew and learnt. I changed as an interviewer as I considered my mistakes and the same could be said of my initial analysis, where I took the data too much at surface level. I am now akin to a driver who has just passed their test. Yes, I have a greater multitude of knowledge and skills than when I began and I am using these to inform both my work and that of others in my new role in Public Health. However, like a new driver, I will now continue this journey and hone my skills and experience further.

7.3.2 Reflexivity within the research process

For constructionists, the truth lies in the eyes of the observer and is therefore inseparable from the forces that support that truth (Crotty 1988, Glasersfeld 1995); for example: the power relationship between observer and observed (Moses & Knutsen 2012) which may occur within interviewees (Gillham 2002). Some researchers argue that participants feel more comfortable disclosing information to someone who is broadly like them (Clarke and Braun 2013). Commenting upon feminist methods in social research, Reinharz & Davidman (1992) suggest that people are prone to judge others, for example stereotyping and being prepossessed by perceptions of gender and the associations of age and status. It was important for the validity of the analysis to reflect upon the relationship between myself and the participants, the perceptions created by the judgements of both parties (Patton 2002). This relationship can lead to

vulnerability of both participant and researcher and impact on the data collection by affecting the researcher's ability to manage the interview or the participants willingness to talk openly (ibid).

Prior to the study, I reflected upon myself and the care staff and their possible perceptions of me as an academic or as an expert or holding a superior position within the relationship. I considered my 'brought self' and paid attention to the interview location, my dress and use of language and tone of speech to remove barriers that might prevent open and honest discussion. In this way, I hoped to ensure that respondents felt comfortable, could relate to myself as the researcher and freely discuss their experiences and perceptions (Clarke & Braun 2013) and as described by Rubin & Rubin (2011), enhance my ability to listen.

In the case of the managers/owners and the senior commissioners, I felt that this would be perceived as a more equal relationship. However, musing upon the interview with the most senior commissioner within the study (chief executive level) provided a valuable experience. By reflecting upon examples provided by Arksey & Knight (1999) I realised that although valuable data was gleaned from the interview, due to their superior status and expertise, they dominated the interview and in reality, I had little control over discussion and direction.

Discussion of an early interview transcript with the supervisory team also provided some valuable critique and opportunity for reflection on how I had affected data collection during the interview process which I recorded in my supervision notes.

[names] pointed out some points of improvement from a previous care staff interview.

- *Structure of questions and not closing responses down too soon – keeping quiet!*
- *Not validating answers with my own opinion*

- *Giving respondents space to expand with body language and small prompts to offer more in-depth info/examples*

(Extract from supervision meeting minutes June 2017)

This assisted in developing my active listening skills and avoiding poor technique such as finishing sentences, empathising through personal examples and under use of silence to probe deeper into topic areas. I worked on refining my skills and used them in later interviews which improved the richness and depth of the remaining data I collected. This included knowing when to let the interview guide go and allow the interviewee to continue speaking. As posited by Arksey & Knight (1999) and Clarke & Braun (2013), this technique can be a useful skill allowing the collection of unexpected and sometimes valuable data. I used this technique with Ruby and, in allowing her to speak at length about the problems she had encountered in her role, collected valuable data about the capabilities, opportunities and motivations of her role and the world that senior commissioners of domiciliary care services operate within.

7.3.3 Reflexivity in the data coding and analysis

Reflection upon the interviews also led me to consider the role of the introductory information sheets provided to research participants (Appendix 10). These highlighted the problem of cold homes to provide a context and importance to the study. In some cases, this may have encouraged some respondents to over emphasise their actions or be very reluctant to admit that they did not consider cold when commissioning or delivering care. This was apparent in some initial answers; for example: when I asked if the subject was covered in the training a provider gave their staff and I considered this in my analysis and interpretation of the data. This reflection also increased my interview skills and ability to probe deeper.

Interviewer: "...and in that training is cold or the harm that can be caused to health by cold discussed?"

"Yes definitely."

Interviewer: "...about the right sort of temperatures that people

should be living in?”

“I don’t suppose they’re told that this temperature is the ideal temperature, but I think...[trails off]”

(Extract from an interview with Winney – Field Care Supervisor)

Reviewing the literature prior to data collection enhanced my theoretical sensitivity. As argued by Thistoll et al (2016), the review process built upon my professional experience and knowledge and provided me with insight to help me interpret and identify relevant and irrelevant data as a basis for interpretation. However, my initial data coding and analysis was mostly data-driven and coded at only a semantic level. I realised through reflecting upon what I had reported, and the opportunity for discussion about sections of data within supervision meetings, that I had simply reported the ‘what’ of things. I took what people said at face value and did not interpret the meaning. For example, reflection upon my initial interpretations of the data pertaining to the provider framework, fiscal constraints and provider organisations. Initially I regarded the provider responses at face value. However, by taking a more reflexive approach I could dig deeper into the meaning and explore the constructs which were determinants of provider behaviour.

CHAPTER 8: Recommendations

The recommendations below focus on what needs to happen within the domiciliary care system to prevent cold-related harm in older people. The chapter is in two sections. The first section presents recommendations for the domiciliary care system aligned to the findings from this study. The recommendations are grouped to reflect the conceptual framework for the study (Section 4.2) which identifies the elements of the system at macro, meso and micro level and how the factors found to influence the delivery of interventions to prevent cold related harm operated at system, organisational and individual level. The second section makes recommendations for future research.

8.1 Recommendations for the domiciliary care system

Finding: Policy and best practice guidance for the prevention of cold-related harm in older people was not translating into domiciliary care systems and practices in an organised or systematic manner.

At macro level, the development of Integrated Care Systems (ICSs) in England creates an opportunity to deepen the relationship between the NHS and LA, providing a co-ordinated focus upon keeping people healthy and reducing the need for hospital-based services (Department of Health and Social Care 2021). The ICSs should use this opportunity to lead the integration of preventing cold-related harm into the remit of social care and into the commissioning of domiciliary care services.

A further opportunity at system level is presented by the key lines of enquiry used by the CQC to assess if providers are delivering 'safe' services. These should include protecting people from the avoidable harm caused by living in a cold home. Indoor temperature checks, in line with the recommended indoor temperatures to prevent cold-related harm, should be included within the list of evidence considered by the CQC when assessing provider compliance. So that providers are not burdened with additional data collection, digital temperature monitoring should be considered as appropriate evidence.

Checks to ensure that clients' homes are at the recommended temperatures to prevent cold related harm should be included by commissioners as a requirement of the risk assessments carried out by providers prior to a care package being put in place. The ongoing and regular monitoring of indoor temperatures within clients' homes, by care staff, and the raising of concerns about low temperatures, should also be included within service delivery specifications. Commissioners should ensure providers, and their staff, have up-to-date information on who to contact within the LA (preferably a single point of contact) should they believe a client is at risk of cold-related harm or how they can refer them into the appropriate interventions or support avenues within their local areas.

As in the recommendation above, to avoid additional administration, data collection and reporting and ease of referral, digital technology should be considered.

Finding: The systems and practices used to commission and deliver domiciliary care services undermined the likelihood that the domiciliary care system would deliver preventative interventions to reduce the risk of cold-related harm within its clients.

At macro level, ICSs should introduce a client outcomes-based commissioning approach rather than the widely used time and task method which measures performance against outputs. Within the outcomes approach, commissioning practice at LA level should consider the time allowed for care visits so care staff can deliver a dual agenda of both care and prevention; for example: staff are able to monitor the indoor temperature within a client's home and deliver brief interventions and/or escalate any concerns where necessary.

Finding: The opportunities presented for preventative interventions afforded by continuity of care are being lost due to high staff turnover.

Both ICSs and individual LAs should radically review the funding for adult social care and provider organisations should be paid rates much nearer, or at, the levels identified by United Kingdom Home Care Association (2021). This could offer increased stability within the market, support compliance with the National

Living Wage and the delivery of sustainable quality homecare services to local authorities by reducing staff turnover. Additionally, service specifications for provider organisations should stipulate that care staff are paid the National Living Wage, or above.

Finding: The care staff were using their own thermal comfort, tacit knowledge or norms and beliefs to make judgements about the suitability of the temperature within a client's home and what actions to take if they felt it was too cold.

At macro level, Skills for Care should use their position as the strategic workforce and development body for adult social care in England (Skills for Care 2020), to support the inclusion of the harm to health caused by living in a cold home within staff induction training. The Skills for Care website should include free access to training materials for provider organisations and care staff about the risk to health caused by cold homes, and recommended temperatures to prevent cold-related harm to health. These should be made available to providers and staff through the Skills for Care website and promoted via the Skills for Care sector wide communications activities. Additionally, The CQC should include cold-related harm to health as part of environmental considerations and risk factors covered within the Care Certificate.

At meso and micro level, service specifications for provider organisations should include the requirement that providers train their staff about the risk to health caused by cold homes, and recommended temperatures to prevent cold-related harm to health and that a temperature monitoring device be placed in the homes of all domiciliary care clients.

Finding: Some care staff did not believe they could change the heating behaviour of older people.

In line with the recommendation above, resources should be made available through the Skills for Care website and promoted via sector communications illustrating best practice examples of preventing cold-related harm in older people; for example: video blogs and case studies to normalise and promote

preventive behaviour by care staff through leveraging the positive outcomes for their clients.

8.2 Recommendations for future research

Research question: *What factors motivate or disincentivise staff delivering domiciliary care services to deliver preventive interventions to prevent cold-related harm in their clients?*

Whilst this study provided unique and valuable insight, I suggest that the opportunity to engage the domiciliary care system in preventing cold-related harm would be further supported by a larger study using qualitative methodology, to explore factors influencing the behaviour of domiciliary care service staff. This should also include personal assistants as this study identified a potential gap in the system in respect to this group. Using this detailed insight, behaviour change methodologies could be used to understand the potential mechanisms to engage the domiciliary care system in preventing cold-related harm in its clients; for example: the effect of increased knowledge gained through training. A further follow-up study using a before-and-after trial with both qualitative and quantitative measures to develop and/or evaluate training, could provide valuable insight about the effect of knowledge upon the prevention of cold-related harm by care staff.

Research question: *What interventions could be delivered by domiciliary care staff that would reduce the risk of cold related harm older people in receipt of domiciliary care services.*

A study involving service users and domiciliary care services to develop and test interventions that could be delivered by domiciliary care services. By applying the existing evidence base in relation to the individual contextual and behavioural influences that lead to an older person being cold in their own home, interventions could be developed using the Behaviour Change Wheel (Michie et al 2014). The interventions could be trialled using a pre and post-intervention qualitative study of the impact of the intervention upon both

contextual and behavioural influences leading to cold homes and the experience of care staff in delivering the interventions.

Research question: *What is the potential cost saving to the NHS and social care of investing in the domiciliary care system to deliver preventive interventions to reduce cold-related harm in older people?*

Health economic modelling of investment cost against potential cost savings could provide incentive, support and investment at policy level to develop the preventative agenda within social care.

CHAPTER 9: Conclusion

By achieving the research aims and objectives, this is the first study to my knowledge exploring the role of the domiciliary care system in preventing cold-related harm within its clients.

Responding to a gap in the literature, the study offers new knowledge about the nature of interventions to prevent cold-related harm within the domiciliary care system. The study has generated insight and understanding of the 'why' and 'how' the prevention of cold-related harm to health is influenced within the domiciliary care system.

By taking a qualitative interpretive approach grounded in a constructivist epistemology, and by collecting data from commissioners, providers and care staff, the study explored the world of the domiciliary care system both at system and individual level. Thus, providing a deeper understanding of the influences upon the system and the actions of individuals within it and ultimately the impact these influences have on the prevention of cold-related harm.

My study has exposed how macro-forces and system response, was leading to a prevention paradox by undermining the likelihood that staff would identify the risk of cold and act upon it despite being in a pivotal and influential position to do so. Regardless of these factors some care staff reported delivering interventions that reduced the risk of harm in their clients; going beyond the efficacy of practical interventions alone. Their actions were driven by individual behavioural influences and therefore, individual staff response to risk was variable.

In conclusion to my thesis, I offer that as the system does not appear to engage or support the domiciliary care system to deliver interventions in a formal or organised manner, any interventions are left to the choice of individuals within the system. As such, the outcomes of an older person vulnerable to the risk of cold-related harm, and in receipt of domiciliary care services, is currently a matter of chance.

The recommendations I make for practice and future research highlight what needs to happen if the opportunities afforded by the domiciliary care system are to be formally harnessed and contribute to reducing the cost to society, and the needless suffering of individuals that can result from living in a cold home.

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Appendices

APPENDIX 1: Preliminary Database Searches

Search history							Hide 
Combine queries <input type="text" value="e.g. (#1 AND #2) AND NOT #3"/>							<input type="button" value="Search"/> ? Combining queries
Search	Results	Set feed	Set alert	Save	Edit	Delete	
18 (TITLE-ABS-KEY(old* OR aged* OR frail* OR pensioner* OR "senior citizen*" OR "over*75") AND PUBYEAR > 2002) AND ((TITLE-ABS-KEY("excess winter death*") AND PUBYEAR > 2002) OR ((TITLE-ABS-KEY("cold*related" OR cold OR seasonal) AND PUBYEAR > 2002) AND (TITLE-ABS-KEY(death* OR illness* OR morbidit* OR mortailit*) AND PUBYEAR > 2002))) AND ((TITLE-ABS-KEY(carer* OR domicil*care OR "home help*" OR "care assistant*") AND PUBYEAR > 2002) AND (TITLE-ABS-KEY(therm* OR heat* OR temperature*) AND PUBYEAR > 2002))	0						
17 (TITLE-ABS-KEY(carer* OR domicil*care OR "home help*" OR "care assistant*") AND PUBYEAR > 2002) AND (TITLE-ABS-KEY(therm* OR heat* OR temperature*) AND PUBYEAR > 2002)	65						
16 (TITLE-ABS-KEY("excess winter death*") AND PUBYEAR > 2002) OR ((TITLE-ABS-KEY("cold*related" OR cold OR seasonal) AND PUBYEAR > 2002) AND (TITLE-ABS-KEY(death* OR illness* OR morbidit* OR mortailit*) AND PUBYEAR > 2002))	10,788						
12 TITLE-ABS-KEY(therm* OR heat* OR temperature*) AND PUBYEAR > 2002	2,433,162						
10 TITLE-ABS-KEY(carer* OR domicil*care OR "home help*" OR "care assistant*") AND PUBYEAR > 2002	9,100						
7 TITLE-ABS-KEY(death* OR illness* OR morbidit* OR mortailit*) AND PUBYEAR > 2002	855,254						
5 TITLE-ABS-KEY("cold*related" OR cold OR seasonal) AND PUBYEAR > 2002	282,890						
3 TITLE-ABS-KEY("excess winter death*") AND PUBYEAR > 2002	11						
1 TITLE-ABS-KEY(old* OR aged* OR frail* OR pensioner* OR "senior citizen*" OR "over*75") AND PUBYEAR > 2002	2,298,251						

APPENDIX 2: Database Search Results

Scopus

Search number	Search terms	Finds	Comments and decisions made
S1	Old* OR elderly OR age* OR geriatric OR vulnerable*	6069876	Covers all the 'Population' terms. Some search terms would be found through the use of * even though they are in the original list.
S2	"Social care" OR "social services" OR "commissioning" OR "care services" OR "domiciliary" OR "domiciliary care" OR "home care" OR "home help" OR "provider*" OR "organi?ation*" OR "compan*" OR "carer*" OR "care assistant*" OR "personal assistant*" OR "care worker*" OR "home carer*" OR "care staff"	1602893	Covers all the 'Intervention' terms
S3	"prevention" OR "intervention*" OR "cold*" OR "cold weather" OR "cold temperatures" OR "cold home*" OR "extreme temperature" OR "low temperature" OR	1762580	Covers all the 'Outcomes' terms

Search number	Search terms	Finds	Comments and decisions made
	“seasonal mortality” OR “seasonal deaths” OR “seasonal illness” OR “winter mortality” OR “winter deaths” OR “winter illness” OR “excess winter death” OR “EWM” OR “EWD”		
S4	SI AND S2 AND S3	68504	Too many results, with often irrelevant titles. Decided to modify S3 to remove some more generic terms.
S5	“cold weather” OR “cold temperatures” OR “cold home*” OR “extreme temperature” OR “low temperature” OR “seasonal mortality” OR “seasonal deaths” OR “seasonal illness” OR “winter mortality” OR “winter deaths” OR “winter illness” OR “excess winter death” OR “EWM” OR “EWD”	787150	Modified version of S3
S6	S1 AND S2 AND S5	6	Some written by the Author. Others need to be reviewed versus inclusion/exclusion criteria.

Search number	Search terms	Finds	Comments and decisions made
			Decided to remove the S1 results to widen the search.
S7	"commissioning" OR "care services" OR "domiciliary" OR "domiciliary care" OR "home care" OR "home help" OR "care at home"	70189	Amended S2 to focus more on domiciliary care... also added the phrase "care at home" following review of keywords on found items.
S8	"prevention" OR "intervention*" OR "cold home*" OR "seasonal mortality" OR "seasonal deaths" OR "seasonal illness" OR "winter mortality" OR "winter deaths" OR "winter illness" OR "excess winter death" OR "EWM" OR "EWD" OR "winter warmth" OR "keep* warm"	1344056	<p>Amended S3 to remove purely temperature related words and phrases. The words "prevention" and "intervention*" have been re-included to establish if any comparable literature exists about prevention in the domiciliary care system.</p> <p>The phrases "winter warmth" and "keep* warm" have been added after they were found in some earlier searches.</p>
S9	S1 AND S7 AND S8	7903	
S10	"cold home*" OR "seasonal mortality" OR "seasonal deaths" OR "seasonal illness" OR "winter mortality" OR "winter deaths" OR "winter illness" OR "excess winter death" OR "EWM" OR "EWD" OR	996	Removed prevention and intervention again

Search number	Search terms	Finds	Comments and decisions made
	"winter warmth" OR "keep* warm"		
S11	S1 AND S7 AND S10	1	
S12	S1 AND S7	31659	Search was too wide
S13	S1 AND S10	245	
S14	S7 AND S10	3	

CINAHL

Search number	Search terms	Finds	Comments and decisions made
S1	Old* OR elderly OR age* OR geriatric OR vulnerable*	1311015	Covers all the 'Population' terms. Some search terms would be found through the use of * even though they are in the original list.
S2	"Social care" OR "social services" OR "commissioning" OR "care services" OR "domiciliary" OR "domiciliary care" OR "home care" OR "home help" OR "provider*" OR "organisation*" OR "compan*" OR "carer*" OR "care assistant*" OR "personal assistant*" OR "care worker*" OR "home carer*" OR "care staff"	18183	Covers all the 'Intervention' terms
S3	"cold weather" OR "cold temperatures" OR "cold home*" OR "extreme temperature" OR "low temperature" OR "seasonal mortality" OR "seasonal deaths" OR "seasonal illness" OR "winter mortality" OR "winter	696	Covers all the 'Outcomes' terms, except "prevention" and intervention" which appeared to be too generic

Search number	Search terms	Finds	Comments and decisions made
	deaths" OR "winter illness" OR "excess winter death" OR "EWM" OR "EWD"		
S4	S1 AND S2 AND S3	1	
S5	"commissioning" OR "care services" OR "domiciliary" OR "domiciliary care" OR "home care" OR "home help" OR "care at home"	25216	Amended S2 to focus more on domiciliary care... also added the phrase "care at home" following review of keywords on found items.
S6	"prevention" OR "intervention*" OR "cold home*" OR "seasonal mortality" OR "seasonal deaths" OR "seasonal illness" OR "winter mortality" OR "winter deaths" OR "winter illness" OR "excess winter death" OR "EWM" OR "EWD" OR "winter warmth" OR "keep* warm"	605421	Amended S3 to remove purely temperature related words and phrases. The words "prevention" and "intervention*" have been re-included to establish if any comparable literature exists about prevention in the domiciliary care system. The phrases "winter warmth" and "keep* warm" have been added after they were found in some earlier searches.
S7	S1 AND S5 AND S6	3077	
S8	"cold home*" OR "seasonal mortality" OR "seasonal deaths" OR "seasonal illness" OR "winter mortality" OR "winter deaths" OR "winter illness" OR "excess	135	Removed prevention and intervention again

Search number	Search terms	Finds	Comments and decisions made
	winter death” OR “EWM” OR “EWD” OR “winter warmth” OR “keep* warm”		
S11	S1 AND S5 AND S8	1	Excluded during search as not relevant
S12	S1 AND S5	11770	
S13	S1 AND S8	55	
S14	S5 AND S8	1	Excluded during search as not relevant

MEDLINE

Search number	Search terms	Finds	Comments and decisions made
S1	Old* OR elderly OR age* OR geriatric OR vulnerable*	3700935	Covers all the 'Population' terms. Some search terms would be found through the use of * even though they are in the original list.
S2	"Social care" OR "social services" OR "commissioning" OR "care services" OR "domiciliary" OR "domiciliary care" OR "home care" OR "home help" OR "provider*" OR "organi?ation*" OR "compan*" OR "carer*" OR "care assistant*" OR "personal assistant*" OR "care worker*" OR "home carer*" OR "care staff"	27995	Covers all the 'Intervention' terms
S3	"cold weather" OR "cold temperatures" OR "cold home*" OR "extreme temperature" OR "low temperature" OR "seasonal mortality" OR "seasonal deaths" OR "seasonal illness" OR "winter mortality" OR "winter	24843	Covers all the 'Outcomes' terms, except "prevention" and intervention" which appeared to be too generic

Search number	Search terms	Finds	Comments and decisions made
	deaths" OR "winter illness" OR "excess winter death" OR "EWM" OR "EWD"		
S4	S1 AND S2 AND S3	5	
S5	"commissioning" OR "care services" OR "domiciliary" OR "domiciliary care" OR "home care" OR "home help" OR "care at home"	35819	Amended S2 to focus more on domiciliary care... also added the phrase "care at home" following review of keywords on found items.
S6	"prevention" OR "intervention*" OR "cold home*" OR "seasonal mortality" OR "seasonal deaths" OR "seasonal illness" OR "winter mortality" OR "winter deaths" OR "winter illness" OR "excess winter death" OR "EWM" OR "EWD" OR "winter warmth" OR "keep* warm"	1229672	Amended S3 to remove purely temperature related words and phrases. The words "prevention" and "intervention*" have been re-included to establish if any comparable literature exists about prevention in the domiciliary care system. The phrases "winter warmth" and "keep* warm" have been added after they were found in some earlier searches.
S7	S1 AND S5 AND S6	6010	To many to review
S8	"cold home*" OR "seasonal mortality" OR "seasonal deaths" OR "seasonal illness" OR "winter mortality" OR "winter deaths" OR "winter illness"	602	Removed prevention and intervention again

Search number	Search terms	Finds	Comments and decisions made
	OR "excess winter death" OR "EWM" OR "EWD" OR "winter warmth" OR "keep* warm"		
S11	S1 AND S5 AND S8	0	No results found for all 3 groups of words/phrases. Check for results using two from three...
S12	S1 AND S5	20013	Too many to review
S13	S1 AND S8	130	
S14	S5 AND S8	2	Both excluded as not relevant

PsycINFO

Search number	Search terms	Finds	Comments and decisions made
S1	Old* OR elderly OR age* OR geriatric OR vulnerable*	1157136	Covers all the 'Population' terms. Some search terms would be found through the use of * even though they are in the original list.
S2	"Social care" OR "social services" OR "commissioning" OR "care services" OR "domiciliary" OR "domiciliary care" OR "home care" OR "home help" OR "provider*" OR "organisation*" OR "compan*" OR "carer*" OR "care assistant*" OR "personal assistant*" OR "care worker*" OR "home carer*" OR "care staff"	189664	Covers all the 'Intervention' terms
S3	"cold weather" OR "cold temperatures" OR "cold home*" OR "extreme temperature" OR "low temperature" OR "seasonal mortality" OR "seasonal deaths" OR "seasonal illness" OR "winter mortality" OR "winter	314	Covers all the 'Outcomes' terms, except "prevention" and intervention" which appeared to be too generic

Search number	Search terms	Finds	Comments and decisions made
	deaths" OR "winter illness" OR "excess winter death" OR "EWM" OR "EWD"		
S4	S1 AND S2 AND S3	4	
S5	"commissioning" OR "care services" OR "domiciliary" OR "domiciliary care" OR "home care" OR "home help" OR "care at home"	42492	Amended S2 to focus more on domiciliary care... also added the phrase "care at home" following review of keywords on found items.
S6	"prevention" OR "intervention*" OR "cold home*" OR "seasonal mortality" OR "seasonal deaths" OR "seasonal illness" OR "winter mortality" OR "winter deaths" OR "winter illness" OR "excess winter death" OR "EWM" OR "EWD" OR "winter warmth" OR "keep* warm"	349386	Amended S3 to remove purely temperature related words and phrases. The words "prevention" and "intervention*" have been re-included to establish if any comparable literature exists about prevention in the domiciliary care system. The phrases "winter warmth" and "keep* warm" have been added after they were found in some earlier searches.
S7	S1 AND S5 AND S6	10322	
S8	"cold home*" OR "seasonal mortality" OR "seasonal deaths" OR "seasonal illness" OR "winter mortality" OR "winter deaths" OR "winter illness" OR "excess	40	Removed prevention and intervention again

Search number	Search terms	Finds	Comments and decisions made
	winter death” OR “EWM” OR “EWD” OR “winter warmth” OR “keep* warm”		
S11	S1 AND S5 AND S8	0	No results
S12	S1 AND S5	31205	To many to review
S13	S1 AND S8	25	
S14	S5 AND S8	0	

Social Care Online

Search number	Search terms	Finds	Comments and decisions made
S1	Old* OR elderly OR age* OR geriatric OR vulnerable*	29041	Covers all the 'Population' terms. Some search terms would be found through the use of * even though they are in the original list.
S2	"Social care" OR "social services" OR "commissioning" OR "care services" OR "domiciliary" OR "domiciliary care" OR "home care" OR "home help" OR "provider*" OR "organi?ation*" OR "compan*" OR "carer*" OR "care assistant*" OR "personal assistant*" OR "care worker*" OR "home carer*" OR "care staff"	19331	Covers all the 'Intervention' terms
S3	"cold weather" OR "cold temperatures" OR "cold home*" OR "extreme temperature" OR "low temperature" OR "seasonal mortality" OR "seasonal deaths" OR "seasonal illness" OR "winter mortality" OR "winter deaths" OR "winter illness" OR "excess winter death" OR "EWM" OR "EWD"	9	Covers all the 'Outcomes' terms, except "prevention" and intervention" which appeared to be too generic. This search on its own has a low number of, what appear to be, good titles so was exported and manually reviewed.

Search number	Search terms	Finds	Comments and decisions made
S4	S1 AND S2 AND S3	3	This is just a subset of S3 which has already been exported
S5	S1 AND S3	6	Given this database is already related to Social Care, search term S2 was removed.
			Following the low number of titles found, the search words and phrases were reviewed. In addition, new words and phrases found in some of the found titles were added.
S6	“commissioning” OR “care services” OR “domiciliary” OR “domiciliary care” OR “home care” OR “home help” OR “care at home”	10777	Amended S2 to focus more on domiciliary care... also added the phrase “care at home” following review of keywords on found items.
S7	“prevention” OR “intervention*” OR “cold home*” OR “seasonal mortality” OR “seasonal deaths” OR “seasonal illness” OR “winter mortality” OR “winter deaths” OR “winter illness” OR “excess winter death” OR “EWM” OR “EWD” OR “winter warmth” OR “keep* warm”	13004	Amended S3 to remove purely temperature related words and phrases. The words “prevention” and “intervention*” have been re-included to establish if any comparable literature exists about prevention in the domiciliary care system. The phrases “winter warmth” and “keep* warm” have been added after they

Search number	Search terms	Finds	Comments and decisions made
			were found in some earlier searches.
S8	S1 AND S6 AND S7	0	
S9	S1 AND S6	18550	
S10	S1 AND S7	0	
S11	S6 AND S7	0	

Campbell Collaboration

The database only held 83 results - they were reviewed manually.

<https://campbellcollaboration.org/better-evidence/home-visits-for-prevention-of-impairment-death-older-adults.html>

APPENDIX 3: Grey Literature Appraisal Tool

The template Grey Literature Appraisal Tool is shown below:

GREY LITERATURE APPRAISAL TOOL	
Paper	Assessment
Why was the paper written?	
How did the Author come to their conclusions?	
Does it appear credible?	
Does it appear accurate	
What authority do the authors have?	
If policy doc - What is the political/lobbyist or campaign bias?	
What was the evidence base used?	
If web-based - who supports the site?	
When was it updated?	

Developed from Aveyard (2014), Hek et al (2000), Wooliams et al (2011), Fink (2019) Jesson, Matheson & Lacey (2011) Florence et al (2005), Wooliams et al (2011) and the 'Six Questions' model

<https://www.nottingham.ac.uk/studentservices/documents/oxfordbookesunibemorecritical2.pdf>

The completed grey literature appraisals are shown below:

Grey Literature Appraisal Tool	
Paper: Adedeji, O. T.;Jepps, A (2014)	
Why was the paper written?	Requirement to report upon the outcomes of publicly funded interventions initiative.
How did the Author come to their conclusions?	Reporting of activity, experiential data and reflection on lessons learned.
Does it appear credible?	Yes- peer reviewed and overseen by senior PCT directors
Does it appear accurate	Yes
What authority do the authors have?	PH professional
If policy doc - What is the political/lobbyist or campaign bias?	N/A
What was the evidence base used?	Collection of data collected by author on delivery of interventions
If web-based - who supports the site?	N/A
When was it updated?	N/A

Grey Literature Appraisal Tool	
Paper: Allmark P; Tod AM (2014)	
Why was the paper written?	To discuss the use of behaviour change techniques and to aid the development of an ethical framework in respect to the application of a specific behaviour change techniques
How did the Author come to their conclusions?	Using primary research findings
Does it appear credible?	Yes
Does it appear accurate	Yes
What authority do the authors have?	Involved in primary research and hold senior academic positions

If policy doc - What is the political/lobbyist or campaign bias?	N/A
What was the evidence base used?	Primary qualitative research
If web-based - who supports the site?	N/A
When was it updated?	N/A

Grey Literature Appraisal Tool	
Paper: Bull A., Mahmood H., Cush N. (2010)	
Why was the paper written?	Practice dissemination
How did the Author come to their conclusions?	Review of statistical evidence
Does it appear credible?	Yes
Does it appear accurate	Yes
What authority do the authors have?	PH practitioner and data analyst
If policy doc - What is the political/lobbyist or campaign bias?	N/A
What was the evidence base used?	National statistics and local data collection
If web-based - who supports the site?	N/A
When was it updated?	N/A

Grey Literature Appraisal Tool	
Paper: Glasper A. (2010)	
Why was the paper written?	Discussion and professional practice advice

How did the Author come to their conclusions?	Drawing upon national policy recommendations
Does it appear credible?	Yes
Does it appear accurate	Yes
What authority do the authors have?	Senior academic
If policy doc - What is the political/lobbyist or campaign bias?	Drawing on national policy of the time
What was the evidence base used?	Credible sources of data for example WHO, ONS
If web-based - who supports the site?	N/A
When was it updated?	N/A

Grey Literature Appraisal Tool	
Paper: Goodwin J. (2007)	
Why was the paper written?	Discussion paper challenging some of the policy responses to EWD
How did the Author come to their conclusions?	Assessing policy response against outcomes – discussion only, based upon EWD and research papers
Does it appear credible?	In the main
Does it appear accurate	Not able to assess
What authority do the authors have?	Head of research for national charity
If policy doc - What is the political/lobbyist or campaign bias?	Potential lobbyist motivations given that he works for AGEUK
What was the evidence base used?	National data and empirical studies
If web-based - who supports the site?	N/A
When was it updated?	N/A

Grey Literature Appraisal Tool	
Paper: Katiyo, S. Dorey, S. Bone, A.	
Why was the paper written?	As a national policy intervention
How did the Author come to their conclusions?	Using a range of findings from empirical and practice-based evidence
Does it appear credible?	Yes
Does it appear accurate	Yes
What authority do the authors have?	Senior PH practitioners and experts in extreme weather events
If policy doc - What is the political/lobbyist or campaign bias?	National policy document

What was the evidence base used?	Empirical and practice-based evidence
If web-based - who supports the site?	N/A
When was it updated?	N/A

Grey Literature Appraisal Tool	
Paper: Lloyd J. (2013)	
Why was the paper written?	To meet the objectives of the organisation in developing evidence-based policy analysis
How did the Author come to their conclusions?	Policy and evidence review
Does it appear credible?	Yes
Does it appear accurate	Yes
What authority do the authors have?	National 'think tank' director, senior academic and advisor to government strategic unit
If policy doc - What is the political/lobbyist or campaign bias?	Possible political or lobbyist bias
What was the evidence base used?	Range of empirical and practice based evidence
If web-based - who supports the site?	N/A
When was it updated?	N/A

Grey Literature Appraisal Tool	
Paper: Mc Lafferty E; Farley A; Hendry C (2009)	
Why was the paper written?	Knowledge and practice dissemination
How did the Author come to their conclusions?	Clinical evidence base and practice guidance
Does it appear credible?	Yes
Does it appear accurate	In the main
What authority do the authors have?	Senior academic
If policy doc - What is the political/lobbyist or campaign bias?	Nonapparent

What was the evidence base used?	Clinical studies and practice evidence
If web -based - who supports the site?	N/A
When was it updated?	N/A

Grey Literature Appraisal Tool	
Paper: NICE (2015 and 2016)	
Why was the paper written?	To provide national guidance to meet PH goals
How did the Author come to their conclusions?	Systematic reviews of evidence
Does it appear credible?	Yes
Does it appear accurate	Yes
What authority do the authors have?	
If policy doc - What is the political/lobbyist or campaign bias?	Nationally recognised expertise
What was the evidence base used?	Empirical research and practice evidence
If web-based - who supports the site?	N/A
When was it updated?	N/A

Grey Literature Appraisal Tool	
Paper: Pete I. (2008)	
Why was the paper written?	Discussion paper to inform practice
How did the Author come to their conclusions?	Review of evidence and interventions
Does it appear credible?	Yes
Does it appear accurate	In the main
What authority do the authors have?	Senior academic
If policy doc - What is the political/lobbyist or campaign bias?	Nonapparent
What was the evidence base used?	Empirical evidence and intervention recommendations

If web-based - who supports the site?	N/A
When was it updated?	N/A

APPENDIX 4: Quality Evaluation

Quantitative Research

Below is an example of a completed quantitative research quality evaluation:

Checklist

Study identification:	Ipparraguire (2014)		
Section 1: Population			
1.1 Is the source population or source area well described? Was the country (e.g. developed or non-developed, type of healthcare system), setting (primary schools, community centres etc.), location (urban, rural), population demographics etc. adequately described?	<div>++</div> <div>+</div> <div>-</div> <div>NR</div> <div>NA</div>	Well described and detailed	
1.2 Is the eligible population or area representative of the source population or area? Was the recruitment of individuals, clusters or areas well defined (e.g. advertisement, birth register)? Was the eligible population representative of the source? Were important groups under-represented?	<div>++</div> <div>+</div> <div>-</div> <div>NR</div> <div>NA</div>	Comments: A specific group of intervention recipients	

<p>1.3 Do the selected participants or areas represent the eligible population or area?</p> <p>Was the method of selection of participants from the eligible population well described?</p> <p>What % of selected individuals or clusters agreed to participate? Were there any sources of bias?</p> <p>Were the inclusion or exclusion criteria explicit and appropriate?</p>	<div>++</div> <div>+</div> <div>–</div> <div>NR</div> <div>NA</div>	<p>Comments:</p>
<p>Section 2: Method of allocation to intervention (or comparison)</p>		
<p>2.1 Allocation to intervention (or comparison). How was selection bias minimised?</p> <p>Was allocation to exposure and comparison randomised? Was it truly random ++ or pseudo-randomised + (e.g. consecutive admissions)?</p> <p>If not randomised, was significant confounding likely (–) or not (+)?</p> <p>If a cross-over, was order of intervention randomised?</p>	<div>++</div> <div>+</div> <div>–</div> <div>NR</div> <div>NA</div>	<p>Comments:</p> <p>Intervention recipients only</p>
<p>2.2 Were interventions (and comparisons) well described and appropriate?</p> <p>Were interventions and comparisons described in sufficient detail (i.e. enough for study to be replicated)?</p> <p>Was comparisons appropriate (e.g. usual practice rather than no intervention)?</p>	<div>++</div> <div>+</div> <div>–</div> <div>NR</div> <div>NA</div>	

<p>2.3 Was the allocation concealed?</p> <p>Could the person(s) determining allocation of participants or clusters to intervention or comparison groups have influenced the allocation?</p> <p>Adequate allocation concealment (++) would include centralised allocation or computerised allocation systems.</p>	<p>++</p> <p>+</p> <p>–</p> <p>NR</p> <p>NA</p>	<p>Comments:</p> <p>Not applicable in this case</p>
<p>2.4 Were participants or investigators blind to exposure and comparison?</p> <p>Were participants and investigators – those delivering or assessing the intervention kept blind to intervention allocation? (Triple or double blinding score ++)</p> <p>If lack of blinding is likely to cause important bias, score –.</p>	<p>++</p> <p>+</p> <p>–</p> <p>NR</p> <p>NA</p>	<p>Comments:</p> <p>N/A in this case</p>
<p>2.5 Was the exposure to the intervention and comparison adequate?</p> <p>Is reduced exposure to intervention or control related to the intervention (e.g. adverse effects leading to reduced compliance) or fidelity of implementation (e.g. reduced adherence to protocol)?</p> <p>Was lack of exposure sufficient to cause important bias?</p>	<p>++</p> <p>+</p> <p>–</p> <p>NR</p> <p>NA</p>	<p>Comments:</p> <p>The analysis assessed impact of intervention against variables of property characteristics</p>

<p>2.6 Was contamination acceptably low?</p> <p>Did any in the comparison group receive the intervention or vice versa?</p> <p>If so, was it sufficient to cause important bias?</p> <p>If a cross-over trial, was there a sufficient wash-out period between interventions?</p>	<p>++</p> <p>+</p> <p>-</p> <p>NR</p> <p>NA</p>	<p>Comments:</p>
<p>2.7 Were other interventions similar in both groups?</p> <p>Did either group receive additional interventions or have services provided in a different manner?</p> <p>Were the groups treated equally by researchers or other professionals?</p> <p>Was this sufficient to cause important bias?</p>	<p>++</p> <p>+</p> <p>-</p> <p>NR</p> <p>NA</p>	<p>Comments:</p>
<p>2.8 Were all participants accounted for at study conclusion?</p> <p>Were those lost-to-follow-up (i.e. dropped or lost pre-, during or post-intervention) acceptably low (i.e. typically <20%)?</p> <p>Did the proportion dropped differ by group? For example, were drop-outs related to the adverse effects of the intervention?</p>	<p>++</p> <p>+</p> <p>-</p> <p>NR</p> <p>NA</p>	<p>Comments:</p>

<p>2.9 Did the setting reflect usual UK practice?</p> <p>Did the setting in which the intervention or comparison was delivered differ significantly from usual practice in the UK? For example, did participants receive intervention (or comparison) condition in a hospital rather than a community-based setting?</p>	<div>++</div> <div>+</div> <div>–</div> <div>NR</div> <div>NA</div>	<p>Comments:</p> <p>Data reflects standard practice across UK in terms of the intervention</p>
<p>2.10 Did the intervention or control comparison reflect usual UK practice?</p> <p>Did the intervention or comparison differ significantly from usual practice in the UK? For example, did participants receive intervention (or comparison) delivered by specialists rather than GPs? Were participants monitored more closely?</p>	<div>++</div> <div>+</div> <div>–</div> <div>NR</div> <div>NA</div>	<p>Comments:</p>
<p>Section 3: Outcomes</p>		
<p>3.1 Were outcome measures reliable?</p> <p>Were outcome measures subjective or objective (e.g. biochemically validated nicotine levels ++ vs self-reported smoking –)?</p> <p>How reliable were outcome measures (e.g. inter- or intra-related reliability scores)?</p> <p>Was there any indication that measures had been validated (e.g. validated against a gold standard measure or assessed for content validity)?</p>	<div>++</div> <div>+</div> <div>–</div> <div>NR</div> <div>NA</div>	<p>Comments:</p> <p>Objective data collection measures used</p>

<p>3.2 Were all outcome measurements complete?</p> <p>Were all or most study participants who met the defined study outcome definitions likely to have been identified?</p>	<p>++</p> <p>+</p> <p>–</p> <p>NR</p> <p>NA</p>	<p>Comments:</p>
<p>3.3 Were all important outcomes assessed?</p> <p>Were all important benefits and harms assessed?</p> <p>Was it possible to determine the overall balance of benefits and harms of the intervention versus comparison?</p>	<p>++</p> <p>+</p> <p>–</p> <p>NR</p> <p>NA</p>	<p>Comments:</p> <p>This study was assessing intervention against temperature – it did not assess other outcomes</p>
<p>3.4 Were outcomes relevant?</p> <p>Where surrogate outcome measures were used, did they measure what they set out to measure? (e.g. a study to assess impact on physical activity assesses gym membership – a potentially objective outcome measure – but is it a reliable predictor of physical activity?)</p>	<p>++</p> <p>+</p> <p>–</p> <p>NR</p> <p>NA</p>	<p>Comments:</p> <p>Some additional measure introduced to control potential confounding effects on EWD</p>

<p>3.5 Were there similar follow-up times in exposure and comparison groups?</p> <p>If groups are followed for different lengths of time, then more events are likely to occur in the group followed-up for longer distorting the comparison.</p> <p>Analyses can be adjusted to allow for differences in length of follow-up (e.g. using person-years).</p>	<p>++</p> <p>+</p> <p>–</p> <p>NR</p> <p>NA</p>	<p>Comments:</p>
<p>3.6 Was follow-up time meaningful?</p> <p>Was follow-up long enough to assess long-term benefits or harms?</p> <p>Was it too long, e.g. participants lost to follow-up?</p>	<p>++</p> <p>+</p> <p>–</p> <p>NR</p> <p>NA</p>	<p>Comments:</p> <p>1950s to 2012</p>
<p>Section 4: Analyses</p>		
<p>4.1 Were exposure and comparison groups similar at baseline? If not, were these adjusted?</p> <p>Were there any differences between groups in important confounders at baseline?</p> <p>If so, were these adjusted for in the analyses (e.g. multivariate analyses or stratification).</p> <p>Were there likely to be any residual differences of relevance?</p>	<p>++</p> <p>+</p> <p>–</p> <p>NR</p> <p>NA</p>	<p>Comments:</p>

<p>4.2 Was intention to treat (ITT) analysis conducted?</p> <p>Were all participants (including those that dropped out or did not fully complete the intervention course) analysed in the groups (i.e. intervention or comparison) to which they were originally allocated?</p>	<p>++</p> <p>+</p> <p>–</p> <p>NR</p> <p>NA</p>	<p>Comments:</p>
<p>4.3 Was the study sufficiently powered to detect an intervention effect (if one exists)?</p> <p>A power of 0.8 (that is, it is likely to see an effect of a given size if one exists, 80% of the time) is the conventionally accepted standard.</p> <p>Is a power calculation presented? If not, what is the expected effect size? Is the sample size adequate?</p>	<p>++</p> <p>+</p> <p>–</p> <p>NR</p> <p>NA</p>	<p>Comments:</p> <p>Very detailed descriptions of methods applied</p>
<p>4.4 Were the estimates of effect size given or calculable?</p> <p>Were effect estimates (e.g. relative risks, absolute risks) given or possible to calculate?</p>	<p>++</p> <p>+</p> <p>–</p> <p>NR</p> <p>NA</p>	<p>Comments:</p> <p>Very detailed descriptions of methods applied</p>




<p>4.5 Were the analytical methods appropriate?</p> <p>Were important differences in follow-up time and likely confounders adjusted for?</p> <p>If a cluster design, were analyses of sample size (and power), and effect size performed on clusters (and not individuals)?</p> <p>Were subgroup analyses pre-specified?</p>	<div>++</div> <div>+</div> <div>–</div> <div>NR</div> <div>NA</div>	<p>Comments:</p>
<p>4.6 Was the precision of intervention effects given or calculable? Were they meaningful?</p> <p>Were confidence intervals or p values for effect estimates given or possible to calculate?</p> <p>Were CI's wide or were they sufficiently precise to aid decision-making? If precision is lacking, is this because the study is under-powered?</p>	<div>++</div> <div>+</div> <div>–</div> <div>NR</div> <div>NA</div>	<p>Comments:</p> <p>Detailed results presented</p>
<p>Section 5: Summary</p>		
<p>5.1 Are the study results internally valid (i.e. unbiased)?</p> <p>How well did the study minimise sources of bias (i.e. adjusting for potential confounders)?</p> <p>Were there significant flaws in the study design?</p>	<div>++</div> <div>+</div> <div>–</div>	<p>Comments:</p> <p>Potential issues were recognised and measures put in place to minimise the bias, potential of confounding results.</p>

<p>5.2 Are the findings generalisable to the source population (i.e. externally valid)?</p> <p>Are there sufficient details given about the study to determine if the findings are generalisable to the source population? Consider: participants, interventions and comparisons, outcomes, resource and policy implications.</p>	<div>++</div> <div>+</div> <div>-</div>	<p>Comments: I feel the study was able to answer the research question and the findings are relevant to population and policy.</p>
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Qualitative Research




Below is an example of a completed qualitative research quality evaluation:



 www.casp-uk.net
 info@casp-uk.net
 Summertown Pavilion, Middle Way Oxford OX2 7LG

CASP Checklist: 10 questions to help you make sense of a **Qualitative** research

How to use this appraisal tool: Three broad issues need to be considered when appraising a qualitative study:

-  Are the results of the study valid? (Section A)
-  What are the results? (Section B)
-  Will the results help locally? (Section C)

The 10 questions on the following pages are designed to help you think about these issues systematically. The first two questions are screening questions and can be answered quickly. If the answer to both is “yes”, it is worth proceeding with the remaining questions. There is some degree of overlap between the questions, you are asked to record a “yes”, “no” or “can’t tell” to most of the questions. A number of italicised prompts are given after each question. These are designed to remind you why the question is important. Record your reasons for your answers in the spaces provided.

About: These checklists were designed to be used as educational pedagogic tools, as part of a workshop setting, therefore we do not suggest a scoring system. The core CASP checklists (randomised controlled trial & systematic review) were based on JAMA 'Users' guides to the medical literature 1994 (adapted from Guyatt GH, Sackett DL, and Cook DJ), and piloted with health care practitioners.

For each new checklist, a group of experts were assembled to develop and pilot the checklist and the workshop format with which it would be used. Over the years overall adjustments have been made to the format, but a recent survey of checklist users reiterated that the basic format continues to be useful and appropriate.

Referencing: we recommend using the Harvard style citation, i.e.: *Critical Appraisal Skills Programme (2018). CASP (insert name of checklist i.e. Qualitative) Checklist. [online] Available at: URL. Accessed: Date Accessed.*

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Critical Appraisal Skills Programme (CASP) part of Oxford Centre for Triple Value Healthcare www.casp-uk.net

Paper for appraisal and reference: Armstrong D., Winder R., Wallis R. (2005)

Section A: Are the results valid?

1. Was there a clear statement of the aims of the research?

Yes	<input checked="" type="checkbox"/>
Can't Tell	<input type="checkbox"/>
No	<input type="checkbox"/>

- HINT: Consider
- what was the goal of the research
 - why it was thought important
 - its relevance

Comments:

2. Is a qualitative methodology appropriate?

Yes	<input checked="" type="checkbox"/>
Can't Tell	<input type="checkbox"/>
No	<input type="checkbox"/>

- HINT: Consider
- If the research seeks to interpret or illuminate the actions and/or subjective experiences of research participants
 - Is qualitative research the right methodology for addressing the research goal

Comments: The methodology is sound and appropriate for the research question

Is it worth continuing?

3. Was the research design appropriate to address the aims of the research?

Yes	<input checked="" type="checkbox"/>
Can't Tell	<input type="checkbox"/>
No	<input type="checkbox"/>

- HINT: Consider
- if the researcher has justified the research design (e.g. have they discussed how they decided which method to use)

Comments: The decision making variables were based in psychological and practical factors that could be unearthed through the interviews at different stages of the project

4. Was the recruitment strategy appropriate to the aims of the research?

Yes	<input checked="" type="checkbox"/>
Can't Tell	<input type="checkbox"/>
No	<input type="checkbox"/>

HINT: Consider

- If the researcher has explained how the participants were selected
- If they explained why the participants they selected were the most appropriate to provide access to the type of knowledge sought by the study
- If there are any discussions around recruitment (e.g. why some people chose not to take part)

Comments:

5. Was the data collected in a way that addressed the research issue?

Yes	<input checked="" type="checkbox"/>
Can't Tell	<input type="checkbox"/>
No	<input type="checkbox"/>

HINT: Consider

- If the setting for the data collection was justified
- If it is clear how data were collected (e.g. focus group, semi-structured interview etc.)
- If the researcher has justified the methods chosen
- If the researcher has made the methods explicit (e.g. for interview method, is there an indication of how interviews are conducted, or did they use a topic guide)
- If methods were modified during the study. If so, has the researcher explained how and why
- If the form of data is clear (e.g. tape recordings, video material, notes etc.)
 - If the researcher has discussed saturation of data

Comments:

6. Has the relationship between researcher and participants been adequately considered?

Yes	<input type="checkbox"/>
Can't Tell	<input checked="" type="checkbox"/>
No	<input type="checkbox"/>

HINT: Consider

- If the researcher critically examined their own role, potential bias and influence during (a) formulation of the research questions (b) data collection, including sample recruitment and choice of location
- How the researcher responded to events during the study and whether they considered the implications of any changes in the research design

Comments: **No mention within the report**

Section B: What are the results?

7. Have ethical issues been taken into consideration?

Yes	<input checked="" type="checkbox"/>
Can't Tell	<input type="checkbox"/>
No	<input type="checkbox"/>

HINT: Consider

- If there are sufficient details of how the research was explained to participants for the reader to assess whether ethical standards were maintained
- If the researcher has discussed issues raised by the study (e.g. issues around informed consent or confidentiality or how they have handled the effects of the study on the participants during and after the study)
- If approval has been sought from the ethics committee

Comments: **Detailed**

8. Was the data analysis sufficiently rigorous?

Yes	<input type="checkbox"/>
Can't Tell	<input checked="" type="checkbox"/>
No	<input type="checkbox"/>

HINT: Consider

- If there is an in-depth description of the analysis process
- If thematic analysis is used. If so, is it clear how the categories/themes were derived from the data
- Whether the researcher explains how the data presented were selected from the original sample to demonstrate the analysis process
- If sufficient data are presented to support the findings
 - To what extent contradictory data are taken into account
- Whether the researcher critically examined their own role, potential bias and influence during analysis and selection of data for presentation

Comments: Outlined but lacking in sufficient detail to state 'yes'.

9. Is there a clear statement of findings?

Yes	<input checked="" type="checkbox"/>
Can't Tell	<input type="checkbox"/>
No	<input type="checkbox"/>

HINT: Consider whether

- If the findings are explicit
- If there is adequate discussion of the evidence both for and against the researcher's arguments
- If the researcher has discussed the credibility of their findings (e.g. triangulation, respondent validation, more than one analyst)
- If the findings are discussed in relation to the original research question

Comments:

Section C: Will the results help locally?

10. How valuable is the research?

HINT: Consider

- If the researcher discusses the contribution the study makes to existing knowledge or understanding (e.g. do they consider the findings in relation to current practice or policy, or relevant research-based literature
- If they identify new areas where research is necessary
- If the researchers have discussed whether or how the findings can be transferred to other populations or considered other ways the research may be used

Comments: highlights the importance of local 'implementers' in ensuring the successful implementable of policy. Relevant to the development of interventions to prevent EWD.

Mixed Methods

The completed Mixed Methods Appraisal Tool (MMAT) – from <http://mixedmethodsappraisaltoolpublic.pbworks.com> – is shown below:

First author	Year	SCREENING QUESTIONS		1. QUALITATIVE STUDIES				
		S1. Are there clear research questions?	S2. Do the collected data allow to address the research questions?	1.1. Is the qualitative approach appropriate to answer the research question?	1.2. Are the qualitative data collection methods adequate to address the research question?	1.3. Are the findings adequately derived from the data?	1.4. Is the interpretation of results sufficiently substantiated by data?	1.5. Is there coherence between qualitative data sources, collection, analysis and interpretation?
Hughes	2019	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Madden	2014	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Stockton	2013	Yes	Yes	Yes	Yes	Can't tell	Can't tell	Can't tell
Pollard	2019	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Viggers	2013	Yes	No	Yes	Yes	Can't tell	Can't tell	Yes
Willard	2017	Yes	Yes	Yes	Yes	Yes	Yes	Yes

First author	Year	3. NON-RANDOMIZED STUDIES					4. RANDOMIZED				
		3.1. Are the participants representative of the target population?	3.2. Are measurements appropriate regarding both the outcome and intervention (or exposure)?	3.3. Are there complete outcome data?	3.4. Are the confounders accounted for in the design and analysis?	3.5. During the study period, is the intervention administered (or exposure occurred) as intended?	4.1 Is the randomization appropriately performed?	4.2 Are the groups comparable at baseline?	4.3 Are there complete outcome data?	4.4 Are outcome assessors blind to the outcome data?	4.5 Did the participants adhere to the assigned intervention?
Hughes	2019	Yes	Yes	No	Can't tell	Yes					
Madden	2014	Yes	Yes	Can't tell	Can't tell	Yes					
Stockton	2013	Yes	Yes	Can't tell	Can't tell	Yes					
Pollard	2019	Yes	Yes	Can't tell	Can't tell	Yes					
Viggers	2013						Yes	Yes	No	Can't tell	Yes
Willard	2017	Yes	Yes	Yes	Can't tell	Yes					

First author	Year	5. MIXED METHODS STUDIES					COMMENTS
		5.1. Is there an adequate rationale for using a mixed methods design to address the research question?	5.2. Are the different components of the study effectively integrated to answer the research question?	5.3. Are the outputs of the integration of qualitative and quantitative components adequately interpreted?	5.4. Are divergences and inconsistencies between quantitative and qualitative results adequately addressed?	5.5. Do the different components of the study adhere to the quality criteria of each tradition of the methods involved?	
Hughes	2019	Yes	Yes	Yes	Yes	Yes	Valuable study that challenges some previous studies that suggest that older people are opposed to energy efficiency interventions despite accepting the impact of stoic behaviour in participants. The mixed methods approach was valid and beneficial in validating the data.
Madden	2014	Yes	Yes	Yes	Can't tell	Yes	Useful evaluation of large intervention revealing challenges and perceptions. Also highlighted the lack of credible link to outcomes.
Stockton	2013	Yes	Yes	Can't tell	Can't tell	Yes	Although potentially useful in may respects to the impact and uptake of interventions and implications to policy and practice, the paper was light on methodological detail.
Pollard	2019	Yes	Yes	Yes	Can't tell	Yes	Useful results in terms of understanding how people with LSI use home heating - study acknowledges that further research is required to gain greater understanding of wider variables and interventions.
Viggers	2013	Yes	Yes	Can't tell	Can't tell	Yes	The study was interrupted by an earth quake. However, despite this the data collected suggested useful findings and was suggested taken forward into further research
Willand	2017	Yes	Yes	Can't tell	Can't tell	Yes	The study uses existing data collected from a retro fit intervention. Despite this the methods are well described and appropriate for answering the research question. Implications suggested for policy and practice.

APPENDIX 5: Quality Appraisal Results Table

Quality assessment table																			
Qualitative assessments. Key: Y= met criteria, CT = can't tell from data presented, N = didn't meet criteria N/A = not applicable to this study																			
Question	1	2	3	4	5	6	7	8	9	10									
Armstrong 2005	Y	Y	Y	Y	Y	CT	Y	CT	Y	Y									
Bennet 2016	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y									
Day 2011	Y	Y	Y	Y	Y	CT	Y	Y	Y	Y									
Gascoigne 2010	Y	Y	Y	Y	Y	CT	Y	CT	Y	Y									
Harrington 2005	Y	Y	Y	Y	Y	CT	Y	CT	Y	Y									
Heffernan 2017	Y	Y	Y	Y	Y	CT	Y	Y	Y	Y									
Stewart 2016	Y	Y	Y	Y	Y	CT	Y	CT	Y	Y									
Tod 2012/13	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y									

Quantitative study Assessments KEY: Y = met criteria, P= partially met criteria, N= didn't meet criteria, N/A not applicable to this study, NR = not recorded																											
Question	1.1	1.2	1.3	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	2.10	3.1	3.2	3.3	3.4	3.5	3.6	4.1	4.2	4.3	4.4	4.5	4.6	5.1	5.2
Grey 2017	Y	Y	Y	Y	P	N/A	N/A	Y	N/A	N/A	N	Y	N/A	P	Y	P	Y	N/A	Y	Y	Y	Y	P	Y	Y	P	P
Ipparraguirre 2014	Y	Y	Y	N/A	Y	N/A	N/A	P	N/A	N/A	N/R	Y	N/A	Y	N/A	N/A	Y	N/A	Y	N/A	N/A	Y	Y	Y	Y	Y	Y
Orezcyn 2005	Y	Y	Y	N/A	Y	N/A	N/A	P	N/A	N/A	N/R	Y	N/A	Y	N/A	N/A	N/A	Y	Y	Y	N/A	Y	Y	Y	Y	Y	Y
Mixed methods assessment Key: Y= met criteria, CT = can't tell from data presented, N = didn't meet criteria N/A = not applicable to this study																											
Question	S1	S2	1.1	1.2	1.3	1.4	1.5	3.1	3.2	3.3	3.4	3.5	4.1	4.2	4.3	4.4	4.5	5.1	5.2	5.3	5.4	5.5					
Hughes 2019	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	CT	Y	N/A	N/A	N/A	N/A	N/A	N/A	Y	Y	Y	Y					
Madden 2014	Y	Y	Y	Y	Y	Y	Y	Y	Y	CT	CT	Y	N/A	N/A	N/A	N/A	N/A	Y	Y	Y	CT	Y					
Stockton 2013	Y	Y	Y	Y	CT	CT	CT	Y	Y	CT	CT	Y	N/A	N/A	N/A	N/A	N/A	Y	Y	CT	CT	Y					
Pollard 2019	Y	Y	Y	Y	Y	Y	Y	Y	Y	CT	CT	Y	N/A	N/A	N/A	N/A	N/A	Y	Y	Y	CT	Y					
Viggers 2013	Y	N	Y	Y	CT	CT	Y	N/A	N/A	N/A	N/A	N/A	Y	Y	N	CT	Y	Y	Y	CT	CT	Y					
Willand 2017	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	CT	Y	N/A	N/A	N/A	N/A	N/A	Y	Y	CT	CT	Y					

APPENDIX 6: Data Extraction Forms

Author	Date	Country	Funding	Evidence type	Methodology	Intervention	Participants
1. Adedeji, O. T.;Jepps, A.	2014	England	£320,000 Warm Homes Healthy People Grant 2011/2012 - Department of Health	Output reporting and evaluation of interventions and comment on lessons learnt from commissioning and organisational perspective	N/A	“Wrapped up” a series of interventions delivered across urban Nottingham	Estimated number of beneficiaries n=3395 Those at risk (inc over 65s with long term health conditions and/or living alone and/or in fuel poverty as set out by the Cold Weather Plan for England)
Findings Practical measures: <ul style="list-style-type: none"> • Training for staff answering phones and making targeted phone calls to at risk people • Awareness raising exercises with H&SC professionals (not clear methods used but n=20 ‘events’ noted) 							

- n=8 practical home energy measures ranging from insulation to a new boiler and central heating (These measures were aimed at reducing delayed discharges back into community settings – targeted from at risk register and having COPD or another severe long-term illness)
- ‘Welfare checks’ at day centres – n=750 questionnaires conducted and n=108 vulnerable individuals identified
- n=60 ‘Cold weather welfare telephone calls’ to individuals on the at-risk register
- n=100 fleece blankets distributed to day care centre clients

Communication and awareness raising measures:

- Public facing website – n=2000 hits recorded
- Information booklets - n=1450 via day care centres and users of domiciliary care services and n=500 charity shops
- Emergency contact number cards n=750 via day care centres and n=800 through domiciliary care services
- Winter warmth cookbooks n=500 via day care centres

Delivery mechanisms

Individuals meeting the at-risk criteria (from CWP) were identified through:

- Agencies already working with those groups – third sector, community and domiciliary care service providers
- Those on the PCT at risk register through management of long-term health conditions

The interventions were delivered via:

- Community groups for example AGEUK, CAB, Community Transport Nottingham.
- Domiciliary care service agencies to provide a channel of distribution

Notes (impact, critical success factors, barriers and enabling factors)?

- The paper notes a shift of organisational culture to pooling resources and taking a joint approach
- It notes the importance of community facing staff and organisations in identifying those at risk.
- However, it also notes that the different operating systems, protocols and thresholds were challenges.
- It suggests a need to identify different channels to engage with organisations and individuals who may have been missed by those used.
- There was a reduction in the need for hospital and nursing home admissions during the project. However, this cannot be fully quantified as the mild winter acted as a confounder to these results.
- It cannot be fully identified how these interventions prevent EWD as this was not measured.

Evaluation

No detailed measures of outcomes – simple reporting of interventions and some reporting of possible impact.

Quality assessment

Completed using grey literature tool

Met majority of quality criteria but lacking in some details.

Author	Date	Country	Funding	Evidence type	Methodology	Intervention	Participants
2. Allmark P; Tod AM	2014	England	N/A	Discussion paper drawing on findings from empirical qualitative research	See Tod A.M., Lusambili A., Homer C., Abbott J., Cooke J.M., Stocks A.J., McDaid K.A. 2012)	The possible contribution of behavioural insights (nudges); to the delivery of the PH agenda to reduce EWD	N/A

Findings

- The CWP and NICE guidance makes no mention of ‘Nudge’ despite this being a recognised behaviour change approach used within PH.
- Is this valid? – much of the literature appears to focus on the practical causes of EWD – fuel poverty and housing.
- Risk of EWD/being cold in the home is determined by ‘risk regulators’
 - cost of achieving a warm home is prohibitive – resulting from both the energy inefficiency of the home – old, damp, no insulation or central heating
 - And/or low income.
 - knowledge is an issue – how to operate the heating system, how to use direct debits (so used meters, how to switch
 - Fear was a problem for some – fear of debt

- Intangibility of fuel – a pile of coal was tangible
- Socio cultural influences – being stoic and tough were culturally valued and engrained into the collective psyche
- Some higher income houses were cold due to the fear of debt or stoic behaviour
- Some low-income houses for example social housing were warmer as LA had implemented improvements.
- Information deficit (impact of cold on health – what to do) was also found to be an issue in both the individuals and those who they relied upon for care
- Each cold household was a result of a process in which differing risk regulators played a part.
- The impact of these cannot be ignored as they contrast to logic that low income = cold home and a higher income = greater likelihood that the heating will be maintained at adequate temperatures to reduce the risk of cold related harm.
- There are some instances where behaviour change will not reduce risk – very poor housing and no money
- There are some where the constraints cannot be overcome for example the inability to remove a meter – maybe rented property or in debt
- However, there are situations where the constraints to reduce/remove the risk regulators are modifiable. Knowledge, reducing fear of large bills for example. These don't practically keep you warm but must be seen as part of the intervention mix.

Notes (impact, critical success factors, barriers and enabling factors)?

Practical interventions alone cannot alone regulate risk in some cases. The causes are complexly intertwined in some cases and in others a simple matter of practical issues OR behaviour.

Evaluation

N/A

Quality assessment

Completed using grey literature tool

Based upon empirical research findings.

Author	Date	Country	Funding	Evidence type	Methodology	Intervention	Participants
3. Armstrong D., Winder R., Wallis R.	2005	England	Dunhill Medical Trust and Lewisham Health Authority Special Trustees	Research paper	Qualitative study using 2 randomised groups (intervention and non-intervention take up) using qualitative interviews	Offer of free central heating installation to residents over 70rs old in Lambeth who did not have central heating in their home	LA tenants n=210 > 70yrs.

Findings

Of 1181 offers of free heating installation – only 301 were installed

1st set of declines

- Most common initial decline reason was that they felt their current system was adequate 17%
- Some felt that the mess and upheaval would be too much 11%
- Some believed it would be unhealthy or stuffy, dry air which would exacerbate and existing respiratory illness 12%

- Worried about bills or rent increase 11%

Of those accepting 51% thought that better heating would be better for their health and 76% had a long-standing illness

Delivery mechanisms

Via LA using contracted heating engineers

Notes (impact, critical success factors, barriers and enabling factors)?

- This marks a fundamental difference of opinion between policy makers and recipients of interventions where formal evidence/logic has a limited part to play.
- Behaviour is not always logical and knowledge and beliefs, even if misguided, play a real part in regulating risk.
- Some failed due to poor record keeping in the LA n respect to the householder's eligibility
- Language and meaning were also an issue – the understanding of what 'central heating' meant.
- Difficulties caused by interdepartmental working within the LA.
- The possible impact of the person visiting the household – the influence of the surveying heating engineer.
- The low uptake may have been the result of policy maker failure to recognise the impact of local/individual circumstances. Even when the benefit seems clear cut and logical, the impact of other variables must be considered if interventions like this are to succeed.

The paper notes the policy implications drawn from EWD that tackling fuel poverty and home energy efficiency or improvements to heating will be an effective way of reducing EWD.

All local authorities with housing responsibilities are required to put in place practical and cost-effective measures to improve energy efficiency measures within the housing stock – more economic heating, tackling damp and mould for example

Evaluation

Outputs

- Quantitative - No's taking up intervention offer

Outcomes

- Qualitative - the barriers to implementation

Quality assessment

Completed using mixed methods tool

Author	Date	Country	Funding	Evidence type	Methodology	Intervention	Participants
4. Bennet E., Dayson C., Gilbertson J., Tod A.	2016	England	Foundations Independent Living Trust	Research paper	Baseline data collection and monitoring and qualitative interviews	A range of home improvement /energy efficiency interventions across 183 district council areas	(n=8 Project managers and home improvement agency case workers, n=20 intervention recipients - homeowners, > 60yrs, low income, disability of long-term illness

Findings

- Overall, the condition of the homes was poor – some damp, mould, poor insulation etc.
- 3,678 home energy assessments
- 2647 received interventions – insulation and draught proofing, boiler replacement or repair and radiator panels were the top.
- 434 referred to supplier for warm homes discount and 399 to priority service register

Key role of local community staff

- Identification of those at risk or in need - those who are in clients homes a lot, for example, the HIA caseworkers have knowledge of the client's needs/individual circumstances. Some had a 'waiting list' of those who needed help.
- Channels of referral - the HIA caseworkers received referrals through the LA but some were referred from other sources, such as local handyman schemes, or self-referred
- The case workers and local schemes were well placed as they had an established reputation and an established network
- They were able to adapt on the ground and use differing techniques to get access to people and start conversations about keeping warm and what help might be needed for example.
- They also appeared to be referring people and supporting to gain access to other services unrelated to the home – for example OTs, carer support
- The HIA caseworkers exhibited very high levels of knowledge about sources of support for their clients and some were involved in coordinating interventions with funding drawn from several pots
- Some recipients had been referred to the scheme by community staff – nurses and OTs
- It was noted that some people had been struggling for quite some time and it was only through an encounter with a neighbour, friend or family member that they had got support from the scheme
- Recipients perceived community organisations as being in 'safe hands' – this inspired trust and confidence in the support
- In a number of reported cases, the trusted position allowed for referral into other avenues of support and the identification of other support needs.

Eligibility and access

- The HIA found that being able to act quickly and having relatively few restrictions of the funding criteria, meant they could act quickly to address the needs of vulnerable people. So, the money could be used to fix their problem.... not just certain problems for example a broken boiler.
- The broad eligibility criteria to access funding helped many for example 'over 60' rather than on certain benefits. An example of an elderly man with cancer who has no hot water – he failed LA support criteria but HIAs were able to help him.
- The monies were not used to set up new referral schemes – these were already in place and it was used to reinvigorate existing community action ie activities with AGEUK
- The speed at which the HIA were able to act was regarded as a great benefit – for example where a boiler broke down.
- Examples of some with limited means but over thresholds for help – a man without any heating was used as such a case example

Benefits of scheme

- Clients/recipients of interventions cited benefits including a warmer home, cheaper to keep warm, relief from the stress of cold and fear of large bills.
- Several cases of supporting discharge back home from hospital – would not have been possible without the intervention
- Spotting other problems – such as no smoke alarms
- Reducing isolation

- Providing knowledge of how to use heating properly
- The scheme provided a route to talk about prevention and health
- Following interventions 87% reported finding their home temperatures comfortable – pre intervention this was 60%
- The study reported overall positive changes in H&WB post interventions – General well-being up 15%
- Qualitative interviews with recipients reported feeling healthier and happier

Delivery mechanisms

The monies for home interventions were channelled through HIAs to provide energy and efficiency advice and interventions.

Notes (impact, critical success factors, barriers and enabling factors)?

- Money
- Local partnerships are essential in making policy happen on the ground – for example the CWP and NICE guidelines
- The scheme appeared to fill gaps in service provision – where help was needed but people implicitly were not eligible.

Evaluation

Outputs

- Interventions delivered

- Additional funding attracted

Outputs

- Qualitative measures self-reported improvements in recipient's health and wellbeing
- Quantitative movement from baseline collection of mould, damp and indoor temperatures

Quality assessment

Completed using qualitative tool as numerical data collection used only for baseline and comparison.

Limitations acknowledge the pressures of time experienced with grant funded projects and the time restrictions created by the parameters of the funding period thus not allowing for the seasonal impact upon the data collection to be fully accounted for.

Although the potential influence on the answers created by the influence of the HIA caseworker, this also had a positive effect in the ability to ask quite sensitive questions.

Author	Date	Country	Funding	Evidence type	Methodology	Intervention	Participants
5. Bull A., Mahmood H., Cush N.	2010	England	Not stated but presumed as Health Improvement Directorate of Birmingham PCTs	Discussion paper reporting the development of an intervention	N/A	An algorithm to assess risk and eligibility for referral to other schemes for use by a range of health and social care professionals within a PCT Birmingham)	At risk individuals using long term condition care management services. (including a high proportion of older people with one or more long term conditions)

Findings

- Identification and referral algorithm (in partnership with sources of practical intervention and advice
- Referral to advice through referral to Energy Savings Trust freephone number
- Referral to home improvement scheme for those with long term illness affected by damp and/or mould Npower Health Through Warmth Scheme
- Useful in identifying those whose health is detrimentally impacted by cold – those who may have been neglected due to high income but may still have been at risk.

- There was a reduction in EWD - it is likely it had a part to play and is being rolled out to other community staff such as GPs.
- Those providing community support such as NPower scheme, valued the links with community staff to gain referrals to those at risk of CRH

Delivery mechanisms

Used in the first instance by those providing telecare to a group being supported to manage long term health conditions.

Notes (impact, critical success factors, barriers and enabling factors)?

A brief paper but supports the notion of community contact to identify and support referral

Evaluation

Reduction in EWD – There was a reduction in EWD but confounders make it difficult to attribute this to the intervention.

Quality assessment

Completed using grey literature tool

Author	Date	Country	Funding	Evidence type	Methodology	Intervention	Participants
6. Crossley T.F., Zilio F.	2018	England and Scotland	Centre for Microeconomic Analysis of Public Policy and The Economic and Social Research Council	Research paper	Population level analysis using data collected in the Health Survey for England, Scottish Health Survey and English Longitudinal Study on Aging between 2001 and 2016	The Winter Fuel Payment	Households with member < 60yrs

Findings

- National data from health surveys and ONS EWDs
- Biomarkers:
 - Hypertension:
 - Serum values of CRP (blood plasma protein indicative of inflammation and/or infection and risk predictor of cardiovascular disease) in excess of 10
 - Serum values of fibrinogen (coagulation protein associated with COPD) 4 or more
 - Illness rates pre and post WFP eligibility:
- Raising the age of eligibility in women in line with pension age had a negative impact on health

- Socio-economic indicators. This impact was particularly apparent in those with lower educational levels
- The WFP has been previously linked to increased spending on fuel, but these findings link this to health.
- As the cut-off age for eligibility was raised in line with the state pension age, a negative impact on health was observed in those made ineligible.

Delivery mechanisms

Monies transferred directly to bank accounts of eligible people

Notes (impact, critical success factors, barriers and enabling factors)?

The impact was most widely seen in those with low educational levels and suggest that means testing might be a better rationale for eligibility to the payments.

Evaluation

Whether the WFP improves the health. Using regression discontinuity design to measure the causal effect of the intervention on markers of infection associated with CPD, hypertension and self-reported chest infections. Based on age and covering the period in which the pensionable age for women was raised.

Quality assessment

Completed using quantitative tool

Author	Date	Country	Funding	Evidence type	Methodology	Intervention	Participants
7. Day R., Hitchings R	2011	England	Nuffield Foundation	Research paper	Qualitative interviews, written and photo diaries.	Population level interventions based upon chronological age and linked to carbon reduction targets – WFP and national awareness campaigns and home improvement programmes to improve energy efficiency	n=21 all > 75yrs Two broad categories of low income and more affluent. A mix of male and female, single and couples and a mix of tenure type, housing type and housing age within each group.

Findings

- Although the physiological changes to the body associated with aging are valid reasons to consider interventions for older people, there are other implications of an aging body in relation to potentially being more susceptible to 'feeling the cold' – immobility due to the aging body, less active lifestyle due to retirement and differing habits.
- Although valid, these are not the only factors that may render an older person more likely to be at risk of CRH.
- Dress – social expectations, identity and also used as a mechanism to 'hide' from the stigma of ageing. Although wearing a nightcap may have been beneficial to some, these were rejected as associated with aging, loss of independence/ability to cope.
- Objects and spatial order – using blankets was associated with aging as above but also in relation to spatial disorder – they belong in the bedroom. Again, upset like this was associated with not be able to cope and a loss of independence.
- Ventilation – fear of odours as embarrassing and associated with old age. Also, ideas of keeping alert and energetic
- Behaviour was often associated with the avoidance of age stigma and feelings of independence

Delivery mechanisms

Not addressed as the paper looked at the impact of national/population level intervention (albeit some enacted at local level for example home improvement schemes)

Notes (impact, critical success factors, barriers and enabling factors)?

Interventions are often based on notions of chronological aging and risk factors associated with physiological decline.

These are real and undeniable but there was a resistance to representations of age – as seen in some aspects of the interventions and within advice campaigns.

Rather than a lack of understanding, this was a determine management of identity and self.

Advice or interventions may not be effective if

- Associated with old age or ‘the past’
- Are potentially embarrassing or expose aging – nightcaps, additional heating, blankets
- Routines, practices and habits matter

Evaluation

No hard measures in respect to intervention outcomes

Qualitative - comment around potential conflict of intervention intention and barriers.

Quality assessment

Completed using qualitative tool

Author	Date	Country	Funding	Evidence type	Methodology	Intervention	Participants
8. Gascoigne C., Morgan K., Gross H., Goodwin J.	2010	England	Not directly stated but collaboration between Met Office and Age UK for stage 4 of the study.	Research paper	Consensus development group, focus groups, field testing and semi-structured qualitative interviews	A booklet to advise on actions to take following receipt of a Met Office Severe Weather Early Warning System alert	<p>Focus groups with older people = male and female =12 64-76yrs, n=10 71-87yrs</p> <p>Focus groups with carers n= 10 (1 male) 19 – 89 yrs.</p> <p>Field testing and interviews n=37 > 65yrs. Mixed housing type and tenure – majority owner occupied.</p>

Findings

- Participants did not think the severe weather they were warned of to be that severe when compared it to cold experiences of their past
- Pre-test awareness of the link between cold and health (respiratory illness, cardiovascular risk) in the participants was low and that the booklet had raised their awareness beyond that of more common knowledge of hypothermia as a result of exposure to the cold
- Even though they did not identify themselves as the risk group – their attitudes towards how they should act during cold weather did shift
- There was evidence of some behaviour change – wearing a coat to pop into the garden for laundry, wearing a dressing gown at night, wearing slippers in the house, minor insulation jobs around doors, turning heating up a little on notification of cold weather
- A small number felt it was nannying and simply ‘common sense’
- For some it reminded and reinforced behaviour
- For some it gave ‘permission’ to act in a certain way
- Communication campaigns were not welcome that identified older people as victims and those who managed with cheer were considered worthy.

Delivery mechanisms

Delivered via project officers who visited homes to deliver booklet and made calls to homes to alert of severe weather

Notes (impact, critical success factors, barriers and enabling factors)?

- Participants had difficulty recognising that this applied to them. That it applied to older people. They did not identify themselves as being within the target group for the advice
- Lay epidemiology – a legacy from their past in the tuberculosis days when fresh air was considered salutogenic. - A clash of contemporary advice and earlier health wisdom
- Some advice and behaviour would never be adopted as barriers such as cost would overpower this – increased heating and insulation for example

Evaluation

The booklet design and content were re-tested via focus groups prior to field trials

Booklets evaluated against several criteria using qualitative techniques (when used in combination with severe weather warning):

- Raising awareness and improving knowledge
- Changing attitudes about keeping warm
- Promoting behavioural change likely to reduce risk

The emphasis placed upon the booklet when making alert calls may have created behavioural bias.

Quality assessment

Completed using qualitative tool

Author	Date	Country	Funding	Evidence type	Methodology	Intervention	Participants
9. Glasper A	2010	England	Not stated	Expert opinion	N/A	National 'Keep warm, keep well' campaign	N/A

Findings

- What nursing staff can learn from the campaign to support elderly and their families:
 - Urge vulnerable people, elderly and/or with long term health conditions/disabilities to monitor the TV and radio to be informed when cold snaps are due
 - Have the flu jab
 - Move around every hour
 - Eat well – and where this may be an issue, for professionals to refer to voluntary organisations
 - Dress in thin but multiple layers
 - Advise the eligible of their rights to winter fuel payments – states that nurses are in a key position to advocate here by providing details and supporting clients to claim
- Suggests providing this advice when in dialogue with elderly patients
 - Keep homes at 18-21 degrees C

- Support to gain financial and practical support to keep the home warm – help line number provided for staff to give out
- Encourage to eat well hot meals and drinks
- Advice to stay indoors on very cold days – if must go out, dress in warm clothing and footwear.

Delivery mechanisms

Through nursing staff in contact with elderly patients

Notes (impact, critical success factors, barriers and enabling factors)?

- The advice might be an enabling factor to support nurses to assist patients
 - The advice raises awareness and knowledge.
 - It also provides practical suggestions of actions to take.
- The critical success factors will be the staff taking up the suggestions and enacting on the ground - the barriers to this are unknown.
- Furthermore, the patients acting or being able to act upon the advice is critical and the barriers to this are unknown

Evaluation

N/A

Quality assessment

Completed using grey literature tool

Author	Date	Country	Funding	Evidence type	Methodology	Intervention	Participants
10. Goodwin J.	2007	UK	Age UK	Expert opinion	N/A	National policy response – Warm Front	N/A

Findings

- Policy intervention
 - Government policy has focused on indoor warmth through financial policies to eliminate fuel poverty and through practical energy efficiency measures.
 - These policies are welcomed as the link between a cold home and EWD is well evidenced
 - However, these policies are based upon eligibility criteria which do not eliminate risk caused by other factors. For example, those who may not receive benefits due to a small occupational pension for example but are in fuel poverty due to the cost of heating their home.
 - Furthermore, some studies suggest little link between deprivation and EWD
 - The NAO suggest that the eligibility criteria be examined more carefully for such schemes
 - Attitudes, knowledge and behaviour play a key role in risk determination
- Community health

- Community nursing staff are ideally placed to delivery anticipatory care.
- The agenda of prevention is growing and the message around temperature related illness needs adding to this
- Habitual behaviour is an issue in older people, ventilation habits, turning off heating at night, not dressing appropriately

Delivery mechanisms

N/A

Notes (impact, critical success factors, barriers and enabling factors)?

The solution to EWD requires not only the practical interventions to support indoor warmth but to ensure that ‘high risk’ behaviour is mitigated and the role of community staff in this is essential

Evaluation

N/A

Quality assessment

Completed using grey literature tool

Author	Date	Country	Funding	Evidence type	Methodology	Intervention	Participants
11. Grey, C. B. Jiang, S. Nascimento, C. Rodgers, S. Johnson, E. Lyons, R. Poortinga, W.	2017	Wales	National Institute for Health Research	Research paper	Quasi- experimental controlled pre- test/post-test 2013 to 2015 using quantitative survey and data analysis	Home energy efficiency schemes	24 intervention areas n=364 participants and 23 control areas n= 418 participants. 67% > 55yrs, 77% owner occupied, mixed housing type and age but majority pre 1965

Findings

- Free to eligible recipients:
- Internal and external wall insulation n=261
- Full central heating n=138
- Voltage optimiser n=159
- Heating controls n=101
- Connection to mains gas n=49
- Some targeting of measures to eradicate fuel poverty are flawed

- The study did not find that investments in energy efficiency measures improved physical or mental health in the short term
- However, it did show improvement in psychosocial outcomes with reported subjective improvements to wellbeing from reduced financial stress, greater thermal comfort and contentedness with their home. Social isolation decreased for some as they felt more able to have visitors.
- Spatial usage also increased for some as previously unheated rooms became usable.
- In the longer term, the improvements seen in these socio-economic factors may contribute to improved health in line with the wider determinants of health theory
- Therefore, when designing energy efficiency or fuel poverty interventions, it is important to consider these wider social determinants not just the health measures. So, they may not deliver immediate health improvement but do deliver immediate improvements in a better-quality living and social environment.
- Some interventions showed some improvements, but some actually had a negative impact (recall the smart meter discussion etc)

Delivery mechanisms

Energy efficiency improvement projects

Notes (impact, critical success factors, barriers and enabling factors)?

Evaluation

- Self-reported health outcomes both physical and mental SF12v2 and Mental Health Composite Scale. Subjective wellbeing.
- Survey of psychosocial measures about satisfaction with housing, thermal comfort, financial stress and isolation – using a series of questions derived from existing studies and Likert scales
- A limitation of the evaluation is that there are limited time scales for follow up. This short term follow up may have contributed to lack of evidence of the health improvements.

Quality assessment

Completed using quantitative tool

Author	Date	Country	Funding	Evidence type	Methodology	Intervention	Participants
12. Harrington B. Heyman B. Merleau- Pony N. Stockton H., Ritchie N. Heyman A.	2005	England	The health and Social Research Programme of The National Lotteries Charity Board (Community Fund) and North Tyneside Council	Research paper	Randomised trial - Baseline data and qualitative – A series of 3 semi structured interviews per participant	Warm Homes Project	Study – n=535 Interview participants n=30 of which n=15 were > 60yrs and in fuel poor households

Findings

- Home improvements;
 - Loft insulation (54%)
 - Cavity wall insulation (53%)
 - Draught exclusion (29%)
 - Heating controls (20%)

- Central heating (13%)

- This produced a improvement in heating efficiency
- People don't always make rational choices and may value emotional factors rather than the benefits of heating and being able to keep a property warm (lady who wanted to live by the sea)
- Or people move to a new house without giving heating any thought
- People adapt to conditions and base expectations on previous experiences – being cold as a child. Thermal comfort varies between people
- Some respondents made the link between positive and poor health (physical and mental) outcomes and the warmth of their home
- Some stated using less of the house in cold weather – heating only certain areas
- Lack of knowledge about heating, what costs to expect for heating and repairs was noted
- Lay epidemiology was noted as people got advice from family and friends as trusted advisors
- People are not passive targets for intervention
- The impact of wider social relationships is worthy of further investigation.

Delivery mechanisms

Warm Homes implementation projects

Notes (impact, critical success factors, barriers and enabling factors)

Response to a cold home is governed by complex variables of values, beliefs and coping strategies applied in the light of limited resources or emotional sacrifices. However, the basis of much intervention is not a complex one and rides upon the notion that improved finances or home improvements will solve the issue.

Cost is a significant factor and supports the policy of financial alleviation of fuel poverty

However, there are secondary effects of fuel poverty that are damaging – coping strategies, behaviour

In addition, advice was often from informal sources. Where formal advice is given, it is often in a prescriptive manner which does not consider the wider lives of those in fuel poverty or struggling to keep warm in their homes – or choosing not to heat their home.

Evaluation

Shift in behaviour, attitudes, beliefs, and self-reported wellbeing post intervention

Quality assessment

Completed using qualitative tool

Author	Date	Country	Funding	Evidence type	Methodology	Intervention	Participants
13. Heffernan C., Jones L., Ritchie B., Erens B., Chalabi Z., Mays N.	2017	England	Department of Health	Research paper	Qualitative - semi structured interviews	The Cold Weather Plan for England	n=52. Health and social care managers responsible for cold weather planning and implementation

Findings

- All respondents felt that the CWP had formalised processes by providing a framework for planning and responding to cold weather
- Majority felt they were better prepared than before the plan
- The plan had facilitated increased joint working and improved cross agency communication
- It helped to focus on outcomes and settings other than the NHS for example social care
- Local leadership was varied and often passed around until it landed in the EPRR directorate
- Majority felt it should be PH to coordinate responses of housing, social care etc
- Some felt that the plan was useful as it was about not just educating those at risk but those around those at risk

- Majority reported difficulties in engaging GPs with the plan
- Identification of vulnerable was varied in approach – some LA only considered those already in receipt of LA services – social care for example – this neglected other people in the local population who might be vulnerable
- Most localities used front line staff who may encounter vulnerable people as a means of identification and then refer them to relevant services. This meant that planners were not always confident they had identified vulnerable people or that they were referred to the most appropriate services
- Data sharing was a problem and the default to existing lists meant that not all people vulnerable may have been identified
- There appeared to be a reluctance to accept help from the LA in some cases – pride, mistrust, ???
- The plan provided a useful way of the social care commissioners to engage with providers about the matter, particularly in combination with the cold weather alerts and ensuring their domiciliary care service staff were making checks and referrals. However, there was little evidence of any of this happening as it was not included in any contractual arrangements or performance measures. It was mostly on the back of assumptions made by commissioners – presuming they would do this as part of their duty of care.
- Some of the interventions such as warm packs would be pointless if given to people in warm well insulated house and likewise if given to those who could not afford to eat well.

Delivery mechanisms

Local health and social care organisations and networks – NHS, LAs

Notes (impact, critical success factors, barriers and enabling factors)?

- The plan as beneficial at organisational level
- Barriers were the correct identification of vulnerable and the appropriateness of intervention given individual circumstance
- It was recognised that front line social care staff had a vital role to play in both identification and supporting to intervention. However, there are no formal mechanisms in place to facilitate this or check it happens.
- Data sharing and lack of engagement for certain groups was a missed opportunity

Evaluation

Qualitative reflections on pre and post plan planning and activity, changes and learning

Quality assessment

Completed using qualitative tool

Author	Date	Country	Funding	Evidence type	Methodology	Intervention	Participants
14. Hughes C., Natarajan S.	2019	England	EPSRC Centre for Decarbonisation of the Built Environment.	Research paper	Longitudinal mixed methods study between 2016 and 2018. Quantitative data collection and qualitative interviews	Energy-efficient retro fitting schemes and energy switching	n=43 > 65yrs. All lived alone, mostly in semidetached properties and had low income.
Findings Adoption of interventions and propensity to do so <ul style="list-style-type: none"> • Health • All recipients felt that the cold was bad for health and worsened their own conditions Personal practical <ul style="list-style-type: none"> • All used clothing rather than turning heating up • Only n=2 used hot water bottles and/or blankets 							

Energy efficiency measures

- Only n=1 participant had done any off their own back
- However, n=88% of recipients indicated they would be willing to have work done.
- But some barriers were recognised – fear of cost of bills, lack of control of new systems, let not worth it at their age

Switching suppliers/tariff

- Commonly known that cheaper
- Barriers were fear of exploitation, lack of knowledge and ability to use the internet.
- High income does not necessarily result in a warm home (most of the studies reviewed focused on low income homes by default of the eligibility for the interventions)
- There is research evidence to suggest that retro fitting fuel efficiency measures does increase indoor temperatures and therefore increases both physical and mental health. However, research also shows that behavioural drivers limit their success, for example habits, lay epidemiological beliefs, the integrability of fuel sources.
- Some papers suggest that older people are wedded to outdated methods of doing things – cultural norms of their childhood and valuing coping.
- Most reported the temperature of their home bearable

- Most reported existing health conditions worsening in cold weather – asthma, arthritis
- Participants often put on more clothing rather than turn the heating up
- Personal heating devices such as hot water bottles were not favoured by the participants who felt they age related – looked like old people
- Reducing spatial use was common in the participants
- Unlike some studies, 88.5% reported that they would be open to retro fit but there were some concerns

Delivery mechanisms

N/A for this paper

Notes (impact, critical success factors, barriers and enabling factors)?

Knowledge – they knew switching as an intervention was useful, but barriers were created by fear of the providers due to mistrust, lack of clarity as to what is a good deal and lack of ability to use the internet.

Barriers to retro fit were the cost of the work required and fear of a lack of control – again relates back to the intangibility

Values and beliefs – thinking they were too old or that it wasn't worth it

Habits and mentality do have an impact on the likelihood of change/intervention rather than coping with the cold

Older people are not opposed to energy efficiency measures but barriers as above and cost prevent this happening in some cases

Evaluation

The thematic results were compared against previous research for similarities and contrasts in the findings

Quality assessment

Completed using mixed methods tool

Author	Date	Country	Funding	Evidence type	Methodology	Intervention	Participants
15. Iparraguirre J	2015	England and Wales	Not stated	Research paper	Time series statistical analysis using EWD data 1950 to 2012,	Winter fuel payments and the cold weather payments	Those in receipt of winter fuel payment

Findings

- WFP made a significant contribution to the reduction in EWDs in England and Wales between 1999 and 2000. Possibly responsible for n=50% of the reduction.
- The WFP is often criticised for being paid to pensioners who have a comparably high income and should be means tested. However, these findings support the caution in this as it may have an impact on mortality. Higher eligibility age (women pensionable age raised from 60 to 65) had negative health impacts. (Link to other findings that income was not always a determinant of EWD outcomes)

Delivery mechanisms

Monies transferred directly to bank accounts of eligible people

Notes (impact, critical success factors, barriers and enabling factors)?

Suggests the problems causing EWD are grouped into health, housing, income poverty, fuel poverty, energy market issues and/or consumer behaviour problems and that interventions are targeted as such. However, the CWP does attempt to bring these together in an in targeted approach.

They paper suggests that the WFP should be integrated into the CWP

Additionally, they suggest that the scope should be increased to include others on benefits – disabled etc.

Evaluation

Comparisons of payment vs EWD trends

Quality assessment

Completed using quantitative tool

Author	Date	Country	Funding	Evidence type	Methodology	Intervention	Participants
16. Katiyo, S. Dorey, S. Bone, A.	2018/19	England	Public Health England and NHS England	National best practice guidance	N/A	Planning, alert and activity guidance framework	N/A

Findings

Recommended steps to reduce cold related harm to health for

- NHS, LAs, Social Care and other public agencies
- Professionals working with people who at risk
- Individuals and community groups/vol sector

5 Key messages:

1. That the suggested actions and cold weather alerts are understood across the local system and that plans are adjusted accordingly
2. That cold weather alerts reach those who need to take action

3. That NHS and LA commissioners should ensure that providers and stakeholders take appropriate action
4. Use opportunities to work with the vol and comm sector on response to cold weather
5. Cold weather response becomes core business for HWB boards and is included in JSNA

A series of actions are prescribed for commissioners, providers, and frontline staff at various levels of alert

	Level 0	Level 1	Level 2	Level 3	Level 4
	Year-round planning All Year	Winter preparedness and action 1 November to 31 March	Severe winter weather forecast – Alert and readiness Mean temperatures of 2°C and/or widespread ice and heavy snow predicted with 60% confidence	Severe weather action Mean temperatures of 2°C and/or widespread ice and heavy snow	Major incident – Emergency response
Commissioners of health and social care	<ul style="list-style-type: none"> 1) Take strategic approach to reduction of EWDs and fuel poverty. 2) Ensure winter plans reduce health inequalities. 3) Work with partners and staff on risk reduction awareness (eg flu vaccinations, signposting for winter warmth initiatives). 	<ul style="list-style-type: none"> 1) Communicate alerts and messages to staff/public/media. 2) Ensure partners are aware of alert system and actions. 3) Identify which organisations are most vulnerable to cold weather and agree winter surge plans. 	<ul style="list-style-type: none"> 1) Continue level 1 actions. 2) Ensure partners can access advice and make best use of available capacity. 3) Activate business continuity arrangements as required. 	<ul style="list-style-type: none"> 1) Continue level 2 actions. 2) Ensure key partners are taking appropriate action. 3) Work with partners to ensure access to critical services. 	Level 4 alert issued at national level in light of cross-government assessment of the weather conditions, coordinated by the Civil Contingencies Secretariat (CCS) based in the Cabinet Office. All level 3 responsibilities to be maintained unless advised to the contrary.
Provider organisations	<ul style="list-style-type: none"> 1) Ensure organisation can identify and support most vulnerable. 2) Plan for joined up support with partner organisations. 3) Work with partners and staff on risk reduction awareness (eg flu vaccinations, signposting for winter warmth initiatives). 	<ul style="list-style-type: none"> 1) Ensure cold weather alerts are going to right staff and actions agreed and implemented. 2) Ensure staff in all settings are considering room temperature. 3) Ensure data sharing and referral arrangements in place. 	<ul style="list-style-type: none"> 1) Continue level 1 actions. 2) Ensure carers receiving support and advice. 3) Activate business continuity arrangements as required; plan for surge in demand. 	<ul style="list-style-type: none"> 1) Continue level 2. 2) Implement emergency and business continuity plans; expect surge in demand in near future. 3) Implement local plans to ensure vulnerable people contacted. 	
Frontline staff – care facilities and community	<ul style="list-style-type: none"> 1) Use patient contact to identify vulnerable people and advise of cold weather actions; be aware of referral mechanisms for winter warmth and data sharing procedures. 2) Ensure awareness of health effects of cold and how to spot symptoms. 3) Encourage colleagues/clients to have flu vaccinations. 	<ul style="list-style-type: none"> 1) Identify vulnerable clients on caseload; ensure care plans incorporate cold risk reduction. 2) Check room temperatures and ensure referral as appropriate. 3) Signpost clients to other services using 'Keep Warm Keep Well' booklet. 	<ul style="list-style-type: none"> 1) Continue level 1 actions. 2) Consider prioritising those most vulnerable and provide advice as appropriate. 3) Check room temperatures and ensure urgent referral as appropriate. 	<ul style="list-style-type: none"> 1) Continue level 2 actions. 2) Implement emergency and business continuity plans; expect surge in demand in near future. 3) Prioritise those most vulnerable. 	

The plan also includes actions at national level and for individuals – not sure individuals would know about or see this???

	Level 0	Level 1	Level 2	Level 3	Level 4
Community and voluntary sector	<ul style="list-style-type: none"> 1) Engage with local statutory partners to agree how VCS can contribute to local community resilience arrangements. 2) Develop a community emergency plan to identify and support vulnerable neighbours. 3) Agree arrangements with other community groups to maximise service for and contact with vulnerable people. 	<ul style="list-style-type: none"> 1) Test community emergency plans to ensure that roles, responsibilities and actions are clear. 2) Set up rotas of volunteers to keep the community safe in cold weather and check on vulnerable people. 3) Actively engage with vulnerable people and support them to seek help. 	<ul style="list-style-type: none"> 1) Activate the community emergency plan. 2) Activate the business continuity plan. 3) Continue to actively engage vulnerable people known to be at risk and check on welfare regularly. 	<ul style="list-style-type: none"> 1) Continue level 2 actions. 2) Ensure volunteers are appropriately supported. 3) Contact vulnerable people to ensure they are safe and well and support them to seek help if necessary. 	<p>Level 4 alert issued at national level in light of cross-government assessment of the weather conditions, co-ordinated by the Civil Contingencies Secretariat (CCS) based in the Cabinet Office.</p> <p>All level 3 responsibilities to be maintained unless advised to the contrary.</p>
National level	<ul style="list-style-type: none"> 1) CO will lead on co-ordinating cross-government work; individual government departments will work with partners on winter preparations. 2) DHSC, PHE and NHS England will look to improve the CWP and the monitoring and analysis of winter-related illness and deaths. 3) PHE and NHS England will issue general advice to the public and professionals and work closely with other government departments and other national organisations that produce winter warmth advice. 	<ul style="list-style-type: none"> 1) Cold Weather Alerts will be sent by the Met Office to the agreed list of organisations and Category 1 responders. 2) PHE and NHS England will make advice available to the public and professionals. 3) NHS England will continue to hold health services to account for action and PHE will routinely monitor syndromic, influenza, norovirus and mortality surveillance data. 	<ul style="list-style-type: none"> 1) Continue level 1 actions. 2) DHSC will ensure that other government departments, particularly MHCLG RED, are aware of the change in alert level and brief ministers as appropriate. 3) Government departments should cascade the information through their own partner networks and frontline communication systems. 	<ul style="list-style-type: none"> 1) Continue level 2 actions. 2) NHS England will muster mutual aid when requested by local services. 3) Met Office will continue to monitor and forecast temperatures in each area, including the probability of other regions exceeding the level 3 threshold. 	
Individuals	<ul style="list-style-type: none"> 1) Seek good advice about improving the energy efficiency of your home and staying warm in winter; have all gas, solid fuel and oil burning appliances serviced by an appropriately registered engineer. 2) Check your entitlements and benefits; seek income maximisation advice and other services. 3) Get a flu jab if you are in a risk group (September/October). 	<ul style="list-style-type: none"> 1) If you are receiving social care or health services ask your GP, key worker or other contact about staying healthy in winter and services available to you. 2) Check room temperatures – especially those rooms where disabled or vulnerable people spend most of their time 3) Look out for vulnerable neighbours and help them prepare for winter. 	<ul style="list-style-type: none"> 1) Continue to have regular contact with vulnerable people and neighbours you know to be at risk in cold weather. 2) Stay tuned into the weather forecast ensure you are stocked with food and medications in advance. 3) Take the weather into account when planning your activity over the following days. 	<ul style="list-style-type: none"> 1) Continue level 2 actions. 2) Dress warmly; take warm food drinks regularly; keep active. If you have to go out, take appropriate precautions. 3) Check on those you know are at risk. 	<p>Follow key public health and weather alert messages as broadcast on the media.</p>

The plan distinguishes between the impact on health of cold temperatures and the risk of injury caused by snow and ice where the main risk is to working age adults. Although, disruption to H&SC services can result.

It suggests a critical role for resilience partnerships – moving to an EPRR territory?

Key elements of intervention within the plan:

- Strategic planning and commissioning
 - Health and Social Care Act 2014 has suitability of accommodation as duty. A healthy home would be dry, warm and well insulated.
 - The Act also states that wellbeing is promoted through people living independently for as long as possible – suggests affordable warmth measures
- Weather alerts available to H&SC professionals
- Winter preparedness
 - Action to reduce impact of exposure to low indoor temperatures
 - Preparedness of the H&SC system – particularly training and planning around health care and the physical environment
- Communication with the public
 - Awareness of health risks
 - Messages should be given to those at risk AND those who care for them
 - Keep warm keep well booklet and Met Office on Twitter @winterready

- Working with service providers
 - Ensuring that social care organisations implement measures to protect those in their care
 - That the community workers refer people to explore avenues of help – local warmth schemes for example
 - Ensure their staff remain fit and well – flu jabs for example

Actions for commissioners

Level 0	Level 1	Level 2	Level 3	Level 4
Year-round planning All year	Winter preparedness and action 1 November to 31 March	Severe winter weather is forecast – Alert and readiness Mean temperatures of 2°C and/or widespread ice and heavy snow is predicted with 60% confidence	Severe weather action Mean temperatures of 2°C and/or widespread ice and heavy snow	Major incident – Emergency response
<p>Work with partner agencies to ensure that cold weather planning features within wider winter resilience planning.</p> <p>Work with partners to ensure a strategic approach to the reduction of EWDs and fuel poverty is taken across the local health and social care economy.</p> <p>Work with partner agencies to:</p> <ul style="list-style-type: none"> • develop a shared understanding of EWDs and what partners can do to reduce them • identify those most at risk from seasonal variations • improve winter resilience of those at risk • ensure a local, joined-up programme is in place to support improved housing, heating and insulation, including uptake of energy efficient, low carbon solutions • achieve a reduction in carbon emissions and assess the implications of climate change <p>Consider how your winter plans can help to reduce health inequalities, target high risk groups and address the wider determinants of health.</p> <p>Ensure that organisations and staff are prompted to signpost vulnerable clients onwards (eg for energy efficiency measures, benefits or related advice).</p> <p>Work with partners and staff on risk reduction awareness (eg flu vaccination for staff in September/October), information and education.</p> <p>Engage with local VCS organisations for planning and implementation of all stages of the plan.</p>	<p>Communicate public health media messages (see executive summary).</p> <p>Consider the revisions to the CWP and ensure that the changes are understood across the system. Work with partner agencies to co-ordinate locally appropriate cold weather plans.</p> <p>Ensure key partners, including all managers of care, residential and nursing homes are aware of the alert system and can access advice.</p> <p>Review the distribution of the alerts across the system and ensure staff are aware of winter plans and advice.</p> <p>Ensure that local organisations and professionals are taking appropriate actions in light of the cold weather alerts in accordance with local and national CWP.</p> <p>Ensure that organisations and staff are prompted to signpost vulnerable clients onwards (eg for energy efficiency measures, benefits or related advice).</p> <p>Liaise with providers of emergency shelter for homeless people to agree plans for severe weather and ensure capacity to scale up provision.</p> <p>Support communities to help those at risk. Support the development of community emergency plans.</p> <p>Identify which local health, social care and voluntary and community sector organisations are most vulnerable to the effects of winter weather. Agree plans for winter surge in demand for services. Make sure emergency contacts are up to date.</p>	<p>Continue to communicate public health messages.</p> <p>Communicate alerts to staff and make sure that they can take appropriate actions.</p> <p>Ensure partners, including all managers of care, residential and nursing homes are aware of the alerts and can access advice.</p> <p>Support local VCS organisations to activate community emergency plans.</p> <p>Activate business continuity arrangements and emergency plans as required.</p> <p>Consider how to make best use of available capacity. For example, by using community beds for at risk patients who do not need an acute bed and enabling access to step-down care and reablement.</p> <p>Work with partner agencies (eg transport) to ensure road/pavement gritting preparations are in place to allow access to critical services and pedestrian hotspots.</p>	<p>Continue to communicate public health messages.</p> <p>Communicate alerts to staff and make sure that winter plans are in operation.</p> <p>Ensure key partners are undertaking action in response to alerts.</p> <p>Support local voluntary and community sector organisations to mobilise community emergency plans.</p> <p>Ensure continuity arrangements are working with provider organisations.</p> <p>Work with partner agencies (eg transport) to ensure road/pavement gritting arrangements are in effect to allow access to critical services and pedestrian hotspots.</p>	<p>Central government will declare a level 4 alert in the event of severe or prolonged cold weather affecting sectors other than health.</p> <p>Response likely to involve:</p> <ul style="list-style-type: none"> • national government departments • executive agencies • public sector, including health sector • voluntary and community sector <p>All level 3 responsibilities must be maintained during a level 4 incident</p> <p>Implementation of national emergency response arrangements by central government</p>

Actions for provider organisations

Level 0	Level 1	Level 2	Level 3	Level 4
Year-round planning All year	Winter preparedness and action 1 November to 31 March	Severe winter weather is forecast - Alert and readiness Mean temperatures of 2°C and/or widespread ice and heavy snow is predicted with 60% confidence.	Severe weather action Mean temperatures of 2°C and/or widespread ice and heavy snow	Major incident – Emergency response
<p>Ensure that you are engaged with local EPRR and other strategic arrangements.</p> <p>Ensure that your organisation can identify those most vulnerable to cold weather and draw up plans for joined-up support with partner organisations. Agree data-sharing arrangements within information governance principles.</p> <p>Assess the longer-term implications of climate change; reduction in carbon emissions; and sustainability for longer-term business continuity.</p> <p>Consider how to best mobilise and engage voluntary and community sector organisations and support the development and implementation of community emergency plans.</p> <p>Make sure that staff have identified all those vulnerable to cold weather and that arrangements are in place to support and protect them appropriately.</p> <p>Work with staff on risk reduction awareness, information and education. Encourage staff to be vaccinated against flu before winter starts.</p> <p>Ensure that the business continuity plan includes severe winter weather. Plan for a winter surge in demand for services.</p> <p>Consider carers needs and support they can continue to give.</p> <p>Work with environmental health officers on HHSRS hazard identification.</p>	<p>Ensure that CW alerts are going to the right staff and appropriate actions are agreed and able to be implemented, especially to protect vulnerable clients. Make sure that staff have identified all those vulnerable to cold weather and that arrangements are in place to support them appropriately.</p> <p>Ensure staff are undertaking appropriate home checks when visiting clients, eg room temperature; medications and food supplies.</p> <p>Hospitals and care, residential and nursing homes: ensure that rooms, particularly living rooms and bedrooms are kept warm (Figure 3.2) and that staff are taking appropriate action to protect residents from cold weather.</p> <p>Work with partner agencies to co-ordinate cold weather plans; ensure data sharing and referral arrangements are in place.</p> <p>Continue to work with staff on risk reduction awareness, information and education. Encourage staff to be vaccinated against flu, if not already.</p> <p>Work with local authority teams to identify accident hotspots on pavements or roads, advise on gritting priorities to prevent accidents, and ensure access by utilities and other essential services.</p> <p>Ensure staff aware of the business continuity plan for winter weather; plan for a winter surge in demand.</p> <p>Ensure carers are receiving advice and support.</p>	<p>Communicate alerts to staff and ensure that locally agreed CWP actions take place, especially those to protect vulnerable patients/ clients.</p> <p>Continue to ensure local actions for the vulnerable such as:</p> <ul style="list-style-type: none"> • arranging daily contacts/visits • ensuring staff are undertaking appropriate home checks when visiting clients, eg room temperature; medications and food supplies • ensure carers are receiving appropriate advice and support. <p>Hospitals and care, residential and nursing homes: continue to ensure that rooms, particularly living rooms and bedrooms are kept warm (Section 4.1 and Section 4.2).</p> <p>Activate business continuity arrangements and emergency plans as required. Activate plans to deal with a surge in demand for services.</p>	<p>Communicate alerts to staff and ensure that locally agreed actions take place, esp those to protect vulnerable patients/clients.</p> <p>Implement local plans for contacting the vulnerable. Consider daily visits/ phone calls for high-risk individuals living on their own who have no regular contacts.</p> <p>Ensure carers are receiving appropriate advice and support.</p> <p>Implement plans to deal with surge in demand.</p> <p>Implement business continuity arrangements.</p>	<p><i>Central government will declare a level 4 alert in the event of severe or prolonged cold weather affecting sectors other than health.</i></p> <p>All level 3 responsibilities must be maintained during a level 4 incident.</p> <p>Implementation of national emergency response arrangements by central government.</p> <p>Continue to implement business continuity arrangements.</p>

Actions for care staff

Level 0	Level 1	Level 2	Level 3	Level 4
Year-round planning All year	Winter preparedness and action 1 November to 31 March	Severe winter weather is forecast - Alert and readiness Mean temperatures of 2°C and/or widespread ice and heavy snow is predicted with 60% confidence	Severe weather action Mean temperatures of 2°C and/or widespread ice and heavy snow	Major incident – Emergency response
<p>Work within your organisation and with partner organisations to ensure that systems are developed to support the identification and sharing of information between agencies of people who may be vulnerable to cold weather.</p> <p>Systematically work to improve the resilience of vulnerable people to severe cold.</p> <p>Ensure that all staff have been made aware of the cold weather plan and the dangers of cold weather to health and know how to spot signs and symptoms.</p> <p>Use clinic attendances and home visits as opportunities to identify vulnerable people and discuss winter preparedness.</p> <p>Work with at-risk individuals, their families and carers to ensure that they are aware of the dangers of cold weather and cold housing and how access support; ensure that there are clear arrangements for 'signposting' to other services (eg home insulation schemes; benefits entitlements) when identified in "clinical" situations.</p> <p>Work with partners to ensure that vulnerable patients/clients have access to fuel supplies. Link to energy supplier priority service registers as required.</p> <p>Ensure that clients and colleagues are aware of and taken advantage of flu and other vaccination programmes.</p>	<p>Identify those at risk on your caseload and make necessary changes to care plans for high-risk groups.</p> <p>For those with multiple agency inputs, ensure that the key worker is clearly identified and care plans consider measures to reduce risk from cold weather.</p> <p>Check client's room temperature if visiting. Ensure that they have at least one room which meets recommended room temperatures.</p> <p>Remind clients of the actions they can take to protect themselves from the effects of severe cold; including warm clothing, warm food and drinks; keeping active as much as they are able within the context of their care plan.</p> <p>Continue to 'signpost' those at risk clients/patients to other services (eg home insulation schemes; benefits entitlements) when identified in "clinical" situations; use the Keep Warm Keep Well booklet for up-to-date patient information and advice.</p> <p>Use resources available to you for raising awareness of the health risks associated with winter weather and cold housing (for example, pharmacists have a key role in reminding people to have sufficient medicine and help with preventive medicines managements).</p> <p>Encourage clients and colleagues to be vaccinated against flu, if not already.</p>	<p>As appropriate, contact those most at risk and implement care plans.</p> <p>Continue to check client's room temperature if visiting to ensure that clients are warm. Ensure that they have at least one room which meets recommended room temperatures.</p> <p>Ensure urgent signposting for those at risk (eg in cold housing) to appropriate services.</p> <p>Continue to remind clients of the actions they can take to protect themselves from the effects of severe cold.</p> <p>Consider how forecast weather conditions may impact on your work – and make appropriate arrangements.</p> <p>Make sure you and your teams are prepared for an influx of weather-related injuries and illnesses.</p>	<p>As appropriate, contact those at risk (visit, phone call) daily.</p> <p>Ensure staff can help and advise clients.</p> <p>Other actions as per level 2.</p> <p>Maintain business continuity.</p>	<p><i>Central government will declare a level 4 alert in the event of severe or prolonged cold weather affecting sectors other than health.</i></p> <p>Continue actions as per level 3 unless advised to the contrary.</p>

Makes recommendations for room temperatures

18 degrees centigrade day and night

Delivery mechanisms

- NHS, LAs, Social Care and other public agencies
- Professionals working with people who at risk
- Individuals and community groups/vol sector

Notes (impact, critical success factors, barriers and enabling factors)?

Critical to the success of the plan is organisations being able to and acting upon the recommendations.

Evaluation

PHOF used as a proxy measure and also annually reviewed by PHE, LGA, DHSC and MHS England against a range of evidence – not detailed

N/A

Quality assessment

Completed using grey literature tool

Author	Date	Country	Funding	Evidence type	Methodology	Intervention	Participants
17. Lloyd, J.	2013	England	The Strategic Society Centre	Report	N/A	National policy interventions	N/A

Findings

Policy intervention is roughly categorised under several headings

- Cost of heating
 - WFP

On average 41% of the payment is spent on fuel. Increased spending of £65million (Institute of fiscal studies and ONS)

The labelling effect means that it is treated as such rather than if it were simply added to the pension for example

Although fluctuations of EWD caused by flu for example and spending due to energy costs – it is reasonable to suggest that on balance, it does reduce EWD

However, socio-economic status does not correlate with EWD as other studies have found.

In terms of more affluent older people, they may live in large hard to heat homes and therefore the funding is not of great impact.

Also, behaviour – people may simply not put the heating on.

Warm Home discount scheme – no real evaluation yet apart from OFGEMs administrative one – counting people given rebates and totals rebated. Eligibility based on means test - available to those over 80 or those receiving pension credit guarantee credit

Up to £130 per annum

First year (2011) = 701,746 low-income pensioners provided with a rebate of an average £120

Problem is that the poorest homes are not the only ones at risk of EWD and the DWP data is often incomplete

- Cold weather response
 - CWP – best practice guidance. Pre-emptive measures. It has been evaluated in terms of implementation or outputs but not in terms of impact. It is heavily reliant upon the identification of those at risk by commissioners, providers and staff and the actions they then take.
- Public health
 - Flu vaccination – free to over 65s
 - PHOF – Published in 2012 and sets out desired outcomes for PH and how these will be measured. It does not mean however, that it will be a priority. Some of the indicators are being changed in 2109/22
- Home insulation

- Warm Front concluded in 2013 – practical house improvement/energy efficiency interventions
 - 35,000 households benefited at a cost of £852 million.
 - Problems with scheme – hose on benefits therefore, those above eligibility but in HTH were neglected
 - Some households had to withdraw as funding didn't cover all cost of work in some cases n=20k homes.
 - Green deal – cost of energy efficiency measures is added to the electricity bills over time. The reduction in costs is meant to outweigh the additional charges.
 - In terms of older people – reluctant to take on the debt.
 - Seen more as an environmental energy efficiency measure and impact on EWD death unknown at present. Likely to be negligible.
- Generalised attempts to address the effects of cold
 - Warm Homes, Healthy People Fund
 - 130,000 to 200,000 people, mostly elderly, received interventions – home, personal practical, benefits advice and other advice

Delivery mechanisms

N/A

Notes (impact, critical success factors, barriers and enabling factors)?

- However, many of these responses neglect the behaviour that leaves people at risk – people who simply do not keep themselves warm. For example, WFP do not guarantee people will put the heating on.

- Attitude and belief can override knowledge of risk if people do not identify as being amongst those at risk
- Not just poor people die from cold homes. Indeed, many low-income people will live in social housing which will be up to decent home level with heating and insulation. However, older less thermally efficient properties are associated with a higher incidence of EWD
- Risk is a complex mix of socioeconomic factors in context
- There is a domination of fuel poverty and energy efficiency – these are often based on household income.
- Behaviour plays a key role so despite some interventions, people are still at risk due to their behaviour.
- Yet government policy intervention focuses on practical measures. Some interventions to raise awareness and link cold to health, that may change behaviour are treated as secondary.
- Policies target specific groups as an attempt to reach those at risk of cold related harm. These are valid...however, they miss out one key group – those who simply do not keep themselves warm
- Policy that does not take account of behaviour may fail and policy can be more effective if this is considered.
- Identifies front line NHS professionals as a key channel
- Policy makers have, within the CWP, defined a list of positive behaviours – but the challenge is educating those at risk and encouraging them to change behaviour.
- Conflicting messages may confound efforts – for example PH say stay warm and environmental groups say turn the heating down!

Evaluation

N/A

Quality assessment

Completed using grey literature tool

Author	Date	Country	Funding	Evidence type	Methodology	Intervention	Participants
18. Madden V., Carmichael C., Petrokofsky C., Murray V.	2014	England	None	Research paper	Online survey, document analysis and telephone semi-structured interviews	Warm Homes Healthy People Fund	n=15 health and social care managers responsible for cold weather planning and implementation of interventions (n=130,000 – 64% elderly)

Findings

- The funding was extremely well received as austerity cuts meant that work like this could not be routinely funded in most cases
- Majority of respondents felt they had achieved their objectives and more
- The fund facilitated joint working
- The target audience appears to have been met – older adults from low income and fuel poor houses 79% of interventions
- Structural interventions, provision of warm goods such as blankets and food by between 53 and 63% of LA areas, n receiving = not recorded
- Benefits advice n= estimated 30,000 to 47,000
- Home checks – 78% of LA areas n= no detail of numbers

- 100% of LA had launched a local media campaign using a mix of channels (traditional and social media) – awareness raising
- Leaflet drops – n= 1 to 1.4 million
- Cold awareness training – n= estimated 9,000 – 15,000n= estimated 5,300 to 9,700 front line staff (no breakdown of sector)
- Partnership working improved through the projects – having a clear and common goal, responsibilities and communication all cited as drivers
- Volunteers were also trained and used widely – n= no numbers given
- Targeting people was challenging due to lack of engagement in some sectors (health care professionals), data sharing and the short timescales for the funding to be spent

Delivery mechanisms

Dedicated project leads and delivery partnerships in LA areas

Notes (impact, critical success factors, barriers and enabling factors)?

Although all stated they had met objectives, I cannot tell what they were.

Funding helps organisations work together as it stops difficulties around who is going to pay

The timescales were very short – monies paid in Dec 2011 had to be spent by March 2012

Data sharing was an issue – having accurate lists or effective ways of identifying those at risk

Lack of engagement from health care professionals – not stated but community based would be GPs or district nurses

A focus on a common goal aided p/ship working

Whilst there is a plethora of evidence linking cold living conditions to adverse health outcomes, there is less evidence about what is effective in tackling this.

The WHHP fund was released along with the first cold weather plan in 2012 - £20 million.

Evaluation

Numbers receiving services, if they were given to the intended targets, what interventions were given, facilitators and barriers, how it could be improved

Not evaluated in terms of health outcomes

Possible bias as those partaking in the study may have achieved more – those who didn't may have been reluctant to be involved

Quality assessment

Completed using mixed method tool

Author	Date	Country	Funding	Evidence type	Methodology	Intervention	Participants
19. Mc Lafferty E; Farley A; Hendry C	2009	England	Not stated	Practice discussion and advice paper	N/A	The delivery of advice to patients by nursing staff	N/A

Findings

- Advocates that nurses have a key role to play in the prevention of old related harm to health – in particular, hypothermia.
- That nurses should be fully aware of the impact of aging and illness upon thermoregulation
- States that nurses should check the temperature of the homes of those they visit by carrying a room thermometer
- Cites an essential role of nursing staff in the education of older people in keeping warm by
 - staying out of extreme cold
 - wear several layers of clothing
 - wear hats and drink warm drinks
 - keep the house at 21 degrees C in the day and 18 degrees C at night
 - use hot water bottles or electric blankets

- Refer to agencies to help when the cost of heating is a problem
- Refer to benefits agencies to check they are getting all entitlements
- Ensure the clients have emergency phone numbers to hand

Delivery mechanisms

Nurses

Notes (impact, critical success factors, barriers and enabling factors)?

Evaluation

N/A

Quality assessment

Completed using grey literature tool

Author	Date	Country	Funding	Evidence type	Methodology	Intervention	Participants
20.National Institute for Health and Social Care Excellence	2015	England	Department of Health and Social Care	Policy and practice guidance	National practice guidance developed from review of evidence and economic modelling.	Prioritising most at risk homes and shaping home improvements	N/A
21.National Institute for Health and Social Care Excellence	2016	England	Department of Health and Social Care		Quality standards for above		N/A

Findings

The guidance:

- H&WBB develop a strategy that includes
 - Identification of those at risk
 - Assessing how heating and insulation needs to be improved
 - Provision for 'normal' winter temperatures not just extremes
 - Identify and meet local practitioner training needs
- Provide a single point of contact
 - Ensure staff meeting anyone at risk can refer to this point of contact
 - Referral services should provide access to
 - Heating and insulation improvements
 - Advice on energy use/tariffs
 - Benefit advice and support
 - Registration on priority services registers
- Primary health and home care practitioners should
 - Identify those at risk
 - Make sure this is in records
 - Share data – by ensuring any issues data sharing issues are addressed

- MECC by
- Assess heating needs of service users
- Assess any difficulties in keeping the home warm
- Provide information about the risk of cold to health
- Identify what needs to be done and refer to other services
- None health and social care workers should
 - Refer to services
 - Provide information on the effects of living in a cold home
- Those responsible for hospital discharge should
 - Ensure the home is warm enough to return home to
- Health and social care practitioners should be trained and receive on going professional development on the effects of living in a cold home, what can be done, who to refer to and how
- Raise awareness in practitioners and the public

The quality standards:

- The health and social care system should consider NICE quality standards when planning and delivering services.
- Staff should be trained and have enough knowledge to deliver actions and interventions

Delivery mechanisms

Health and well-being boards

Commissioners, managers and practitioners in health and social care. In addition, clinicians, housing and energy suppliers

Notes (impact, critical success factors, barriers and enabling factors)?

Evaluation

Quality assessment

Completed using grey literature tool

Author	Date	Country	Funding	Evidence type	Methodology	Intervention	Participants
22. Orezcyn, T. Hong, S. Ridley, I. Wilkinson, P. The Warm Front Study Group	2005	UK	Department of The Environment, Food and Rural Affairs and The Welsh Assembly through the Energy Savings Trust	Research paper	Quantitative data collection – home temperature	Warm Front	1604 dwellings in the Warm Front Scheme. 65% oldest inhabitant > 60yrs

Findings

- Homes received heating and/or insulation
- The homes receiving intervention were associated with gains in indoor temperatures
- Those receiving both heating and insulation had the greatest gains
- The intervention had greatest effect in the coldest homes
- There was a possible expansion of the space used due to better heating
- Temperature patterns did not follow markers of areas of deprivation – more self-reported difficulties and concerns in relation to heating bills

- Socio-economic status was not strongly related to indoor temperatures
- A good heating system does not guarantee a warm home if the user chooses not to use it.
- However, it does make the choice to have a warm home much easier

Delivery mechanisms

Home improvement schemes

Notes (impact, critical success factors, barriers and enabling factors)?

The scheme is now superseded by the ECO boiler grants – only for those getting pension credits.

Evaluation

Statistical analysis models

Quality assessment

Completed using quantitative tool

Author	Date	Country	Funding	Evidence type	Methodology	Intervention	Participants
23. Peate, I.	2008	UK	Not stated	Discussion paper	N/A	Health and social care professionals	N/A

Findings

- The importance of addressing health inequalities at local level through practical support and advice underpins much policy intention
- Understanding the effects of cold upon health can reduce the risk of EWD
- Working in partnerships can help reduce the risks to vulnerable people
- Planning and identifying those at risk is key
- Changing behaviour is a key aspect of successful intervention to prevent harm
- Eat well, move if possible, wear warm clothes, apply for grants and home improvements and check benefit entitlement
- Health and social care staff are in a position to make a difference
- Health and social care staff are often held in a position of trust and therefore can be influencers/trusted intermediaries therefore advice may be accepted
- Managers need to ensure that staff have the knowledge and skills to offer advice and support
- Staff training and protocols for action need to be in place in addition to systems for referral of vulnerable people to other agencies

- Care plans should include assessments of warmth needs
- Staff should use resources available such as booklets and leaflets on warmth and health and sources of help
- This should be part of health and social care managers remit

Delivery mechanisms

Health and social care system and staff

Notes (impact, critical success factors, barriers and enabling factors)?**Evaluation**

N/A

Quality assessment

Completed using grey literature tool

Author	Date	Country	Funding	Evidence type	Methodology	Intervention	Participants
24. Pollard A., Jones T., Sherratt S., Sharpe R.A.	2019	England	British Gas Energy Trust Healthy Homes Fund 2015	Research paper	Pilot study – quantitative data collection (for temperature readings) and qualitative questionnaires.	Thermometers worn or placed within homes	Data collection n=34 mixed type, tenure and participant households previously identified as being in fuel poverty Questionnaire response n=22 (16 > 65yrs and 7 living alone)

Findings

- The study aims to assess if raising awareness of the temperature has the potential to reduce risk. The loggers flashed a light if the room temperature dropped below 18 degrees C
- The loggers were delivered by energy advisors who gave advice on what to do if the light flashed
 - Turn heating on/up
 - Close windows
 - Make a hot drink
 - wear more clothing

- Move around

- Where appropriate or eligible, homes were referred to agencies for improvements
- The average temperatures of homes where people had a long-term health condition was slightly higher and increased with self-reported worsening of H&WB
- Those using GP or A&E in the three months up to the trial had colder homes
- Those who received some heating or insulation intervention and had higher temperatures reported a better quality of life, Those who had maintained lower temperatures reported no change in quality of life
- There was insufficient evidence to show that participants felt less cold or poorly due to the trial however, they were more aware of temperature and there was a slight reduction in the use of local health services.
- Interventions need to account for the complexity of the interaction between the physical environment and behaviour – age of home, energy efficiency, household income and values, beliefs, norms and other barriers.
- There is a possible role for telemetry in raising awareness and therefore being part of a mix to manage long term health conditions and reduce risk. Also reduce use of H&SC services and pharmaceuticals.
- Environment, awareness and behaviour must be considered if interventions are to prove effective

Delivery mechanisms

Energy advisors

Notes (impact, critical success factors, barriers and enabling factors)?

Evaluation

Home temperature and use of service data and self-reported H&WB

Quality assessment

Completed using mixed methods tool

Author	Date	Country	Funding	Evidence type	Methodology	Intervention	Participants
25. Stewart J., Dhesi S.	2016	England	Not stated	Research paper	Observation and qualitative interviews	Affordable warm policy interventions	Members of Health and Well-being Boards (n=4) in Midlands and North of England and Environmental Health practitioners. Observation 55 hours Total interviews n=50

Findings

- Policy interventions:
 - Green Deal (replaced Warm Front in 2013 – warm front was funded by gov – green Deal is funded by a levy on electricity bills). An energy saving incentive – an assessment followed by interventions to the home. The work is paid for by a ‘loan’ of sorts as savings on energy covers the cost of the works. The emphasis is on the homeowner to improve their property with payback for the investment being through energy savings
 - Energy Companies Obligation –The Home Heating Cost Reduction element offers heating repairs and loft insulation. Eligibility and cross over with The Green Deal is complex and therefore the uptake has been low.

- Annual winter fuel payments
- Cold weather payments
- NICE guidance
- The Housing Health and Safety Rating System (HHSRS)
- Based on individual property and individual risk. Action is mandatory where risk is high. Would apply to social housing and where, inspections get carried out, private rental properties.
- There are a range of national policies and strategies but no mandatory requirement for affordable warmth strategies
- There may be narrow and curtailed application of the law for example the HHSRS
- PH was relocated into LA following the 2012 reforms of the NHS and HWB boards being together PH, CCGs to integrate H&SC. However, most HWBB do not include environmental health or housing officers
- Although the link with cold and health is well evidenced, PH policy makers at local levels do not always prioritise the issue and are focused by national policy towards integration and specific problems such as obesity.
- The varied evidence based supporting the effectiveness of housing interventions is likely a problem
- There is an artificial divide created by statutory and non-statutory duties upon LAs
- Under pressure of austerity some LAs have retreated to statutory functions only for example, only concentrating on severe cases of mould and damp under the HHSRS duties and not wider issues around affordable warmth.
- Found this in Environmental health where housing interventions were not supported by PH investment
- The research suggests a more effective approach would be interprofessional working at local levels rather than top end actives around creating integrated organisations.

- Although there appeared to be an appreciation by those interviewed of the link between housing and health, clear pathways for implementation and evaluation were not often in place
- Some of the policy interventions are challenging for older people and their carers to access

Delivery mechanisms

Notes (impact, critical success factors, barriers and enabling factors)?

Local interprofessional working is an enabler

The focus on integration at organisational level has distracted real integration at local levels

Under austerity, only statutory duties are fulfilled in some LAs and there is not statutory duty in respect to affordable warmth. The minimum may be carried out in terms of HHSRS – severe mould and damp for example

Some schemes are only available to eligible people and may be complicated to navigate and access.

Evaluation

Quality assessment

Completed using qualitative tool

Author	Date	Country	Funding	Evidence type	Methodology	Intervention	Participants
26. Stockton H., Harrison D., Alan J.	2013	England	Not clear but likely department of Energy and Climate Change and National Energy Action	Research paper	Mixed methods research using quantitative survey and qualitative interviews	Green Deal and Energy savings obligation	Circa 200 people > 55 yrs Representatives from frontline agencies n=9

Findings

- Green Deal and Energy savings obligation (acknowledges that some people – vulnerable or those on a low income, will not be able to benefit from Green Deal as under heating their home so little opportunity for savings to cover cost) both aim to tackle energy efficiency (therefore carbon emissions) and fuel poverty
- Low income can limit the social connectedness of older people thus limiting their exposure to some channels of communication in relation to accessing these interventions
- Under heating was common within the cohort within the study and worry about the financial cost of heating was second only to H&WB
- People made compromises on other household expenditure to pay for heating in 25% of respondents
- Social networks and contacts for the respondents fell into 5 categories
 - Family and neighbours
 - Friends

- Health and social care staff
- Community based organisations/third sector
- Digital
- Older people spent more time at home and their social contacts were less than the younger respondents
- Those over 75 engaged with family more than younger respondents (daily or once a week more likely)
- Over 75s were more likely to attend coffee mornings or lunch clubs than under 75s in the study
- For those who had care staff, the contact was very regular, and it was the over 75s and single households that had most contact with care staff or home help type services. For some people, they only had contact with care staff and the relationship can be close.
- Older and single people had most contact with formal services such as meals services.
- Respondents were mainly confident about where they could get advice on heating their home and warmth but were not confident about how to get advice on (or how to apply for) possible interventions such as energy efficiency schemes
- The least confident about seeking help were also the ones who were more likely to be underheating their home
- Warm front was recognised by some participants (numbers not detailed) but GD and ECO were recognised by less than 40%
- 92% knew about the winter fuel payments
- Preferred sources of advice re interventions were a combination of informal – family and friends and formal – community based or charitable organisations.
- These are then important channels of communication and ‘gatekeepers’ for those wishing to encourage uptake by those who are vulnerable due to poor housing or fuel poverty

- There is an opportunity to use community based/front line organisations through ‘bolting on’ advice and support to access interventions because of the existing and trusted relationship, ability to know who is at risk and understanding of the impact of poor housing conditions and limited finances
- However, there are challenges – funding for this support, capacity and competing priorities

Delivery mechanisms

N/A

Notes (impact, critical success factors, barriers and enabling factors)?

The right channel of communication is critical for it to be accessible and/or trusted.

The ability and motivation of those in a primary position of influence may be a barrier.

Evaluation

Quality assessment

Completed using mixed methods tool

Author	Date	Country	Funding	Evidence type	Methodology	Intervention	Participants
27. Tod A.M., Lusambili A., Homer C., Abbott J., Cooke J.M., Stocks A.J., McDaid K.A.	2012	England	National Institute for Health Research Patient Benefit Programme	Exploratory research and practice development paper	Qualitative interviews and focus groups	Social marketing materials	Older people n=50 (all over 55 and 65+ n=36, Male n=10, female n=36, couples n=4, of which a total of 19 participants were BME) Tenure: Privately owned n=33, private rented n=5, Social housing n=11, other n=1 Staff interviews n=25 (Voluntary sector = 5 H&SC staff n=12 LA n=3 Social housing staff n=5)

28.Tod A.M., Lusambili A., Homer C., Abbott J., Cooke J.M., Stocks A.J., McDaid K.A.	2013	As above	As above	Discussion paper	As above	As above	As above
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Findings

- People may not respond to communications if they do not resonate with them – think they are aimed at them – or example if they feel they are not old.
- Beliefs, culturally derived social norms and lay epidemiology play a role
- Fear of cost and mistrust of energy companies
- Therefore, factors normally associated with being at risk may have a limited role to play and interventions need to consider this.
- There is a complex interaction of factors explaining why people were at risk of being cold or choose to access help. These factors are combined at individual level and govern behaviour and therefore risk
- Contextual factors
 - Income
 - Age

- Social influences – some received poor information from these
- Housing type and tenure
- Health
- Attitudes and values
 - Norms – being cold was part of their childhood/younger life therefore normal
 - Thrift
 - Stoicism
 - Privacy
- Barriers
 - Knowledge and awareness – not just about cold related harm but also about how to work the heating, gain access to support etc
 - Technology and machinery – can't work systems
 - Systems and processes
 - The intangibility of heat sources
- People may not wish to admit problems and seek help, access support as it may be perceived they are not coping and lead to a loss of independence
- Public campaigns do not always reach the full range of older people at risk
- Current interventions define risk by age related, financial and property factors and address as such
- The tools were intended to support the delivery of the CWP by:

- Helping front line staff identify those at risk – not just through the perimeters of age, income and housing but also by behavioural risks
- Also, to aid the development of referral processes so staff can take action
- Organisations and practitioners cannot rely upon risk assessments and interventions as some who had received home improvements remained cold
- Frontline staff are critical and ideally placed to deliver information about cold and health and check room temperatures
- Building cold weather messages into MECC could support signposting to sources of assistance
- Also, the mistrust of energy companies is a barrier whilst front line staff are trusted intermediaries.
- Implications for practice
 - Identifying those at risk – set the bar low and don't assume a nice house means that they will be warm
 - Signpost to support/advice
 - Act

Delivery mechanisms

Social marketing tools to increase awareness, knowledge and what actions to take – professional and public facing

Notes (impact, critical success factors, barriers and enabling factors)?

Policy and practice intervention to date has focused upon reducing fuel poverty and reducing fuel costs through tariffs caps etc and increasing fuel efficiency through property improvements.

There is concern that those at risk of cold related harm are not always able to access interventions and the interventions are not always targeted well.

In addition, the contribution of professionals in the community, in health for example, is not always clear.

In order to increase the uptake of interventions, an understanding of the influencing factors is required – capability, opportunity and motivation

Barriers are attitudes, beliefs, norms as well as mistrust and some practical factors

Enablers are the role and trusted position of front-line staff

For the staff to be able to act they need knowledge.

Training – lack of information, knowledge will create a barrier

Managerial support and systems and processes in place for example MECC and referral pathways

Evaluation

Quality assessment

Completed using qualitative tool

Author	Date	Country	Funding	Evidence type	Methodology	Intervention	Participants
29. Viggers H., Howden- Chapman P., Ingham T., Chapman R., Pene G., Davis C., Currie A., Pierse N., Wilson H., Zhang J., Baker M., Crane J.	2013	New Zealand	Health Research Council of New Zealand, The University of Otago, The Energy, Efficiency and Conservation Authority and Autex (fabric/material technology)	Research paper	Randomised community- based trial applying a mixed methods data collection method	Fuel credit voucher paid into participants fuel account	n=522 median age 71 yrs.

Findings

Primary measures:

- Exacerbations of COPD -moderate to severe, those needing hospitalisation, those needing systemic corticosteroids or antibiotics, all cause hospitalisation, electricity usage and costs to H&SC system.

Secondary measures:

- Self-reported QOL, respiratory health, COPD severity changes
- Net benefits and support person burden
- Initial trials showed a link between improved indoor warmth and improved lung function in COPD sufferers.
- Study indicates that specific targeting of illness exacerbated by cold is possible.
- Using a credit made it only useable for fuel
- It was not paid just before Xmas, as in UK, as seasons differ in Southern Hemisphere.
- Multiple providers caused administrative barriers
- Note: Study interrupted by an earthquake.
- New Zaland had higher rates of EWD than some other developed countries which were colder and to those with similar climates
- However, average temperatures through the day were 17 degrees c and common practice was to heat 1 room only in winter.
- There is no advised temperatures other than a building code which refers to children's centres and old peoples homes being maintained at a minimum of 16 degrees c

- Electricity was chosen to discourage the use of other forms of heating that may exacerbate COPD – real wood burning for example.
- Participants were given knowledge about health and cold and exactly what the credit meant in terms of additional fuel they could use to heat their homes

Delivery mechanisms

Energy company representatives who credited the accounts of participants following transfer of funds

Notes (impact, critical success factors, barriers and enabling factors)?

Can only be spent on heat as credit into account not cash

Is targeted to those who are ill and where heat will help reduce risk

Information given to recipients

Multiple providers are a barrier to the administration of such a scheme in larger scales

Evaluation

Number of exacerbations of COPD

Hospitalisations

Temperatures in living rooms and bedrooms

Electricity usage

Costs to healthcare system

Self-reported QOL

Quality assessment

Completed using mixed methods tool

Author	Date	Country	Funding	Evidence type	Methodology	Intervention	Participants
30. Willand N., Maller C., Ridley I.	2017	Australia	Southeast Council's Climate Change Alliance and the Energy Saver Study Team	Research paper	Quasi randomised trial research using quantitative data collection and qualitative interviews	Residential energy efficiency trial	16 intervention and 13 control homes. Majority of homes contained 1 female over 70yrs living with male partner or alone and had a long-standing disability. All spent the whole day at home.
Findings Self-reported behaviour and changes <ul style="list-style-type: none"> • All participant engaged in at least n=1 energy saving behaviour. • Turning off heating at night - • The retro fit did not reduce this behaviour or reduce cold as low cost measures did not retain heat throughout the night. • Keeping thermostat between 18-20 degrees c – location of thermostats led to significant variation in actual room temperatures within homes. 							

- Limiting spatial heating within home – only n=1 increased. This home had one of the most extensive retrofits within the study.
- All households used additional clothing to keep warm
- The retro fits did not eliminate behaviour that led to underheating.
- Blanket advice on energy saving and reducing carbon emissions may inadvertently re-enforce potentially harmful behaviours and eliminate self-identification within those at risk.
- The impact of energy saving interventions upon older people is under researched
- Some advice advocates spatial restrictions of heating and the use of clothing to keep warm and this eco-friendly advice clashes with PH concerns and concerns about the quality of life of the fuel poor for example.
- Energy consumption is shaped by behaviour, material, social and cultural contexts enacted repeatedly across space and time
- All households had engaged in one or more cost saving practices recommended by the state;
 - Turning off heating at night
 - Heating only occupied rooms
 - Lowering temperature setting
 - Use of additional clothing
- Those turning off the heating at night did not regard the cold temperatures within the house first thing as they rose from bed as a health risk
- Even those who received retro fit improvements tended to keep the eating off at night as they still feared the cost of heating
- Advice on temperature settings was not always implemented due to:
- Concerns about cost

- The inability to regulate temperature through poor system controls
- All used more clothing in cold weather
- The low cost retrofit interventions did not reduce underheating habits

Delivery mechanisms

Government communication campaigns

Home efficacy schemes

Notes (impact, critical success factors, barriers and enabling factors)?

Energy saving advice must pay attention to the sensitivity of diverse populations and those who are at risk due to cold indoor temperatures

This advice may give additional credit to and perpetuate habits and behaviours that are risky.

Evaluation

Temperatures and self-reported behaviour and behaviour change

Quality assessment

Completed using mixed methods tool

APPENDIX 7: Summary Data Extraction Forms Table

	Author/s	Setting	Methods	Study/document objectives	Summary of findings
1.	Adedeji & Jepps (2014)	England	Evaluation report	To report the outputs and impact of Wrapped Up – a localisation of the Warm Homes, Healthy People Fund.	The fund enabled partnership working, identification of vulnerable people and delivery of a range of interventions. A drop in nursing home and hospital admissions noted but not robustly evaluated.
2.	Allmark & Tod (2014)	England	Discussion paper	To argue that in some cases, the risk of cold is within individuals control and that this behaviour can be modified.	Practical interventions alone cannot alone regulate risk in some cases. There are individual behavioural influences and contextual factors that combine to act as ‘risk regulators’ for cold related harm to health.

	Author/s	Setting	Methods	Study/document objectives	Summary of findings
3.	Armstrong et al. (2005)	England	Randomised study using qualitative interviews n= 210	To examine the factors influencing the implementation of policy and intervention to combat EWD	Individual behavioural influences such as attitude, beliefs and fear governed the uptake of the intervention. Lay epidemiology acted as both a positive and negative influence.
4.	Bennett et al. (2016)	England	Self-reported improvements in health and wellbeing n=20 and project interviews n=8. Baseline collection of mould, damp and indoor temperatures n=156	To evaluate the impact of the Warm at Home Programme on housing conditions and H&WB and evaluate the project benefits from housing improvement agency managers' perspectives.	Indoor temperatures increased whilst damp, mould and condensation decreased. Self-reported H&WB and thermal comfort increased. The flexibility of the funding eligibility made it easier to act quickly and assist some people outside the eligibility criteria for some interventions.

	Author/s	Setting	Methods	Study/document objectives	Summary of findings
5.	Bull et al. (2010)	England	Discussion paper	To report the development and use of an algorithm to identify people at risk of EWD	A significant reduction of reported EWD but unable to robustly directly attribute to the algorithm. Identified at risk individuals and referred to interventions but some may have been outside the eligibility criteria due to household income level.
6.	Crossley & Zilio (2018)	England & Scotland	Statistical analysis using data collected in the Health Survey for England, Scottish Health Survey and English Longitudinal Study on Aging between 2001 and 2016	To explore the causal effect of the Winter Fuel Payment on health outcomes	The WFP had a positive effect on health outcomes. Raising the pensionable age of women negatively affected health outcomes in the affected group; particularly in those with lower educational attainment levels.

	Author/s	Setting	Methods	Study/document objectives	Summary of findings
7.	Day & Hitchings (2011)	England	Qualitative interviews, written and photo diaries n=21	To explore older peoples' response to cold weather and interventions aiming to reduce EWD.	Distancing from the behaviours associated with aging, social identity and lay epidemiology acted as barriers to the uptake of preventive advice, interventions and behaviour change.
8.	Gascoigne et al (2010)	England	Pilot study - Consensus development group n=32 participants, field testing and semi-structured qualitative interviews n=37	To translate the relevant scientific literature on EWD into advice and guidance for older people and to explore its impact on awareness, attitude and behaviour.	Awareness levels raised but a distancing from personal risk occurred. Understanding created some positive behaviour changes in some but fear of cost, poor heating systems and lay epidemiology acted as barriers to preventive behaviour change.
9.	Clasper (2010)	England	Expert opinion	To present evidence and encourage preventative intervention.	Provided information on EWD and intervention. Advised that front line community staff are well placed to identify those at risk and provide advice and support.
10	Goodwin (2007)	UK	Expert opinion	To examine the position of EWD in the UK by reviewing	Indoor warmth through reducing fuel poverty and increasing thermal efficiency has undeniable H&WB

	Author/s	Setting	Methods	Study/document objectives	Summary of findings
				policy and intervention response and some commonly held misconceptions that underpin these.	benefits for some. However, the policies neglect those who cannot or choose not to change behaviour and those who are at risk but outside eligibility.
11	Grey et al. (2017)	Wales	Quasi-experimental controlled pre-test/post-test 24 intervention locations n=364 participants and 23 control areas n= 418 participants	To examine the relationship between energy efficiency interventions and H&WB and psychosocial outcomes.	Found no significant shift in H&WB measures but self-reported H&WB increased, social isolation reduced, and some respondents had changed their behaviour for example, displaying less stoicism and 'coping' with cold.
12	Harrington et al. (2005)	England	A series of 3 semi structured	To explore the relationship between energy efficiency interventions and response	Increased awareness and preventative behaviour changes in some participants who felt warmer, used more of their home and felt less financial stress. Response

	Author/s	Setting	Methods	Study/document objectives	Summary of findings
			interviews per participant n=30	to cold indoor temperatures by examining respondents' behaviour and understanding of cold and health.	was governed by complex variables of values, beliefs and coping strategies. Interventions did not consider the wider lives of those struggling to keep warm in their homes or simply choosing not to heat their home.
13	Hefferman et al. (2017)	England	Semi structured interviews with H&SC managers n=52	To seek the views and experiences of local decision makers responsible for delivery of The Cold Weather Plan for England.	The plan was well received and raised awareness of, and formalised, planning to prevent EWD in H&SC orgs. Data sharing was a problem and most interventions only engaged with those known to services. The plan was very clear about social care responsibilities, but this was not measured or specified within contracts.
14	Hughes and Natarajan (2019)	England	Longitudinal study between 2016 and 2018. Quantitative data collection and qualitative	To understand the relationship between personal practical and energy efficiency intervention strategies and older peoples' behaviour in	Retrofitting fuel efficiency measures increased indoor temperatures, physical and mental health but behavioural influences limited their success meaning that higher income did not necessarily result in a warmer home. Most reported existing health conditions worsening in cold weather – but used more clothing rather than heating. Hot water bottles were not favoured as signified aging.

	Author/s	Setting	Methods	Study/document objectives	Summary of findings
			interviews n=43 participants	copng with cold indoor temperatures.	Most respondents were open to retro fit in their homes but did not want to, or could not, pay.
15	Iparraguirre (2015)	England & Wales	Time series statistical analysis using EWD data 1950 to 2012, mean indoor and outdoor temperatures and household spend on fuel.	To determine the direct effect of The Winter Fuel Payment on EWD	Suggests that the WFP has been significant in reducing EWD and is possibly responsible for n=50% of the reduction since its introduction.
16	Katiyo et al. (2018)	England	Best practice guidance	To reduce EWD and cold related harm to health by initiating planned preparedness and response at national, local and	Provides best practice guidance for planning and preventative intervention to prevent EWD. Outlines responsibilities and actions for policy makers, commissioners, providers and frontline staff within H&SC

	Author/s	Setting	Methods	Study/document objectives	Summary of findings
				individual level to the onset of cold weather.	
17	Lloyd (2013)	England	Report	To examine policy response and intervention to prevent EWD and the preventative impact on older people.	Identifies eligibility, identification of those at risk and personal behavioural influences as creating barriers to the take up of intervention in older people. Much policy neglected the notion that personal behaviour influences meant that some people simply do not keep themselves warm
18	Madden et al. (2014)	England	Online survey, document analysis and telephone semi-structured interviews with n=15 H&SC managers responsible for cold weather	To evaluate how the Warm Homes Healthy People Fund was used to tackle EWD	Funded a wide range of interventions and was popular as provided money and a basis for engaging in partnership working. Data sharing was an issue – having accurate lists or effective ways of identifying those at risk. The time restrictions placed upon funded projects led to fast reactive activity rather than strategic responses.

	Author/s	Setting	Methods	Study/document objectives	Summary of findings
			planning and implementation of interventions		
19	Mc Lafferty (2019)	England	Expert opinion	To provide informative discussion on cold related harm to health and the preventative role of nursing staff.	Provided information on EWD and advised that front line community staff are well placed to identify those at risk and provide advice and support.
20	NICE (2015)	England	Best practice guidance	To inform policy and preventive intervention to reduce EWD.	A tool to support knowledge and competence and support intervention to reduce EWD caused by cold homes.
21	NICE (2016)	England	Best practice guidance	To act as a quality standard for the above.	Provides quality standards for the above NICE guidance.
22	Orezcyn et al. (2005)	UK	Indoor temperature data collection and analysis from	To quantify the extent to which variation in indoor temperatures is explained by dwelling and household characteristics and	Intervention resulted in indoor temperature gains and the expansion of domestic spatial use. Temperature patterns did not follow markers of areas of deprivation and socio-economic status was not strongly related to indoor temperatures. A good heating system did not guarantee

	Author/s	Setting	Methods	Study/document objectives	Summary of findings
			n=1604 households	increased energy efficiency interventions.	a warm home where the user did not to use it. However, it made the choice to have a warm home much easier.
23	Peate (2008)	UK	Discussion paper	To examine the role health and social care professionals play in ensuring vulnerable adults are kept warm and healthy in cold weather.	Advises that H&SC staff can make a difference to health outcomes associated with cold homes through identification of those at risk, providing information, referral and advice. They are often held in a position of trust and therefore can be influencers/trusted intermediaries meaning that their advice is more likely to be accepted. Staff need the knowledge and skills to offer advice and support and protocols should be in place to aid referral.
24	Pollard (2019)	England	Pilot study - data collection households n=34 Questionnaire response n=22	To assess whether raising occupants' awareness of indoor temperatures in the home could initiate improved health and wellbeing in vulnerable adults.	Overall, the trial did not establish enough evidence to link the devices to feeling less cold or less poorly but found a link between increased awareness, slightly raised temperature and reduced use of services. Indicated a possible role for telemetry in raising awareness and being part of a toolkit to manage long term health conditions and reduce risk. Reported a complexity of interaction

	Author/s	Setting	Methods	Study/document objectives	Summary of findings
					between the physical environment and individual behavioural influences.
25	Stewart & Dhesi (2016)	England	Semi-structured interviews n=50 and observation n=55 hours	To provide evidence to support the development of more effective services and interventions to tackle the health inequalities created by cold homes.	National policy ambition had created competing priorities leaving EWD and housing matters neglected in some cases. There is an artificial divide, fuelled by austerity, between statutory and non-statutory duties and no mandatory requirements for affordable warmth interventions.
26	Stockton et al. (2013)	England	Mixed methods research using quantitative survey and qualitative interviews n=200 people and representatives from frontline agencies n=9	To examine the ways in which older people can be engaged and supported to take advantage of energy efficiency and fuel poverty interventions and how service providers can be supported to help achieve this.	Low income can limit access to information. Older people spend more time at home than younger people and social contacts are important for support and advice. Those who had care staff relied heavily upon them and for some, it was their only contact. Respondents trusted informal and formal sources of advice but funding, capacity and competing priorities created challenges for formal channels to provide this.

	Author/s	Setting	Methods	Study/document objectives	Summary of findings
27	Tod et al. (2012)	England	Qualitative interviews and focus groups. Older people n=50, frontline staff n=12.	To understand the decisions and influencing factors that might affect older people keeping warm, accessing help to reduce fuel poverty and taking preventative intervention against being cold in their homes.	Barriers for older people keeping warm were contextual (income, housing, age) personal (attitudes, beliefs, norms, stoicism) or practical (lack of knowledge inability to work heating or access interventions). There is a complex interaction of factors explaining why people were at risk of being cold or choose to access help. These factors are combined at individual level and govern behaviour and therefore risk
28	Tod et al. (2013)	England	Discussion paper	To share the findings from primary research with nursing professionals and encourage intervention from nurses in various sectors to prevent cold related harm to health.	Suggests that policy and intervention to date has focused upon reducing fuel poverty. Highlights concern that those at risk of cold related harm may not be able to access interventions and the interventions may not target some people at risk. To increase the uptake of interventions, an understanding of the influencing factors is required including the role and trusted position of front-line staff. For the staff to be able to take preventative action they need knowledge and training.

	Author/s	Setting	Methods	Study/document objectives	Summary of findings
29	Viggers et al. (2013)	New Zealand	Mixed methods randomised control trial n=522 households - quantitative health, health service usage and indoor temperature measures and qualitative questionnaires measuring self-reported health and wellbeing, medication use and visits to	To test if monies paid directly into the electricity accounts of recipients result in increased indoor temperatures and reduced exacerbations of COPD and hospitalisation rates.	Initial trials showed a link between improved indoor warmth and improved lung function in COPD sufferers suggesting that specific targeting of illness exacerbated by cold is possible. Using a credit made it only useable for fuel but the administration was problematic due to the numerous fuel suppliers involved.

	Author/s	Setting	Methods	Study/document objectives	Summary of findings
			health professionals.		
30	Willand et al. (2017)	Australia	Quasi randomised trial research using mix methods n=29 households- quantitative data collection and qualitative interviews.	To explore the impact of retro fit energy efficiency measures on heating practices of older people in the light of carbon reduction campaigns.	The retro fits did not eliminate behaviour that led to underheating. All households adopted 1 or more energy saving interventions advised by the government and these were often established practice within this group. Blanket advice on energy saving and reducing carbon emissions may inadvertently re-enforce potentially harmful behaviours and eliminate self-identification within those at risk.

APPENDIX 8: Findings Matrix

	Target of intervention					Intervention type						What impact was measured													Barriers & enablers to implementation				
Paper number	At risk individuals	H&SC policy makers	Commissioners of H&SC	H&SC provider orgs	H&SC professionals and frontline staff	Identification of at-risk individuals	Planning and guidance	Personal practical	Reducing fuel poverty	Improving energy efficiency	Raising knowledge and awareness	Health gains	Use of services	Self-reported H&WB levels	Indoor temperatures	Fuel spend	Financial stress levels	Behaviour change	Knowledge and awareness	Attitude and beliefs	Self-reported thermal comfort	Domestic spatial usage	Housing conditions – damp/mould/condensation	Macro level environmental factors and policies	Local system processes and policies	Individual behavioural influences	Individual contextual influences	Was the possible or actual role of social/dom care or front-line comm staff identified?	
1	x				x	x		x		x	x		x															x	
2		x	x		x																			x		x	x		
3	x									x																x	x	x	
4	x					x			x	x			x	x	x		x				x		x					x	
5					x	x			x	x		x																x	
6	x								x			x																	

	Target of intervention					Intervention type						What impact was measured										Barriers & enablers to implementation						
Paper number	At risk individuals	H&SC policy makers	Commissioners of H&SC	H&SC provider orgs	H&SC professionals and frontline staff	Identification of at-risk individuals	Planning and guidance	Personal practical	Reducing fuel poverty	Improving energy efficiency	Raising knowledge and awareness	Health gains	Use of services	Self-reported H&WB levels	Indoor temperatures	Fuel spend	Financial stress levels	Behaviour change	Knowledge and awareness	Attitude and beliefs	Self-reported thermal comfort	Domestic spatial usage	Housing conditions – damp/mould/condensation	Macro level environmental factors and policies	Local system processes and policies	Individual behavioural influences	Individual contextual influences	Was the possible or actual role of social/dom care or front-line comm staff identified?
7	x								x	x	x															x	x	
8	x										x							x	x	x						x	x	x
9					x			x	x		x																	x
10					x				x	x		x												x				x
11	x									x		x		x			x	x			x	x						
12	x									x		x					x	x			x	x						
13	x	x	x	x	x		x																		x			x

	Target of intervention					Intervention type						What impact was measured										Barriers & enablers to implementation							
Paper number	At risk individuals	H&SC policy makers	Commissioners of H&SC	H&SC provider orgs	H&SC professionals and frontline staff	Identification of at-risk individuals	Planning and guidance	Personal practical	Reducing fuel poverty	Improving energy efficiency	Raising knowledge and awareness	Health gains	Use of services	Self-reported H&WB levels	Indoor temperatures	Fuel spend	Financial stress levels	Behaviour change	Knowledge and awareness	Attitude and beliefs	Self-reported thermal comfort	Domestic spatial usage	Housing conditions – damp/mould/condes	Macro level environmental factors and	Local system processes and policies	Individual behavioural influences	Individual contextual influences	Was the possible or actual role of social/dom care or front-line comm staff identified?	
14	x							x	x	x				x				x		x							x	x	
15	x								x			x			x	x									x				
16	x	x	x	x	x		x				x																	x	
17		x	x	x	x		x		x	x	x	x				x		x							x	x	x	x	
18	x				x	x		x	x	x	x														x	x			x
19					x				x		x																		x
20		x	x	x	x		x				x																		x

	Target of intervention					Intervention type						What impact was measured													Barriers & enablers to implementation				
Paper number	At risk individuals	H&SC policy makers	Commissioners of H&SC	H&SC provider orgs	H&SC professionals and frontline staff	Identification of at-risk individuals	Planning and guidance	Personal practical	Reducing fuel poverty	Improving energy efficiency	Raising knowledge and awareness	Health gains	Use of services	Self-reported H&WB levels	Indoor temperatures	Fuel spend	Financial stress levels	Behaviour change	Knowledge and awareness	Attitude and beliefs	Self-reported thermal comfort	Domestic spatial usage	Housing conditions – damp/mould/condes	Macro level environmental factors and policy	Local system processes and policies	Individual behavioural influences	Individual contextual influences	Was the possible or actual role of social/dom care or front-line comm staff identified?	
21		x	x	x	x		x				x																	x	
22	x									x					x		x	x				x				x	x		
23			x	x	x						x																	x	
24	x							x		x	x	x		x	x						x					x	x		
25	x					x	x		x	x														x	x				
26	x									x																x	x	x	
27		x	x	x	x	x					x								x	x						x	x	x	

	Target of intervention					Intervention type						What impact was measured										Barriers & enablers to implementation							
Paper number	At risk individuals	H&SC policy makers	Commissioners of H&SC	H&SC provider orgs	H&SC professionals and frontline staff	Identification of at-risk individuals	Planning and guidance	Personal practical	Reducing fuel poverty	Improving energy efficiency	Raising knowledge and awareness	Health gains	Use of services	Self-reported H&WB levels	Indoor temperatures	Fuel spend	Financial stress levels	Behaviour change	Knowledge and awareness	Attitude and beliefs	Self-reported thermal comfort	Domestic spatial usage	Housing conditions – damp/mould/condes	Macro level environmental factors and	Local system processes and policies	Individual behavioural influences	Individual contextual influences	Was the possible or actual role of social/dom care or front-line comm staff identified?	
28		x	x	x	x	x					x								x	x							x	x	x
29	x								x		x	x	x	x	x	x								x					
30	x									x	x				x			x				x		x		x	x		

APPENDIX 9: Risk Assessment and Mitigation Matrix


Nature of risk	Likelihood of occurrence	Potential impact	Mitigation strategies
Research cohort unwillingness to participate			
Commissioners of adult social care	Low Commissioners in a position of assurance and could benefit from research – low risk to reputation due to nature of current contractual arrangements	High	Use network of contacts, networks and interest groups to gain contacts and introductions Produce a briefing paper explaining work and benefits to participant
Providers of domiciliary care services	Moderate	High	Use network of contacts, networks and interest groups to gain contacts and introductions The potential participant fears around reputational loss, commercial sensitivity must be addressed - a briefing paper/pre research meeting to explain work and benefits to participant
Domiciliary care service staff	Low	Very high	Introduction from trusted source Re- assurance of anonymity within report

Nature of risk	Likelihood of occurrence	Potential impact	Mitigation strategies
			<p>Explanation of work and opportunity to ask questions</p> <p>Incentive to take part</p>

Nature of risk	Likelihood of occurrence	Potential impact	Mitigation strategies
Resources			
Researcher's time	Low	Very high	Careful diary scheduling
Money	Low	Very high	All costs carefully considered, budgeted for and money set aside
Equipment required	Low	Moderate	<p>Arrange to borrow recording devices from SHU.</p> <p>Buy devices if necessary.</p> <p>Use iPad if necessary</p>
Professional services Transcription High volume printing	Low	Moderate	<p>Review services in good time</p> <p>Discuss with supervisors/SHU preferred suppliers.</p> <p>Book services in good time</p>

APPENDIX 10: Research Participant Information

Commissioners

<p>Amanda Stocks Participant Information Form - Commissioners</p>	1
	
<p>A research project to understand: ‘How can domiciliary care services prevent cold related harm in the elderly?’</p>	
<p><u>Information for participants who are commissioners within health and social care</u></p>	
<p>Dear Colleague</p>	
<p>My name is Amanda Stocks and I am currently undertaking a Doctorate at Sheffield Hallam University.</p>	
<p>I would like to invite you to take part in my research study however, before you decide, I would like you to understand why this research is being done and what it would involve for you.</p>	
<p>I would also like you to have the opportunity to talk to myself or others about the study if there is anything that is not clear or you have any other questions about the research.</p>	
<p>Please find below and some frequently asked questions and answers to provide some further information to help you decide if you would like to take part.</p>	
<p><i>Yours sincerely</i></p>	
<p>Amanda-Jayne Stocks Doctorate Research Student – Sheffield Hallam University Contact details: REDACTED Phone number REDACTED</p>	
<p>1</p>	

Questions and information about the research

What is the purpose of this research?

The overall aim of this doctorate research is to add to the knowledge around the factors that lead to people being cold in their own home as evidence shows that this may have a detrimental impact on health.

Much work has been done around the contextual factors such as lack of money to pay for fuel and poor or inefficient heating systems. There is however, a growing recognition that other factors may drive behaviour in relation to heating regimes. This could include knowledge, beliefs and attitudes about cold as well as the influence of the people they come into contact with.

The UK has an aging population and more people are being supported to live in their own homes as they get older through the help domiciliary care. The aim of this research is to develop insight into how domiciliary care is currently delivered to older people, how this contributes to the prevention of cold related harm to health and how this could be maximised.

Why have I been invited to take part in the research?

As a commissioner within health and social care, your experiences and knowledge will provide vital information for this study and that is why you have been invited to take part in this study.

Do I have to take part in this research?

Your decision to take part in this study is voluntary. It is up to you to decide if you want to take part, and you can withdraw from the study at any time, without giving a reason.

What will happen to me if I decide to take part in the research?

The researcher will arrange a meeting to interview you for between 45 minutes and one-and-a-half hours. During the interview the researcher will talk with you about your work and ask you to share your thoughts and experiences.

The interview will take place at a time and place that is convenient to you. This can be in your own office or at a place of your choosing if you would prefer. It needs to be a place where you can speak freely and would not be disturbed.

The safety, confidentiality and security of the research participants are a major concern at all times.

The interview will be recorded so that the interviewer can chat freely with you and then make proper notes afterwards.

Expenses and payments

You will not be paid for taking part in this study but if you have any expenses related to the study, for example reasonable travel expenses, these can be reimbursed.

What are the possible benefits or disadvantages in taking part in this research?

A possible disadvantage to you is that you are being asked to give-up some of your time to take-part in the study.

The benefit for you is an opportunity to use your knowledge and experience in this research study which will add to the evidence base, inform professional practice and may help prevent harm to those at risk of living in a cold home in the future.

What if I wanted to ask some questions or make a complaint?

The researcher:

Amanda Stocks

Contact details redacted.

The Director of study

Dr Hilary Piercy

Contact details redacted.

If you would rather contact an independent person, speak to:

Peter Allmark

Contact details redacted.

Will my taking part in this research be kept confidential?

Completely, all identifiable data will be removed when the findings are written up.

Will anyone else be able to see my answers and the information I give

Only the researcher will know that you have agreed to take part in this study. Nobody else will know unless you give your permission.

The interview will be recorded and then written up word-for-word and kept on a password-protected computer file accessible only by the researcher; the recording will then be deleted.

At the end of the study the written transcripts will be kept securely for as long as they might be useful in future research.

All links to you or any other people will be removed from the final report or any future publications, so people reading these will not be able to identify you.

Issues of concern and security

If you raise an issue of concern in the interview, the researcher will consult the University supervisor about what to do. She will act in accordance with the professional Code of Conduct, and as far as possible with your agreement.

The documents relating to the administration of this research, such as the consent form you sign, will be kept in a project file. This is locked away securely.

The folder might be checked by people in authority who want to make sure that researchers are following the correct procedures. These people will not pass on your details to anyone else. The documents will be destroyed one year after the end of the study.

What will happen to the results of this research study?

The main outcome of the study is a dissertation for a Doctorate in Professional Studies at Sheffield Hallam University. Copies of the dissertation are kept for other students and staff to see.

If there are new findings these may be written up in a paper for an academic journal or presentation at a conference.

Who is sponsoring this study?

The sponsor of this study is Sheffield Hallam University. The sponsor has the duty to ensure that it runs properly and that it is insured.

Who over-sees the research to ensure everything is done correctly?

All research based at Sheffield Hallam University is looked at by a group of people called a Research Ethics Committee. They check studies to protect your safety, rights, wellbeing and dignity. This Committee is run by Sheffield Hallam University but its members are not connected to this research study. The Research Ethics Committee has reviewed this study and is happy with it.

I would like to take part in this research, what do I do now?

Simply contact the researcher below who will arrange the next steps.

Amanda-Jayne Stocks
Research Student – Sheffield Hallam University
Contact details: **REDACTED**

Please keep this information sheet.

Provider Organisations



A research project to understand: 'How can domiciliary care services prevent cold related harm in the elderly?'

Information for participants who are senior managers/owners of provider organisations within adult social care

Dear Colleagues

My name is Amanda Stocks and I am currently undertaking a Doctorate at Sheffield Hallam University.

I would like to invite you to take part in my research study however, before you decide, I would like you to understand why this research is being done and what it would involve for you.

I would also like you to have the opportunity to talk to myself or others about the study if there is anything that is not clear or you have any other questions about the research.

Please find below and some frequently asked questions and answers to provide some further information to help you decide if you would like to take part.

Yours sincerely

Amanda-Jayne Stocks
Doctorate Research Student – Sheffield Hallam University
Contact details: **Details redacted.**

Questions and information about the research

What is the purpose of this research?

The overall aim of this doctorate research is to add to the knowledge around the factors that lead to people being cold in their own home as evidence shows that this may have a detrimental impact on health.

Much work has been done around the contextual factors such as lack of money to pay for fuel and poor or inefficient heating systems. There is however, a growing recognition that other factors may drive behaviour in relation to heating regimes. This could include knowledge, beliefs and attitudes about cold as well as the influence of the people they come into contact with.

The UK has an ageing population and more people are being supported to live in their own homes as they get older through the help domiciliary care. The aim of this research is to develop insight into how domiciliary care is currently delivered to older people, how this contributes to the prevention of cold related harm to health and how this could be maximised.

Why have I been invited to take part in the research?

As a provider organisation within health and social care, your experiences and knowledge will provide vital information for this study and that is why you have been invited to take part in this study.

Do I have to take part in this research?

Your decision to take part in this study is voluntary. It is up to you to decide if you want to take part, and you can withdraw from the study at any time, without giving a reason.

What will happen to me if I decide to take part in the research?

The researcher will arrange a meeting to interview you for between 45 minutes and one-and-a-half hours. During the interview the researcher will talk with you about your work and ask you to share your thoughts and experiences.

The interview will take place at a time and place that is convenient to you. This can be in your own office or at a place of your choosing if you would prefer. It needs to be a place where you can speak freely and would not be disturbed.

The safety, confidentiality and security of the research participants are a major concern at all times.

The interview will be recorded so that the interviewer can chat freely with you and then make proper notes afterwards.

Expenses and payments

You will not be paid for taking part in this study but if you have any expenses related to the study, for example reasonable travel expenses, these can be reimbursed.

What are the possible benefits or disadvantages in taking part in this research?

A possible disadvantage to you is that you are being asked to give-up some of your time to take-part in the study.

The benefit for you is an opportunity to use your knowledge and experience in this research study which will add to the evidence base, inform professional practice and may help prevent harm to those at risk of living in a cold home in the future.

What if I wanted to ask some questions or make a complaint?

The researcher:

Amanda Stocks

Details redacted.

The Director of study

Dr Hilary Piercy

Details redacted.

If you would rather contact an independent person, speak to:

Peter Allmark

Details redacted.

Will my taking part in this research be kept confidential?

Completely, all identifiable data will be removed when the findings are written up.

Will anyone else be able to see my answers and the information I give

Only the researcher will know that you have agreed to take part in this study. Nobody else will know unless you give your permission.

The interview will be recorded and then written up word-for-word and kept on a password-protected computer file accessible only by the researcher; the recording will then be deleted.

At the end of the study the written transcripts will be kept securely for as long as they might be useful in future research.

All links to you or any other people removed from the final report or any future publications, so people reading these will not be able to identify you.

Issues of concern and security

If you raise an issue of concern in the interview, the researcher will consult the University supervisor about what to do. She will act in accordance with the professional Code of Conduct, and as far as possible with your agreement.

The documents relating to the administration of this research, such as the consent form you sign, will be kept in a project file. This is locked away securely.

The folder might be checked by people in authority who want to make sure that researchers are following the correct procedures. These people will not pass on your details to anyone else. The documents will be destroyed one year after the end of the study.

What will happen to the results of this research study?

The main outcome of the study is a dissertation for a Doctorate in Professional Studies at Sheffield Hallam University. Copies of the dissertation are kept for other students and staff to see.

If there are new findings these may be written up in a paper for an academic journal or presentation at a conference.

Who is sponsoring this study?

The sponsor of this study is Sheffield Hallam University. The sponsor has the duty to ensure that it runs properly and that it is insured.

Who over-sees the research to ensure everything is done correctly?

All research based at Sheffield Hallam University is looked at by a group of people called a Research Ethics Committee. They check studies to protect your safety, rights, wellbeing and dignity. This Committee is run by Sheffield Hallam University but its members are not connected to this research study. The Research Ethics Committee has reviewed this study and is happy with it.

I would like to take part in this research, what do I do now?

Simply contact the researcher below who will arrange the next steps.

Amanda-Jayne Stocks
Research Student – Sheffield Hallam University
Contact details: **Details redacted.**

Please keep this information sheet.



A research project to understand: 'How can domiciliary care services prevent cold related harm in the elderly?'

Information for participants who are care workers within health and social care

My name is Amanda Stocks and I am currently undertaking a Doctorate at Sheffield Hallam University.

I would like to invite you to take part in my research study however, before you decide, I would like you to understand why this research is being done and what it would involve for you.

I would also like you to have the opportunity to talk to myself or others about the study if there is anything that is not clear or you have any other questions about the research.

Please find below and some frequently asked questions and answers to provide some further information to help you decide if you would like to take part.

Yours sincerely

Amanda-Jayne Stocks
Doctorate Research Student – Sheffield Hallam University
Contact details: **Details redacted.**

Information and questions about this research

What is the purpose of this research?

The overall aim of this doctorate research is to understand why people might be cold in their own home as this may be bad for their health.

There has already been some work done on this and some things have been put in place like benefits and help with new heating or insulation. There may be other things that may mean people are cold and this work hopes to find out about these.

The UK has an aging population and more people are being supported to live in their own homes as they get older through the help of care staff. The aim of this research is to understand how delivering care helps to stop this harm from cold and how this could be made even better.

Why have I been invited to take part in the research?

Care workers who look after older people have a very important role to play in helping to understand this problem as they have experience of working with people who need care.

This is why we are asking you to be involved. Your experiences and knowledge will provide vital information for this study

Do I have to take part in this research?

It is up to you to decide if you want to take part, and you can withdraw from the study at any time, without giving a reason.

What will happen to me if I decide to take part in the research?

The researcher will arrange a meeting to interview you for about 45 minutes. At the interview the researcher will talk with you about your work and ask you to share your thoughts and experiences.

The interview will take place at a time and place that is convenient to you and at a place you choose. It needs to be a place where you feel ok to talk.

The interview will be recorded on a digital sound recorder.

Expenses and payments

You will not be paid for taking part in this study but as a thank you gift for your help, you will be given £25.

If you have any expenses, for example reasonable travel expenses, these will be covered.

What are the possible benefits or disadvantages in taking part in this research?

A possible disadvantage to you is that you are being asked to give-up some of your time to take-part in the study.

The benefit for you is an opportunity to use your knowledge and experience to help prevent harm to those at risk of living in a cold home in the future.

Will my taking part in this research be kept confidential?

Completely, all identifiable data will be removed when the findings are written up. No one will know you took part unless you want to tell them.

Will anyone else be able to see my answers and the information I give

People will see the answers but no one except the researcher will know they were from you.

The interview will be recorded and then written up word-for-word and kept on a password-protected computer file accessible only by the researcher; the recording will then be deleted.

At the end of the study the written transcripts will be kept securely for as long as they might be useful in future research.

All links to you or any other people will be removed from the final report or any future publications, so people reading these will not know you took part.

If there is a problem

If something is worrying you and you let the researcher know in the interview, the researcher will ask the University supervisor about what to do. She will act in accordance with the professional Code of Conduct, and as far as possible with your agreement.

The documents relating to the administration of this research, such as the consent form you sign, will be kept in a project file. This is locked away securely.

The folder might be checked by people in authority who want to make sure that researchers are following the correct procedures. These people will not pass on your details to anyone else. The documents will be destroyed one year after the end of the study.

What will happen to the results of this research study?

The results will be part of a dissertation for a Doctorate in Professional Studies at Sheffield Hallam University. Copies of the dissertation are kept for other students and staff to see.

If there are new findings these may be written up in a paper for an academic journal or presentation at a conference.

Who is sponsoring this study?

The sponsor of this study is Sheffield Hallam University. The sponsor has the duty to ensure that it runs properly and that it is insured.

Who over-sees the research to ensure everything is done correctly?

All research based at Sheffield Hallam University is looked at by a group of people called a Research Ethics Committee. They check studies to protect your safety, rights, wellbeing and dignity. This Committee is run by Sheffield Hallam University but its members are not connected to this research study. The Research Ethics Committee has reviewed this study and is happy with it.

What if I wanted to ask some questions or make a complaint?

You can contact:

The researcher:

Amanda Stocks
Details redacted.

The Director of study

Dr Hilary Piercy
Details redacted.

If you would rather contact an independent person, speak to:

Peter Allmark
Details redacted.

I would like to take part in this research, what do I do now?

Simply contact the researcher below who will arrange the next steps.

Amanda-Jayne Stocks
Research Student – Sheffield Hallam University
Contact details: **Details redacted.**

Please keep this information sheet.

APPENDIX 11: Research Ethics Committee Approval



Date 02.03.2015

Ref 2014-5/HWB/DPS/3

Dear Amanda STOCKS

This letter relates to your research proposal: How can domiciliary care services prevent cold related harm in older people?

This proposal was submitted to the Faculty Research Ethics Committee with a standard SHREC1 form. This indicates that your project does not require formal ethics and scientific review. As such, it has been added to the register of projects and given a reference number. You do not need any further review from the Ethics Committee. You will need to ensure you have all other necessary permission in place before proceeding, for example, from the Research Governance office of any sites outside the University where your research will take place. This letter can be used as evidence that the proposal has been registered within Sheffield Hallam University.

Good luck with your project.

Yours sincerely

REDACTED

Peter Allmark
Chair Faculty Research Ethics Committee
Faculty of Health and Wellbeing
Sheffield Hallam University
32 Collegiate Crescent
Sheffield
S10 2BP

REDACTED

Centre for Health and Social Care Research
Faculty of Health and Wellbeing | Montgomery House | 32 Collegiate Crescent | Sheffield | S10 2BP | UK

REDACTED

APPENDIX 12: Research Application Form & Approval

Research Application Form

REDACTED

CHILDREN AND YOUNG PEOPLE'S SERVICES/
NEIGHBOURHOODS AND ADULT SERVICES

Research Application Form

The principal researcher should fill in this form. Please fill in all sections of the application form in full.

About you

Name	Amanda-Jayne Stocks
Address	REDACTED
E-mail	REDACTED
Daytime phone number	REDACTED
Fax	N/A
Current employment	Director AJ Stocks Limited
Your qualifications	<ul style="list-style-type: none">• and A levels – various including maths and English• Honours Degree – Business and Management• Masters Degree – Strategic Marketing

	<ul style="list-style-type: none"> Chartered Marketer
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Your previous research experience	<p>I have been involved with a number of research programmes in conjunction with Sheffield Hallam University including:</p> <ul style="list-style-type: none"> KWILLt – A programme to understand the barriers and behaviours around keeping warm at home in later life: analysis of findings/thematic framework, segmentation and behaviour models and subsequent resources including a 'Winter Warmth Toolkit' that was included in The Cold Weather Plan for England 2013 (Department of Health) Warm Well Families – A programme to discover the contextual and psychological factors influencing risk to children with asthma in relation to home heating regimes: analysis of findings/thematic framework, segmentation and behaviour models and subsequent resources including a set of 'pen portraits' for use with professional audiences. Parkinson's UK – A research programme to understand what 'good care' looks like and the impact of early intervention in improved outcomes for Parkinson's patients: Developed recommendations for commissioners, behavioural models, intervention models as well as marketing and communication plan for Parkinson's UK based on the findings of the research. <p>In addition, I have worked on research programmes for</p>
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	public sector organisations such as the Department of Health, Sheffield City Council and The Fire Service
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About the other people who will be involved with the research

Name of your research supervisor	Dr Hilary Piercy
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<p>Address</p> <p>Phone number</p> <p>Fax</p> <p>E-mail</p>	<p>REDACTED</p>
<p>Your supervisor's research qualifications and experience:</p>	<p>Hilary completed the Supervisor training at SHU in 2008 and has examined one MPhil, one PhD and one DPS as internal examiner.</p> <p>She has experience of supervising both PhD and professional doctorate students. Hilary is programme lead for the DPS and therefore has a comprehensive understanding of the requirements of the programme.</p> <p>Outline of relevant experience and publications appropriate to the programme of research:</p> <p>Hilary is an experienced qualitative researcher with a theoretical grounding and practical experience in a range of qualitative methodologies. Her research covers two broad areas of enquiry: firstly understanding the ways in which individuals understand and make sense of health and illness</p>

	<p>experiences and secondly work that examines aspects of service delivery. Both have clear relevance to Amanda's proposed project.</p> <p>Relevant recent publications:</p> <p>Rajapaksa-Hewageegana, Piercy, H, Salway, S, Samarage, S. Sexual and reproductive knowledge, attitudes and behaviours in a school going population of Sri Lankan adolescents, <i>Sexual & Reproductive Healthcare</i> (2014), doi: 10.1016/j.srhc.2014.08.001</p> <p>Gerrish, K. & Piercy, H. Capacity development for knowledge translation: evaluation of an experiential approach through secondment opportunities. <i>Worldviews on Evidence-based Nursing</i> 2014 11:3, 209-213</p> <p>Salway S, Piercy H, Presto L. How can realist synthesis methods contribute to building the evidence base for action on ethnic health inequalities? A narrative assessment. <i>Lancet</i> 2013 Nov 29;382(Suppl 3):S87</p> <p>Tunncliffe, S, Piercy, H, Bowman, C, Hughes, C, Goyder, E (2013) The contribution of the HIV specialist nurse to HIV care: a scoping review. <i>Journal of Clinical Nursing</i>. doi: 10.1111/jocn.12369</p> <p>Piercy, H., Chowbey, P, Soady, J, Dhoot, P, Willis, L, Salway, S (2013) A care pathway approach to identifying factors that impact on diagnosis of heart disease in British Pakistani women. <i>Ethnicity and Inequalities in Health and Social Care</i> 5:3 78-88</p> <p>Salway, S., Piercy H, Chowbey, P, Brewins, L & Dhoot, P (2012) Improving capacity in ethnicity and health research; report of a tailored programme for NHS Public Health practitioners. <i>Primary. Health Care Research and Development</i>. Accepted for publication FirstView Article / August 2012, pp 1 11 DOI: 10.1017/S1463423612000357, Published online: 13 August 2012</p> <p>Piercy, H. & Hayter, M. (2009) Effective Sex education in</p>
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	<p>primary schools: a study. British Journal of School Nursing 4 (4): 130-134</p> <p>Piercy, H. & Hayter, M. (2008) School nurse management of children's questions when they are involved in primary school sex education: an exploratory study. Primary Health Care Research and Development. 9: 75-84</p>
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Research team members (including fieldworkers)

Name	N/A – I will be the sole researcher however, please find details below of my other supervisory staff member who will oversee my doctorate
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Address Phone number Fax E-mail	Dr Anna Cronin De Chavez REDACTED
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Who will be funding the research?

Name	I am self funded and there will be no cost to REDACTED
------	---

Who will be sponsoring the research?

Name	SHU
------	-----

Address	Sheffield Hallam University 34 Collegiate Crescent Sheffield S10 2BP
Phone number	
Fax	
E-mail	

About the research

Title of the research project

How can domiciliary care services prevent cold related harm in older people?

Brief outline of the project

In 2009 the Chief Medical Officer for England published a report stating that 'Winter Kills' (Department of Health 2009) and between the beginning of December and the end of March in England and Wales 2012/2013, 31,000 'additional' deaths occurred (Office of National Statistics 2014). Although the majority of deaths occur in people with existing morbidities they would not have been expected to die at this time (Roche 2010); these are 'additional or unexpected deaths' and the term 'excess winter deaths' (EWD) is used to describe the phenomena.

There is a huge body of evidence to support the Chief Medical Officer's statement above (Marmot Review team 2011, Liddel et al 2010). In addition, it is also widely acknowledged that these are preventable deaths (Department of Health 2012) and it is estimated that it costs the NHS £859 million to treat disease and illness caused individuals by living in cold housing in the private sector alone (Department of Health 2012).

Over the last decade, the NHS has become under increasing pressure due to the aging population and the demands upon services (NHS England 2013). Health policy has responded with 'The Vision for Adult Social Care' (Department of Health 2010) and 'The Better Care Fund' (NHS England 2013) which promote people being supported to live independently in their own home and have reductions in costly avoidable hospital visits and admissions to residential and care homes as 2 of 5 key metrics to reflect this challenge. As the move towards older people being cared for in their own home increases, how domiciliary care is delivered to older people, how this can contribute to the prevention of cold related harm to health and how this can be maximised will be an important factor in the avoiding preventable death and illness caused by living in a cold home.

This research project will add to the understanding by the collection and analysis of insights into the factors that drive decision making and behaviour within 3 key stages that impact on domiciliary care for older people; the commissioning, provision and delivery of care. The model below illustrates the 3 target groups in relation to these stages and the contextual and psychological factors that may impact of behaviour and decision making within these 3 groups. The aim of this research is to develop insight into how domiciliary care is currently delivered to older people, how this contributes to the prevention of cold related harm to health and how this can be maximised.

By the end of 2015, this project will:

1. Gain detailed insights into the ways that prevention of cold related harm to health is incorporated into the commissioning of domiciliary care of older people through semi-structured interviews with a purposive sample of commissioners and examination of related documentation.
2. Gain detailed insights into the ways that prevention of cold related harm to health is incorporated into the provision of domiciliary care for older people through semi-structured interviews with a purposive sample of provider organisations and examination of related documentation.
3. Gain detailed insights into the ways that prevention of cold related harm to health is incorporated into the delivery of domiciliary care for older people through semi-structured interviews with a purposive sample of domiciliary care workers and

examination of related documentation.

4. Following final analysis, deliver a set of findings and recommendations in relation to the commissioning, provision and delivery of adult social care to older people that will maximise the prevention of cold related harm to health.

Target audience

The target audience for the research findings will be policy makers, commissioners of adult social care, provider organisations and their staff as well as wider academic audiences within health and social care.

What is your main reason for doing this research?

To fill a gap in existing knowledge and complete doctorate studies

It is clear from reviewing the literature and evidence base around EWD that it remains a significant public health problem for the UK. The evidence also supports the assertion that those over 75 years old with existing morbidities are most at risk from the harm associated with living in a cold home; cold homes being a major risk factor in relation to the risk of EWD. In addition, policy and the delivery of care to older people is moving towards a model of supported care in the individuals own home where possible.

Although frontline domiciliary care staff are acknowledged by many sources to be a vital and well placed channel in constant contact with the most vulnerable, there is very little evidence of what current behaviour takes place now and their role in preventing harm from living in a cold home.

When do you plan to start this research?

Hopefully in July 2015

How long do you expect the research will take?

Data collection will hopefully be completed by the end of 2015

How is the research being funded? Are there any estimated costs to our department?

The research is self-funded – no cost to **REDACTED**

Have you attached a copy of your research proposal to this application?

Yes ☒ No ☐ I have attached a draft

Does your proposal deal with the issues raised in the Research Proposal Guide?

Yes ☒ No ☐ Partly

If 'No', please attach appropriate extra information.

Will your research involve you talking directly to council staff, service users or their families or carers?

Yes ☒ No ☐

If 'Yes', do you and all members of your research team have up-to-date Criminal Records Bureau certificates?

Yes ☐ No ☒

Has your research been approved by any of the following?

University ethics approval	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>
Association of Directors of Social Services approval	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
NHS approval	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
Other	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>

Please give details.

As the research will only involve senior members of REDACTED, no NHS or other approval is required – see attached research committee letter

Insurance

Please provide proof that your insurance is current and will last for the whole research project. If you're not sure what insurance you have, you should discuss this with your supervisor.

- **Please see attached email**

Checklist

Please provide the following documents with your application.

Filled-in application form	<input checked="" type="checkbox"/>
Research proposal	<input checked="" type="checkbox"/>
A copy of your draft questionnaire	<input type="checkbox"/> N/A
Research timetable <u>-contained in proposal attached</u>	<input checked="" type="checkbox"/>
Information for participants	<input checked="" type="checkbox"/>
Participant consent form	<input checked="" type="checkbox"/>
Criminal Records Bureau certificates	<input type="checkbox"/> N/A?
Your company's or university's insurance documents	<input checked="" type="checkbox"/>
Any other research or ethical approvals	<input checked="" type="checkbox"/>
Please list any other documents you are providing.	
<ul style="list-style-type: none">• Research Degrees Sub Committee Approval• SHU Ethic approval• Health and safety assessment	

Declaration of interests

Please tell us about any personal or professional relationship you have with a staff member or possible participant that may affect this research. You should also tell us about any business interests that could affect the research.

Nothing to declare

Declaration

As far as I know the information I have given in this application and any supporting documents is accurate. If there are any major changes to the research or the proposal, I will tell your research co-ordinator as soon as possible. I understand that as a condition of your approval I must agree to you using any research findings in your day-to-day work.

I know that I have a general 'duty of care' and I will tell the link officer or research co-ordinator if I believe that someone might be at risk (an adult or a child at risk of abuse, injury and so on).

Your signature:

REDACTED

Date: 07/04/2015

Print name: Amanda-Jayne Stocks

Research Approval

Dear Amanda-Jayne Stocks

Project Title: How domiciliary care services can prevent cold related harm in the elderly

On behalf of [REDACTED] Team I am pleased to inform you that the above named research project has been reviewed and approved. If you need any further assistance from the team please do hesitate to contact [REDACTED] or [REDACTED] who will be happy to help. Their email addresses are;

[REDACTED]

and

[REDACTED]

If during the course of your research project you need to change direction in a significant way from the approved proposal please get in touch as soon as possible as we may need to reapprove your research project. If you wish to end the project, again please get in touch as soon as possible.

Kind regards

Jo|

APPENDIX 13: Participant Consent Form

Amanda Stocks | 1
Participant Consent Form



A research project to understand: 'How can domiciliary care services prevent cold related harm in the elderly?'

Participant Consent form

Please read each of the statements below and tick yes or no depending on your answer.

Question	YES	NO
I have read the Information Sheet for this study and/or the researcher has explained the details of the research to me.		
My questions about the study have been answered to my satisfaction.		
I understand that I may ask further questions at any point.		
I understand that I am free to withdraw from the study at any time without giving a reason.		
I understand that I do not have to answer any questions I don't want to.		
I understand that no one will be able to identify me or my answers in the final report and any other publications about this research.		
I consent to the information collected for the purposes of this research study, with my details removed so that I cannot be identified, to be used for any other research purposes.		
I wish to participate in the study under the conditions set out in the Information Sheet.		

Name of research participant:

Signature:

Date:

Name of researcher: Amanda Stocks

Date:

Signature:

APPENDIX 14: Sample Frame

Participant group	Target sample size	Sample frame criteria
Commissioners of adult social care	4 to 5	<ul style="list-style-type: none"> Involved in the commissioning of domiciliary care services for older people. Influential in the policy and planning of the commissioning domiciliary care services for older people.
Provider organisations	6 to 7	<ul style="list-style-type: none"> Size of organisation Type of organisation, for example private or publicly funded provision
Domiciliary care service staff	8 to 10	<ul style="list-style-type: none"> Age Gender Role (Care staff, supervisor) Type of employment (Employed, self-employed, PT/FT) Experience in their role and sector Type of employer (size and client base)

APPENDIX 15: Care Staff Sample Frame Matrix

Code Number	Age	Gender	Ethnicity	Care Role	Terms of employment – hours per week	Organisation Size/type	Time/Experience in role	Type of clients by funding	Additional notes
DS001	55 and over	female	White British	1	Full time	Large (with local offices around country circa 40/50 staff)	Experienced	Mixed	Ex teacher
DS003	55 and over	female	White British	1	Full time	Medium (single site local)	Very experienced	Mixed (80% LA)	Experience as care manager and care home manager
DS004	25 to 54	female	White British	1	Part-time	Private family arrangement	Private family arrangement	Private	Ex sales rep

Code Number	Age	Gender	Ethnicity	Care Role	Terms of employment – hours per week	Organisation Size/type	Time/Experience in role	Type of clients by funding	Additional notes
DS005	Under 25	female	White British	1	Full time	Medium (local franchises around region circa 20/30 staff)	Inexperienced	Mixed	Under 6 months - ex veterinary nurse
DS006	51-60	female	White British	3	Full time	Medium (local franchises around region circa 20/30 staff)	Very experienced	Private	Ex NHS nurse
DS007	25 to 54	female	White British	2	Full time	Small (single site local)	Very experienced	Private (small amount of LA)	Previous social services care staff for 19 years

Code Number	Age	Gender	Ethnicity	Care Role	Terms of employment – hours per week	Organisation Size/type	Time/Experience in role	Type of clients by funding	Additional notes
DS008	25 to 54	female	White British	2	Full time	Small (single site local)	Moderate	Private (small amount of LA)	New to domiciliary but previous care home care worker
DS009	55 and over	female	White British	1	Full time	Large (local franchises around country circa 40/50 staff)	Moderate	Mixed	3 years – no previous care experience
DS010	Under 25	female	White British	1	Full time	Large (local franchises around country circa 40/50 staff)	Moderate	Mixed	Worked in care 18 months - previously in a pub

Code Number	Age	Gender	Ethnicity	Care Role	Terms of employment – hours per week	Organisation Size/type	Time/Experience in role	Type of clients by funding	Additional notes
DS011	25 to 54	female	White British	1	Full time	Self-employed carer	Very experienced		Ex Alzheimer's UK care staff

Description of definitions and classifications used.

The definitions used to describe the research sample for domiciliary care service staff are taken from:

Skills for Care, The size and structure of the adult social care sector and workforce report in England, 2016 (Leeds, 2016). Available at www.skillsforcare.org.uk/sizeandstructure.

This is to provide a comparable analysis with the data collected for the National Minimum Data Set (Skills for care 2006)

Organisation type

The description of organisation is used here to describe the business or employer of the care worker and covers a range of organisational type – for example, large national organisations with multiple office locations, local single office franchises as part of larger national organisations, single office local organisations and self-employed care staff.

Organisation size

Size is based on number of employees

- Micro – 0 to 9 employees
- Small – 10 to 49 employees
- Medium – 50 to 249 employees
- Large – 250+
- Self employed
- Private family arrangements

Age

This indicates the age of the care worker

- Under 25

- 25 to 54
- 55 and over

Types of care role

This indicates the role carried out by the participant

- 1 - Care Worker – Direct care of clients, no supervisory/management role
- 2 - Care Supervisor/Senior Care Worker – Direct care of clients and basic supervision of new staff/shadowing
- 3 - Field Care Supervisor – Some direct care, training and supervision of new staff, quality and support for escalated issues

Terms of employment – hours per week

This indicates the normal working week of the participant

- Full time – 30 plus hours per week
- Part-time – under 30 hours per week

Type of clients by funding

This indicates how the client's care is paid for.

- Local authority – all fees and costs covered by Local Authority funding

- Mixed – the client receives Local Authority funding, but some care is also paid for by the client from their own funding sources
- Private – all funding for care is from the clients own funding sources

Time/Experience in role

This indicates the participants' time with organisation and previous experience in care work

- Very experienced – Over 5 years as care worker and has long time experience in care sector
- Experienced – over 5 years in current or previous care worker role
- Moderate experience – 1 to 5 years in care worker role
- Inexperienced – under 1 year in care worker role
- No formal experience

APPENDIX 16: Interview Guide – Commissioners

Interview Guide

Commissioners - Adult Domiciliary Care (elderly)

Stage 1: Introductions

- Thank participant for their time and agreeing to be interviewed
- Briefly go over purpose of interview, use of data and confidentiality
- Explain it will be recorded and transcribed
- Ask if any other questions and happy to go ahead?
- Collect signed consent form if not already returned

Stage 2: Opening questions

1. What is the title of your role?
2. What is the overall purpose/aim of your role?
3. What do you see as the main your responsibilities?

Stage 3: Core Data Gathering

Question aims:

- *To understand what influences commissioning decisions around domiciliary care*
- *To understand how policy/national guidance is translated into commissioning intent*
- *To understand if EWD/cold related harm might be a consideration*
- *To understand where commissioners get information/direction on this*

Prompts for discussion:

- *Probe about the process, who is involved, how contracts are developed and awarded*

Remember: ask for examples to illustrate

4. Can you explain how domiciliary care is commissioned in [area]?
5. What considerations do you feel are included when developing commission strategies for elderly people (define as over 65)?

Question aims:

- *To understand the influence of budget cuts and economic pressures upon commissioning priorities and choices and current trends*

Prompt: ask for examples to illustrate.

6. How would you describe the current financial position in [name] in respect to providing adult domiciliary care?
7. How do financial considerations impact on how you make commissioning decisions?

Question aims:

- *To understand perceptions of locus of responsibility in respect to health and well-being of elderly people receiving domiciliary care, how this is reflected in commissioning practice and any known interventions to reduce EWD.*

Prompts: Knowledge of excess winter death

- *Is cold related harm a consideration?*
- *Ensuring staff are trained*
- *Measures used to assess quality of care*

8. How is health and well-being considered when developing domiciliary care contracts for the elderly?
9. How is this reflected/performance measured in the in the actual contracts?

10. In relation to performance measures, how do you expect providers to demonstrate this?
11. Which organisations, groups or individuals do you feel are responsible for ensuring elderly people receiving care are not at risk of harm from living in a cold home?
12. Are you aware of any measures that are in place in [area] to help prevent cold related harm in elderly?

Stage 4: Wind down question

13. What are your thoughts on the future of domiciliary care?

Stage 5: Summary of discussion

- Give thanks and reiterate how important this info is to the work
- Ask if they have any further questions
- Explain the next steps

APPENDIX 17: Interview Guide – Providers

Interview Guide

Providers - Adult Domiciliary Care (elderly)

Stage 1: Introductions

1. Thank participant for their time and agreeing to be interviewed
2. Briefly go over purpose of interview, use of data and confidentiality
3. Explain it will be recorded and transcribed
4. Ask if any other questions and happy to go ahead?
5. Collect signed consent form if not already returned

Stage 2: Opening questions

6. What is the title of your role?
7. What is the overall purpose/aim of your role?
8. What do you see as the main your responsibilities?

Stage 3: Core Data Gathering

Question aims:

To understand how domiciliary care is delivered and what the influences are

Remember: ask for examples to illustrate

9. What kind of care services does your organisation deliver?
10. What happens in the care visits – what do staff do?
11. Are most care packages the same – [how is it decided/agreed what staff do for their clients? – what is included in the contracts?]
12. Do staff visit same people each day?
13. How is this measured/quality checked?

14. What other people are involved in caring for your clients [district nurses, family, GP etc]

Question aims:

- *To understand the influence of macro and local forces upon commissioning priorities and choices and current trends*

Prompt: ask for examples to illustrate.

15. Have recent cuts to LA funding had an impact on the contracts with domiciliary care providers?

16. How does your company ensure it makes a profit on the care it delivers?

17. How is your performance in your role measured?

18. How do you recruit and retain your staff?

19. How do you feel staff see their role?

Question aims:

- *To understand perceptions of locus of responsibility in respect to health and well-being of elderly receiving domiciliary care.*
- *To understand if and how concerns are raised and dealt with*
- *To understand if EWD/CRHH might be a consideration*
- *To understand where providers/staff get information/direction/training on CRHH*

15. What training do you and your staff receive? [and who delivers it]

16. What are the legal basic requirements [do staff get more than this?]

17. What benefits do you think are the benefits of training staff?

18. Is cold related harm included in training?

19. What procedures are in place for care staff to report any concerns they have. [and what happens next]
20. Can you recall any situations where staff have raised cold-related concerns about a client?
21. (No – why do you think that is?)
22. Who do you feel is responsible/should take action if a person is too cold

Stage 4: Wind down question

9. What are your thoughts on the future of domiciliary care?

Stage 5: Summary of discussion

- Give thanks and reiterate how important this info is to the work
- Ask if they have any further questions
- Explain the next steps

APPENDIX 18: Facebook Recruitment of Care Staff

Ethics Approval

Ref 2014-5/HWB/DPS/3

Dear Amanda STOCKS

This email relates to your research proposal:

- How can domiciliary care service workers prevent cold related harm in the elderly?

I received your AMENDMENT on 19022017. I note the change and believe it does not raise any substantial ethical issues requiring further review. I am therefore happy to approve the amendment.

The relevant document is stored in a file which is in the 2016-17 folder of the FREC database.

Good luck with your project.

Best wishes

Peter

Peter Allmark

Faculty REC

FHWB

Sheffield Hallam University

32 Collegiate Crescent

Sheffield S10 2BP


Campaign

**Research Project: Home Care Workers for the Elderly**
Published by Amanda Stocks (?) · 26 February at 14:33 · 🌐





It's now easier to call Research Project: Home Care Workers for the Elderly.


[Call Now](#)


**Research Project: Home Care Workers for the Elderly**
@HomeCareResearch


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 Share



**Research Project: Home Care Workers for the Elderly**
Published by Amanda Stocks (?) · 26 February at 14:26 · 🌐

Home Care Workers wanted for research project

Are you or a friend a care worker for elderly people in their own home?

I am doing a research project for a doctorate with Sheffield Hallam University and I am looking for care workers who look after elderly people in their own home within the Yorkshire region to help me with my research.

If you are selected to take part in the research, we will arrange a 1 hour confidential interview and you will get a £25 shopping voucher to compensate you for your time.

Only I will know who has taken part and full details about the research will be provided to anyone who makes contact. The research interview...

...

[See more](#)

APPENDIX 19: Care Staff Recruitment Poster



**Are you a care worker who looks after
the elderly in their own home?**



I am looking for home care staff to help with
my Sheffield Hallam University doctorate
research project by taking part in a **1 hour
confidential** interview; in return you will be
paid **£25**.

Please contact **Amanda** for more details:

[Contact details removed]

APPENDIX 20: Care Staff Recruitment Newspaper Advert

Below is a small advert, placed in the Normanton Advertiser:

**Care Staff Needed
for Research.**

Do you look after elderly
people in their own
home?

Participants get paid £25
for taking part in a
confidential 1-hour
interview – time to suit
you

For details - Amanda on

Redacted

APPENDIX 21: Interview Guide - Care Staff (Employed)

Interview Guide

Care staff (employed) - Adult Domiciliary Care (elderly)

Stage 1: Introductions

- Thank participant for their time and agreeing to be interviewed
- Briefly go over purpose of interview, use of data and confidentiality
- Explain it will be recorded and transcribed
- Ask if any other questions and happy to go ahead?
- Collect signed consent form if not already returned

Stage 2: Opening questions

1. What is the title of your role?
2. What is the overall purpose/aim of your role?
3. What do you see as the main your responsibilities?

Stage 3: Core Data Gathering

Question aims:

- *To gain understanding of how domiciliary care is delivered*
- *Who the care staff are, their experience and training*
- *What care looks like on the coal face*

Remember: *SHUT UP AND LISTEN, ask for examples to illustrate*

4. How big is your organisation?
5. What services do they provide?
6. How long have you worked here?
7. Was this your first role in home care?

8. Tell me about the other care staff - (how long been here, age)
9. Do the staff stay a long time?
10. What kind of people do you look after?
11. Do you see the same clients all the time?
12. Is this a private/family/LA arrangement?
13. What tasks do you do for your clients?
14. How long are the visits?
15. Who else is involved with their care?
16. How do care staff communicate with each other – say when moving to a new client or covering leave?
17. What are their houses like (repair, heating, warmth)

Question aims:

- *To understand how cold is considered in the delivery of care*

Prompt: ask for examples to illustrate.

18. What training did you receive when you started the role?
19. Does this cover cold – the temperatures, how to spot someone is too cold in their home?
20. Does it cover actions to take?
21. What do you think the clients think about the effects of cold on their health?
22. Can you think of any clients where there are problems trying to keep them warm?
23. What kind of things have you had to do? (clothing, thermostat, family interventions, alert systems).

24. Have you seen any actions that say family or friends of the client have taken?

25. Is there a formal alert system in place with the office etc.

Stage 4: Wind down question

26. Is there anything you think that would help care staff to protect their clients from CRHH?

Stage 5: Summary of discussion

- Give thanks and reiterate how important this info is to the work
- Ask if they have any further questions
- Explain the next steps

APPENDIX 22: Interview Guide – Care Staff (Self-Employed)

Interview Guide

Care staff (self-employed) - Adult Domiciliary Care (elderly)

Stage 1: Introductions

- Thank participant for their time and agreeing to be interviewed
- Briefly go over purpose of interview, use of data and confidentiality
- Explain it will be recorded and transcribed
- Ask if any other questions and happy to go ahead?
- Collect signed consent form if not already returned

Stage 2: Opening questions

1. How long have you worked for yourself?
2. Was this your first role in home care?
3. How do you get the work?
4. Do you have to be registered or anything?

Stage 3: Core Data Gathering

Question aims:

- *To gain understanding of how care is delivered*
- *Who the care staff are, their experience and training*
- *What care looks like on the coal face*

Remember: *SHUT UP AND LISTEN, ask for examples to illustrate*

5. What kind of people do you look after?
6. Do you see the same clients all the time?
7. Is this a private/family/LA arrangement?

8. What tasks do you do for your clients?
9. How long are the visits?
10. Who else is involved with their care?
11. How do care staff communicate with each other – say when covering leave?
12. What are the clients' houses like (repair, heating, warmth)

Question aims:

- *To understand considerations of cold*

Prompt: *ask for examples to illustrate.*

13. What training did you receive when you had for your care role/how do you keep up to date with new things about care?
14. Did your training or updates cover cold – the temperatures, how to spot someone is too cold in their home?
15. Does it cover actions to take?
16. What do you think the clients think about the effects of cold on their health?
17. Can you think of any clients where there are problems trying to keep them warm?
18. What kind of things have you had to do? (clothing, thermostat, family interventions, alert systems).
19. Have you seen any actions that say family or friends of the client have taken?

Stage 4: Wind down question

20. Is there anything you think that would help care staff to protect their clients from CRHH?

Stage 5: Summary of discussion

- Give thanks and reiterate how important this info is to the work
- Ask if they have any further questions
- Explain the next steps

APPENDIX 23: Data Management Plan

Data Management Plan	
Prepared by Amanda Stocks, October 2014	
Project name	How can domiciliary care services prevent cold related harm in older people?
Description of research	A qualitative study to looking at how the domiciliary care system contributes to the prevention of excess winter death in its clients. The study will use semi-structured interviews to collect data.
Principal investigator	Amanda Stocks
Institution	Sheffield Hallam University
Data type and format	Interview audio recordings – digital files (WMA files estimated 20 to 30 KB) Interview transcriptions – Word documents (MS Word files estimated 20 to 25 KB)
Data volume	<u>Target:</u> Commissioner audio recordings and transcripts 6 to 8 of each Provider audio recordings and transcripts 6 to 8 of each Care staff audio recordings and transcripts circa 12 of each
Data storage and back-up	The audio files and transcripts will be stored on a private PC under a password protected file. Hard copies of the transcripts and associated field notes will be kept in a lockable cabinet in a private residence. No additional copies will be made. Back up for electronic data files will be on an external hard disc under encryption. Additional back up will be provided by an encrypted private Dropbox cloud account.

Ethical and legal compliance	<p>Information sheets and consent form will be used to ensure that informed consent is gained from all participants of the study that allows for the preservation and sharing of anonymised data.</p> <p>References within the transcripts will be anonymised.</p> <p>The transcripts will be stored under password protection.</p> <p>Any further identifying details will be redacted from the final thesis and any subsequent publications.</p>
Copyright and Intellectual Property Rights	<p>The primary data will be owned by Sheffield Hallam University.</p> <p>The analysed data and copyright of the thesis submitted for examination will be owned by Amanda Stocks.</p>
Data preservation	<p>The anonymised data will be retained by Sheffield Hallam University in a data repository for a period of 10 years.</p> <p>The study master file which contains the informed consent and hard copies of transcripts will be retained in a locked cabinet in the private office of Amanda Stocks for 15 years.</p>
Data sharing	<p>A data sharing agreement is not required for the anonymised transcripts.</p> <p>The audio files will not be made available for sharing.</p>
Responsibility for data management	Amanda Stocks
Additional resources required for delivery of above plan	No further resources required

APPENDIX 24: COREQ Checklist

COREQ (Consolidated criteria for REporting Qualitative research) Checklist

A checklist of items that should be included in reports of qualitative research. You must report the page number in your manuscript where you consider each of the items listed in this checklist. If you have not included this information, either revise your manuscript accordingly before submitting or note N/A.

Topic	Item No.	Guide Questions/Description	Reported on Page No.
Domain 1: Research team and reflexivity			
<i>Personal characteristics</i>			
Interviewer/facilitator	1	Which author/s conducted the interview or focus group?	67
Credentials	2	What were the researcher's credentials? E.g. PhD, MD	N/A
Occupation	3	What was their occupation at the time of the study?	11
Gender	4	Was the researcher male or female?	67
Experience and training	5	What experience or training did the researcher have?	ccxxxvi
<i>Relationship with participants</i>			
Relationship established	6	Was a relationship established prior to study commencement?	72, 74, 76
Participant knowledge of the interviewer	7	What did the participants know about the researcher? e.g. personal goals, reasons for doing the research	clxxii
Interviewer characteristics	8	What characteristics were reported about the inter viewer/facilitator? e.g. Bias, assumptions, reasons and interests in the research topic	1, 143
Domain 2: Study design			
<i>Theoretical framework</i>			
Methodological orientation and Theory	9	What methodological orientation was stated to underpin the study? e.g. grounded theory, discourse analysis, ethnography, phenomenology, content analysis	63
<i>Participant selection</i>			
Sampling	10	How were participants selected? e.g. purposive, convenience, consecutive, snowball	69
Method of approach	11	How were participants approached? e.g. face-to-face, telephone, mail, email	72,74,76
Sample size	12	How many participants were in the study?	72
Non-participation	13	How many people refused to participate or dropped out? Reasons?	74
<i>Setting</i>			
Setting of data collection	14	Where was the data collected? e.g. home, clinic, workplace	74,75,77
Presence of non-participants	15	Was anyone else present besides the participants and researchers?	67
Description of sample	16	What are the important characteristics of the sample? e.g. demographic data, date	ccii,
<i>Data collection</i>			
Interview guide	17	Were questions, prompts, guides provided by the authors? Was it pilot tested?	ccx, 67
Repeat interviews	18	Were repeat inter views carried out? If yes, how many?	N/A
Audio/visual recording	19	Did the research use audio or visual recording to collect the data?	79
Field notes	20	Were field notes made during and/or after the inter view or focus group?	79
Duration	21	What was the duration of the inter views or focus group?	74,75,77
Data saturation	22	Was data saturation discussed?	71
Transcripts returned	23	Were transcripts returned to participants for comment and/or	81

Topic	Item No.	Guide Questions/Description	Reported on Page No.
		correction?	
Domain 3: analysis and findings			
<i>Data analysis</i>			
Number of data coders	24	How many data coders coded the data?	81
Description of the coding tree	25	Did authors provide a description of the coding tree?	N/A
Derivation of themes	26	Were themes identified in advance or derived from the data?	980
Software	27	What software, if applicable, was used to manage the data?	99
Participant checking	28	Did participants provide feedback on the findings?	80
<i>Reporting</i>			
Quotations presented	29	Were participant quotations presented to illustrate the themes/findings? Was each quotation identified? e.g. participant number	88
Data and findings consistent	30	Was there consistency between the data presented and the findings?	N/A
Clarity of major themes	31	Were major themes clearly presented in the findings?	86
Clarity of minor themes	32	Is there a description of diverse cases or discussion of minor themes?	86

Developed from: Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *International Journal for Quality in Health Care*. 2007. Volume 19, Number 6: pp. 349 – 357

APPENDIX 25: Development Needs Analysis



Sheffield Hallam University

RFDNA (2012-13)

DEVELOPMENT NEEDS ANALYSIS FOR RESEARCH STUDENTS

Purpose of the DNA

All research students in the UK now have to engage with a Development Needs Analysis (DNA). The idea behind the DNA is that you do a self-assessment so that you have a much clearer sense of your strengths and weaknesses in terms of skills competence. In discussion with your supervisors, it should be possible to identify where and how you may be able to develop such skills if you currently feel there is a need. The University will be responsible for ensuring that provision is available to meet these needs. ***If you feel that you don't need to take part in any formal generic skills training activity, then that is your decision. However, it is important for the university to know that we have offered you the chance to do this, so please sign a copy of the DNA which must be counter-signed by your Director of Studies and returned to the Head of Programme Area (Research Degrees).*** Nevertheless, all students are required to take some general training via University/Faculty induction events and an Introduction to the Learning Centre which will help you when beginning your research degree. Students are also advised to have regular update sessions from their Learning Centre as services and provision are enhanced throughout the year.

How Skills Development Needs will be met

The 'Guide to Research Training and Development Programmes' is a University handbook whose purpose is to inform you and your supervisors of the range and availability of training and development events (both research methods and generic) which the University has to offer. It is available from the Research Student Blackboard site (or the Research Staff site for supervisors). The University 'Generic Skills Training Programme' has been designed to equip you with the skills needed for personal and professional development. The programme is delivered by Central departments and is available to all research students free of charge. The programme consists of a mixture of compulsory and optional units in subjects such as project management, team working, presentation skills etc. Your Faculty will make sure that those parts of the Joint Skills Statement (see table B for details) which are embedded in the research process itself, will be met through the supervision process, by carrying out the research itself, by being part of a research culture and also through departmental activities such as induction, specialist seminars, working groups etc.

Support for Teaching

Should you be interested in undertaking teaching duties (**in relation to skill E5**) you will need to undertake the programme of Associate Lecturer Workshops which are organised by the Learning and Teaching Institute. These run in the first semester of each academic year and details can be found in 'The Guide to Research Training and Development Programmes'. A new policy was agreed with effect from the 2010/11 session which makes this training **mandatory** for all research students engaged in teaching. Thus if you are planning to apply for teaching duties in your second year and beyond (although none can be guaranteed), you must have successfully completed this workshop programme.

Monitoring and Review Processes

You will need to stipulate a 'programme of related studies and guided reading' (regulation R4.6) as part of the application for Approval of Research Programme - RF1 (or equivalent professional doctorate form). The regulation has been revised in line with QAA requirements to ensure that all new students from the 2005/6 session onwards complete a DNA during induction in the new academic term. This will allow you to identify skills areas which could be strengthened by some form of development activity eg, a formal seminar, group workshops, or intra-university events. The DNA will be used by each student as part of Personal Development Planning (PDP). An e-PDP resource has been specially designed for research students and is available on the Research Student Blackboard site. You will be expected, informally via routine supervisory meetings and formally via annual monitoring, to confirm that the development activity identified has been/will be completed. Those students enrolled on MPhil or PhD subject to Confirmation who apply for the Confirmation of PhD process, will need to formally verify at that stage that the programme of related studies and associated training has been completed/progressed. Returning students should also complete the DNA after re-enrolment. Progress with the proposed training activity will be monitored formally via the annual monitoring exercise.

All students will be expected to complete a DNA in every year that they enrol on their research degree up to completion.

How to Complete the DNA

You need to refer to the 36 skills areas listed in the Joint Skills Statement (see table B) and **complete table A to identify:**

- what you have already done (which can be logged on your e- PDP record)
- what training and development you require to bridge the skills gap(s) you have identified
- where/how you will receive training and development for these areas.

Summary

Four things need to happen:

1. You should fill out this form (and keep a copy for personal use)
2. You should discuss it with your Director of Studies (with reference to the 'Guide to Research Training and Development Programmes' for assistance)
3. Details of proposed training, if you are a new student, should be confirmed on the RF1 form as part of the programme of related studies
4. A completed signed version of the DNA should be sent to the Faculty Head of Programme Area (Research Degrees).

TABLE A: ASSESSMENT BY SKILL GROUP (refer to Table B)

Category of skill	Training and Development Activity previously completed	Training and Development Required	Anticipated source of skills development
(A) Research skills and techniques	<p>1: Abilities and skills developed throughout career – particularly PH & Social Marketing work.</p> <p>2: As above</p> <p>3: Strong links with experts, submissions and attendance at key conferences – part of professional network. Need to keep up to date for work.</p> <p>4: As 1 but understand that this needs 'refining'</p> <p>5: As above</p> <p>6: Have produced a number of reports, presentation and papers on findings. Honest and pragmatic approach to progress as have good project/time management skills</p>	More formal research training and development to 'higher' standard	Self study Seminars etc at SHU?
(B) Research environment	<p>1: Strong links with experts, submissions and attendance at key conferences – part of professional network. Need to keep up to date for work.</p> <p>2: Had experience of all and not bad but would benefit from refinement</p> <p>3: Discuss meaning of statement further with tutor</p> <p>4: Knowledge, experience, skills and abilities developed throughout career</p> <p>5: Think so – discuss</p> <p>6: Yes as have already made basic proposals and arguments as to why</p> <p>7: Discuss meaning of statement further with tutor</p>	More formal research training and development (attribution, malpractice, ethics etc) to 'higher' standard	Self study Seminars etc at SHU?
(C) Research management	<p>1: Yes, good project management skills and time management skills – experience throughout career</p> <p>2: Yes – as above</p>	Guidance from supervisors?	

	3: yes but would benefit from further guidance on making the best of the SHU resources available, best use of library etc and any networks to be aware of. 4: As above		
(D) Personal effectiveness	Yes, to all as I have had to for my career and own personal development goals.		
(E) Communication skills	Yes, to all as I have had to for my career and own personal development goals. Would welcome opportunity to build on teaching/training experience	Opportunity to teach/assist with teaching?	
(F) Networking and team-working	Yes, but as with most people need to improve listening skills and not take criticism so personally!		
(G) Career management	Yes to all.		

TABLE B: Joint Skills Statement

Introduction

All universities are required to provide training provision for research degree candidates to develop generic skills as part of a wider Personal Development Planning agenda (PDP). It must be emphasised that these skills may be present on commencement, explicitly taught, or developed during the course of the research. It is expected that different mechanisms will be used to support learning as appropriate, including self-direction, supervisor support and mentoring, departmental support, workshops, conferences, elective training courses, formally assessed courses and informal opportunities. The purpose of this statement is to give a common view of the skills and experience of a typical research student which can provide a clear framework for skills development.

(A) Research Skills and Techniques - to be able to demonstrate:

1. the ability to recognise and validate problems
2. original, independent and critical thinking, and the ability to develop theoretical concepts
3. a knowledge of recent advances within one's field and in related areas
4. an understanding of relevant research methodologies and techniques and their appropriate application within one's research field
5. the ability to critically analyse and evaluate one's findings and those of others
6. an ability to summarise, document, report and reflect on progress

(B) Research Environment - to be able to:

1. show a broad understanding of the context, at the national and international level, in which research takes place
2. demonstrate awareness of issues relating to the rights of other researchers, of research subjects, and of others who may be affected by the research, e.g. confidentiality, ethical issues, attribution, copyright, malpractice, ownership of data and the requirements of the Data Protection Act
3. demonstrate appreciation of standards of good research practice in their institution and/or discipline
4. understand relevant health and safety issues and demonstrate responsible working practices
5. understand the process for funding and evaluation of research
6. justify the principles and experimental techniques used in one's own research
7. understand the process of academic or commercial exploitation of research results

(C) Research Management - to be able to:

1. apply effective project management through the setting of research goals, intermediate milestones and prioritisation of activities
2. design and execute systems for the acquisition and collation of information through the effective use of appropriate resources and equipment
3. identify and access appropriate bibliographical resources, archives, and other sources of relevant information
4. use information technology appropriately for database management, recording and presenting information

(D) Personal Effectiveness - to be able to:

1. demonstrate a willingness and ability to learn and acquire knowledge
2. be creative, innovative and original in one's approach to research
3. demonstrate flexibility and open-mindedness

4. demonstrate self-awareness and the ability to identify own training needs
5. demonstrate self-discipline, motivation, and thoroughness
6. recognise boundaries and draw upon/use sources of support as appropriate
7. show initiative, work independently and be self-reliant

(E) Communication Skills - to be able to:

1. write clearly and in a style appropriate to purpose, e.g. progress reports, published documents, thesis
2. construct coherent arguments and articulate ideas clearly to a range of audiences, formally and informally through a variety of techniques
3. constructively defend research outcomes at seminars and viva examination
4. contribute to promoting the public understanding of one's research field
5. effectively support the learning of others when involved in teaching, mentoring or demonstrating activities

(F) Networking and Teamworking - to be able to:

1. develop and maintain co-operative networks and working relationships with supervisors, colleagues and peers, within the institution and the wider research community
2. understand one's behaviours and impact on others when working in and contributing to the success of formal and informal teams
3. listen, give and receive feedback and respond perceptively to others

(G) Career Management - to be able to:

1. appreciate the need for and show commitment to continued professional development
2. take ownership for and manage one's career progression, set realistic and achievable career goals, and identify and develop ways to improve employability
3. demonstrate an insight into the transferable nature of research skills to other work environments and the range of career opportunities within and outside academia
4. present one's skills, personal attributes and experiences through effective CVs, applications and interviews

Student Name: Amanda Stocks	Signature:
Director of Studies name: Hilary Pierce	Signature:
Faculty: Health and Wellbeing	
Name of Faculty Head of Programme Area (Research Degrees*): <i>See below for guidance</i> Professor REDACTED	Signature:
<p><i>*The names of the Faculty Head of Programme Area (Research Degrees) are as follows:</i></p> <p>ACES – (C3RI) – Dr REDACTED (MERl)– Professor REDACTED</p> <p>Development and Society – Professor REDACTED</p> <p>Health and Wellbeing – Professor REDACTED</p> <p>Sheffield Business School – Professor REDACTED</p>	

APPENDIX 26: Analytical Memo Example

The screenshot displays a software interface with a top toolbar containing icons for Go, Refresh, Open, Properties, Edit, Paste, Copy, Merge, Format, Paragraph, Styles, and Editing. Below the toolbar is a 'Sources' panel on the left, a search bar in the center, and a results pane on the right.

Sources Panel:

- Internals
 - Care staff interviews
 - Commissioner interviews
 - Provider interviews
- Externals
- Memos
- Framework Matrices

Search Bar: Look for [] Search In [] Cold in training Find Now Clear Advanced Find

Results Pane:

Cold in training

Name	Node	Referen
Cold, not really answering th	0	0
Cold in training	0	0
Environment checks as part	0	0
Cold not really being in train	0	0
Gaps in training leading to st	0	0

Selected Item: Cold not really being in training

Cold does not appear to be a subject that people would comment on when discussing previous training or indeed training needs.

This comment indicates that the manager feels it would be difficult to train and accredit for cold as such. It is seen here as continuous learning.

I think this means that cold is seen as latent knowledge, something that is wrapped up in all the things a care staff should become aware of. It isn't trained as a specific subject per se.

This links to the environment aspect of the care certificate. However, cold is not mentioned at all in that.

APPENDIX 27: Mini Pen Portraits of Study Participants

Interview participants – mini pen portraits			
Data number	Pseudonym	Job title	Background
SC001	June	Operational Commissioner Adult Social Services	<p>June is female and in her 40s. She has worked in the public sector in LA for most of her career.</p> <p>June is very experienced and has a senior role responsible for many aspects of the commissioning of adult social care services including: demand management, provider market development, budgets, developing and managing contracts and the provider framework. This also includes acting where there are quality or sustainability concerns. As well as training for providers, she provides and manages a network for domiciliary care providers within the LA area.</p> <p>At the time of the interview, June was concerned about funding and her LA was making staff redundant due to funding cuts. She remained positive and her work with the provider network gave her empathy and understand of their challenges as well as her own.</p>
SC002	Kate	Workforce development manager	<p>Kate is female and in her mid-50s. She has worked in the public sector in LA for most of her career.</p> <p>Kate works within adult social services alongside the commissioners and has responsibility for workforce development within the domiciliary and residential care workforce. In addition, she also covers other aspects of the health workforce as the LA works towards integration of services creating Accountable Care Organisations.</p> <p>Kate's role in workforce development also encompasses potential gaps in the work force and how those roles could be developed and provided including training needs and budgets.</p>

Interview participants – mini pen portraits

Data number	Pseudonym	Job title	Background
SC004	Ruby	Commissioning Manager	<p>Ruby is female and in her early 40s and has worked in the public sector in LA for most of her career.</p> <p>She is a commissioning manager for a LA and has responsibility for older people. This includes predicting and planning for demand, supporting a buoyant and stable market of providers, setting budgets, developing service level agreements and the management of the contracts. This also includes acting where there are quality or sustainability concerns.</p> <p>At the time of the interview Ruby expressed great frustration as she attempted to introduce a new model of commissioning that would provide a more flexible and person-centred service. She was facing challenges with budgets, a range of performance indicators as well as local politics and the impact of several published 'issues' at the LA.</p>
SC005	Anthony	Commissioning Manager	<p>Anthony is male and in his early 50s. He has worked in the public and third sector all his career covering health, mental health and commissioning. Most recently for the NHS and for the LA.</p> <p>Andrew is a senior commissioner covering residential care and domiciliary care for adults. He has a specialist in mental health but covers a wide strategic role within his current post.</p> <p>At the time of the interview he was reviewing how the services could meet wider holistic needs and enable more people to be cared for in their own homes.</p>
SC006	Simon	Chief Executive	<p>Simon is male and in his early 50s. He has worked in the public sector for most of his career.</p> <p>Simon is the Chief Executive for a large urban Council. The Council is part of a region wide partnership looking to reform how health and social care is delivered. In his role and through his chairmanship of boards concerned with the future of social care, he has a deep understanding of the social care sector, the current state of the system and a passion for reform.</p>

Interview participants – mini pen portraits

Data number	Pseudonym	Job title	Background
CP001	Eleanor	Manager	<p>Eleanor is female and in her mid-40's. She has worked in social care for many years starting as a direct care staff.</p> <p>Eleanor is the manager of a local branch (circa 90 care staff) of a very large national care provider. The provider has a national head office and local branches across the UK. She is responsible for the running of the branch including all recruitment, training, management of local contracts with the LA, regulatory issues and compliance. Most of her clients are on LA supported through the LA provider framework.</p> <p>Eleanor is open about the challenges of working within LA frameworks and the sector in general but also describes positively the support gained from being part of a large organisation.</p>
CP002	Mike	Owner	<p>Mark is male and in his late 50s. He has had a varied career in management and no experience in care until this role.</p> <p>Mark and his business partner own a franchise (circa 120 care staff) of a large national organisation providing care through franchises across the UK. The business started small and has grown well over the last few years - they cover LA and some private clients. Mark speaks passionately about the quality of care he hopes to deliver and how he wants to support his staff. He is also open about the challenges that are faced by domiciliary care providers and the social care system.</p>

Interview participants – mini pen portraits

Data number	Pseudonym	Job title	Background
CP003	Geoff	Owner/Manager	<p>Geoff is male and in his late 40's and is experienced in the care sector.</p> <p>Geoff is the Assistant Manager of a small independent care company covering the south of a large city (circa 30/40 care staff). The company supports mainly private clients. He makes the distinction between what he calls an 'agency' and his organisation which he describes as a 'care company' - with allocated staff and times for each client to achieve a more person-centred approach.</p>
CP004	Nadia	Owner/Manger	<p>Nadia is female and in her late 30s. She is a qualified social worker and is experienced in the care sector.</p> <p>Nadia started her own small care company in 2011. She initially worked alone providing care for clients. Since then the organisation has grown (circa 30 care staff) and now employs a couple of admin staff and a team of care staff. Her company supports mainly LA clients. She is proud of what she has achieved but speaks openly about the challenges within the sector and for her self being the owner of a small business.</p>
CP005	Tina	Manager	<p>Tina is female and in her late 50s. She is experienced in the care sector and has worked within health and social care for many years.</p> <p>Tina is the manager of a private care company that has expanded over recent years (circa 90 care staff). As an SME it now provides care for mainly LA clients across two LA areas. Tina has a good relationship with the LA who provide support and training for the providers. She talks about her pride in the level of training she and her staff receive.</p>

Interview participants – mini pen portraits

Data number	Pseudonym	Job title	Background
CP006	Natalie	Owner	<p>Natalie is female and in her mid-40s. She has no previous experience in care and worked in education before she started her own care company less than 5 years ago by buying into a large franchise. She still works in education as well as running her company.</p> <p>Natalie's organisation supports mainly private clients and she has a team of staff to support her including a care supervisor who has both NHS and social care experience (circa 30 care staff).</p> <p>She describes her role as 'strategic' and the 'nominated person'. She feels she is responsible for the running of the business and ensuring the organisation delivers high quality care. She describes her reluctance to enter into the LA provider framework arrangements as she feels the payments would not provide the funding she feels necessary to run her business as she wishes.</p>
CP007	Corrine	Owner	<p>Corrine is female and in her early 40s. She is experienced in the adult social care sector in both management and commissioning.</p> <p>At the time of interview, Corrine had just started her business and catered for only private clients (circa 12 care staff). She spoke passionately about her aim to provide bespoke packages of care that catered for a wide range of client needs above simple 'time and task approaches'. She speaks openly about her misgivings about the care system and how she hopes to deliver a higher quality of care. She also speaks about her commitment to staff development and training.</p>

Interview participants – mini pen portraits

Data number	Pseudonym	Job title	Background
DS001	Elizabeth	Carer	<p>Elizabeth is female and 60 years old. She has worked in care for a number of years and previously worked in education.</p> <p>Elizabeth is a direct care staff for a branch of a very large national provider who support mainly LA clients. She is confident and independent and speaks about how she negotiated her T&Cs to ensure she worked only day shifts and that, wherever possible, she sees the same clients. She discusses that she feels this is unusual for care staff in general.</p>
DS003	Jane	Direct Care Staff	<p>Jane is female and in her early 50s. She is very experienced and has worked in social care for many years in both managerial and front-line roles in both residential and domiciliary care. She has been a carer for 4 years.</p> <p>Jane is a direct care staff for a SME provider covering 2 LA areas and supporting mainly LA clients. She knowledgeably discusses the sector at length and talks about how things have changed within care and within the organisation she works for as it has got bigger.</p>
DS004	Heidi	Care for family under private arrangement	<p>Heidi is female and in her mid-60s. She has no experience in care.</p> <p>Heidi is the sole carer under a private arrangement for elderly parents who are becoming frailer. She describes how she provides daily care and how she helps them navigate the health and social care system. She speaks at length about stoic behaviour and the attitudes and perceptions of her parents.</p>

Interview participants – mini pen portraits

Data number	Pseudonym	Job title	Background
DS005	Tracey	Direct Care Staff	<p>Tracey is in her early 20s and is quite new to the role. She has no previous experience within care and previously worked at a veterinary practice.</p> <p>Tracy is a direct care staff for a franchise supporting mainly private clients. She speaks about her induction training and some additional training for care certificates she has received. She also talks about how nervous she was at first going alone to clients houses and how she now wants to continue training for a career in the care sector.</p>
DS006	Winney	Field Care Supervisor	<p>Winney is female and in her mid 50s. She has experience in the health and care sector and has previously been a state registered nurse at ward sister level.</p> <p>Winney is a field care supervisor for a franchise supporting mainly private clients. Although she does some direct care, Winney is responsible for making sure staff are trained, rotas are planned and for checking the quality of care being delivered. However, she describes the bulk of her work being around the setting up of care packages and care package reviews.</p>
DS007	Zara	Senior Direct Care Staff	<p>Zara is female and in her early 30s. She is experienced in the sector working previously for social services within LA as a support worker.</p> <p>Zara is a senior direct care staff for a small care organisation covering a city region and supporting mainly private clients. She describes her role as '50/50' – some direct care work but also developing care plans, supporting new starters and carrying out spot checks for quality purposes.</p>

Interview participants – mini pen portraits

Data number	Pseudonym	Job title	Background
DS008	Emily	Senior Direct Care Staff	<p>Emily is female and in her late 20s. She has previously worked in care but in residential settings.</p> <p>Emily is new to her role and she is a senior direct care staff for a small care organisation covering a city region and supporting mainly private clients. As she is quite new in the role, Emily still does quite a lot of direct care for clients until she will be experienced enough within the organisation to take on other senior care staff duties.</p>
DS009	Cathy	Direct Care Staff	<p>Cathy is female and in her mid 60's. She has been working in the care sector for 4 years.</p> <p>Cathy is a direct care staff for a franchise of a large national provider supporting mainly LA clients. She works on 'double calls' – where two care staff are required due to clients needing hoists for example. Cathy seems happy in her role despite her hours of work which are in several shifts across the day starting at 7am and ending gone 10pm at night. She speaks fondly of the clients who she says she 'sees more than her own family'.</p>
DS010	Sharon	Direct Care Staff	<p>Sharon is female and is in her mid 30s. She has worked in the care sector for 18 months and had no previous experience as previous background was in hospitality.</p> <p>Sharon is a direct care staff for a franchise of a large national provider supporting mainly LA clients. She notes how the organisation has grown since she has been there and talks about some of the previous challenges around staff turnover and continuation of care. She comments on how the company are working hard and things have improved.</p>

Interview participants – mini pen portraits

Data number	Pseudonym	Job title	Background
DS011	Judy	Self-Employed Direct Care Staff	<p>Judy is female and in her late 50s. She has previous experience in the care sector.</p> <p>Judy became a self-employed direct care staff following redundancy. Previously she had worked providing direct care to clients through a charity who contracted to LA. She has circa 6 clients and provides differing packages of care depending on need.</p> <p>Judy has had extensive training in the past but comments on how there is no training or even DBS checks now she is self-employed.</p>