FULL PROTOCOL TITLE:
EXPERIENCING LOSS AND PLANNING AHEAD STUDY: CARING FOR A RELATIVE OR FRIEND WITH DEMENTIA

ACRONYM: ELPAS

Chief Investigator:
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NCT03332979
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PROTOCOL VERSIONS

Version Stage	Versions No	Version Date	Protocol updated & finalised by;	Appendix No detail the reason(s) for the protocol update
Current	1	2 October 2017	Dr Kirsten Moore (Chief Investigator)	NA

DECLARATIONS

The undersigned confirm that the following protocol has been agreed and accepted and that the investigator agrees to conduct the study in compliance with the approved protocol and will adhere to the Research Governance Framework 2005 (as amended thereafter), the Trust Data & Information policy, Sponsor and other relevant SOPs and applicable Trust policies and legal frameworks.

I (investigator) agree to ensure that the confidential information contained in this document will not be used for any other purposes other than the evaluation or conduct of the clinical investigation without the prior written consent of the Sponsor.

I (investigator) also confirm that an honest accurate and transparent account of the study will be given; and that any deviations from the study as planned in this protocol will be explained and reported accordingly.

Chief Investigator:

Signature:..... Date:

Print Name(in full): Dr Kirsten Moore

Position: Senior Research Fellow

On behalf of the Study Sponsor:

Signature:..... Date...../...../.....

Print Name(in full):.....

Position:.....

STUDY SUMMARY

Identifiers	
IRAS Number	232091
REC Reference No	
Sponsor Reference No	17/0477
Other research reference number(s) (if applicable)	
Full (Scientific) title	Experiencing Loss and Planning Ahead Study (ELPAS): Caring for a relative or friend with dementia.
Health condition(s) or problem(s) studied	Pre-death grief experience by family and friend carers of people with dementia
Study Type i.e. Cohort etc	Cross-sectional cohort study
Target sample size	150
STUDY TIMELINES	
Study Duration/length	2.5 years
Expected Start Date	2/10/2017
End of Study definition and anticipated date	Completion of all interviews, follow-up, data analysis and initial publication draft: 31/3/2020
Key Study milestones	Budget and contract finalised: 15/12/2016 Fellowship commenced: 1/4/2017 Study submission for HRA approval: Approval to commence recruitment: First patient recruited:
FUNDING & Other	
Funding	Alzheimer's Society (Senior Fellowship) Dr Claire De-May

	Claire.De-May@alzheimers.org.uk
Other support	Administrative support provided by the Marie Curie Palliative Care Research Department, Division of Psychiatry, UCL Contact: Yana Kitova 02076799713 y.kitova@ucl.ac.uk
STORAGE of SAMPLES **(if applicable)**	
Human tissue samples	Not applicable
Data collected / Storage	Not applicable
KEY STUDY CONTACTS	Full contact details including phone, email and fax numbers
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KEY ROLES AND RESPONSIBILITIES

SPONSOR: The sponsor is responsible for ensuring before a study begins that arrangements are in place for the research team to access resources and support to deliver the research as proposed and allocate responsibilities for the management, monitoring and reporting of the research. The Sponsor also has to be satisfied there is agreement on appropriate arrangements to record, report and review significant developments as the research proceeds, and approve any modifications to the design.

FUNDER: The funder is the entity that will provide the funds (financial support) for the conduction of the study. Funders are expected to provide assistance to any enquiry, audit or investigation related to the funded work.

CHIEF INVESTIGATOR (CI): The person who takes overall responsibility for the design, conduct and reporting of a study. If the study involves researchers at more than once site, the CI takes on the primary responsibility whether or not he/she is an investigator at any particular site.

The CI role is to complete and to ensure that all relevant regulatory approvals are in place before the study begins. Ensure arrangements are in place for good study conduct, robust monitoring and reporting, including prompt reporting of incidents, this includes putting in place adequate training for study staff to conduct the study as per the protocol and relevant standards.

The Chief Investigator is responsible for submission of annual reports as required. The Chief Investigator will notify the RE of the end of the study, including the reasons for the premature termination. Within one year after the end of study, the Chief Investigator will submit a final report with the results, including any publications/abstracts to the REC.

KEY WORDS

Grief before death, family or friend carer, dementia, preparation for end of life

LIST OF ABBREVIATIONS

AE	Adverse Event
AR	Adverse Reaction
Brief COPE	Brief Coping Orientation to Problems Experienced scale
CI	Chief Investigator
CRF	Case Report Form
CRO	Contract Research Organisation
DMC	Data Monitoring Committee
DUREL	Duke University Religion Index (DUREL)
GAfREC	Governance Arrangement for NHS Research Ethics
HADS	Hospital Anxiety and Depression Scale

HLQ	Health Literacy Questionnaire
IB	Investigator Brochure
ICF	Informed Consent Form
JDR	Join Dementia Research
MCPCRD	Marie Curie Palliative Care Research Department
MMCGI-SF	Marwit-Meuser Caregiver Grief Inventory Short Form
PI	Principle Investigator
PIS	Participant Information Sheet
QA	Quality Assurance
QC	Quality Control
REC	Research Ethics committee
SAR	Serious Adverse Reaction
SAE	Serious Adverse Event
SDV	Source Data Verification
SOP	Standard Operating Procedure
SSI	Site Specific Information
TMF	Trial Master File

CONTENTS

1 INTRODUCTION

The course of dementia over many years, gradual losses and uncertain life expectancy can mean that family carers experience feelings and symptoms of grief before the death of the person for whom they are caring. UK guidelines recommending that carers are offered information about bereavement supports and dementia progression are rarely followed in practice.

This study aims to examine the relationship between carers' feelings of grief before the death of a person with dementia and how well they are prepared for that death. The study involves completing a questionnaire schedule with 150 carers of people with dementia (across all stages of dementia and for people with dementia living at home or in a care home). Twenty of these carers will be purposively selected to complete an additional semi-structured interview to further explore the research questions. The questionnaires will examine whether being prepared for end of life is linked to having lower levels of grief. Preparation will be measured by important factors shown in research including: knowledge of dementia progression; knowledge of the person with dementia's end of life preferences; communication with healthcare professionals; family support; and having a Power of Attorney or advance directive in place. The study is one component of a larger senior fellowship being undertaken by the CI and will inform subsequent development of a resource for supporting carers to help prepare for end of life care and manage grief. The study was informed by the Alzheimer's Society Research Network who will also be involved throughout the study. It will increase understandings of how we can better support grieving carers and help them plan and prepare for end of life care. This is a critical area given that dementia is now the leading cause of death in the UK [1] and family and friend carers are relied on to meet an ever increasing proportion of the support and care needs for their relatives living with dementia in this time of austerity.

2 BACKGROUND AND RATIONALE

Grief is often felt before the death of a friend or relative with dementia. Grief before the death can be triggered by losses associated with dementia causing carers to experience sorrow, anger, yearning and acceptance that can wax and wane from diagnosis to the end of life [2]. It occurs due to the lengthy and uncertain disease trajectory; compromised communication between the person with dementia and family and friends; and changes in relationship quality and carer freedom.[2] Grief before the death can contribute to carer burden and depression.[2] Between 47-71% of family carers of people with dementia experience grief before the death and 20% experience complicated grief after the death.[3] Higher grief prior to death is associated with complicated grief after death [4], so emotional support during care rather than solely after the death may be beneficial.[5]

Preparation for end of life has medical, psychosocial, spiritual and practical components, [6, 7] including having a family member or healthcare professional to help make decisions, knowing what to expect about the terminal condition and having finances in place.[8] Good communication with healthcare providers to discuss prognosis, treatments, cultural, spiritual and practical issues; and dealing with family conflict is critical.[6] Preparation for end of life is associated with a lower likelihood of complicated grief in bereavement [9-11] but has not been explored in the context of grief before the death (Figure 1). Preparation for end of life is influenced by socioeconomic factors associated with health literacy (Figure 1). Low health literacy is more common amongst those from more deprived backgrounds, ethnic minorities, older people and those with chronic health conditions.[12] In the UK a third of older adults have difficulty interpreting basic health information.[13] Despite the potential benefits of end of life discussions with carers, there are many barriers to such discussions.[14, 15] Carers struggle to formalise in writing future wishes on behalf of the person with dementia and professionals tend to be reluctant to initiate end of life discussions.[16] Family conflict can deter end of life decision making.[17] Factors reflecting preparation for end of life are potentially modifiable suggesting that improving preparation could reduce grief before the death.

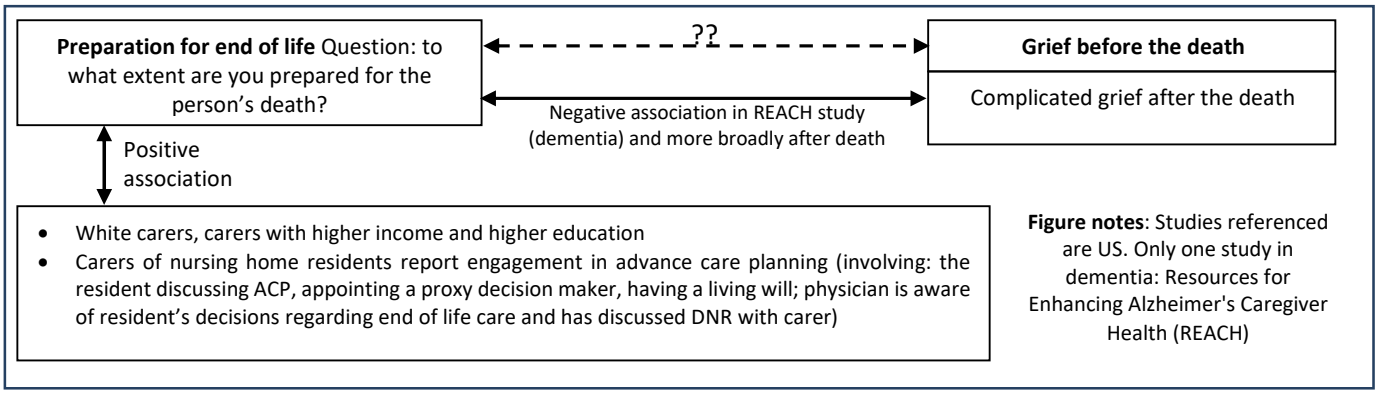


Figure 1: Existing evidence linking preparation for end of life and grief (before and after the death)

This will be the first UK study to assess the prevalence of grief before the death amongst a sample of carers for people with all stages of dementia and living either at home or in a care home. It will be one of few studies to explore whether modifiable factors showing preparation for end of life are associated with lower levels of grief before the death. The modifiable factors reflecting preparation for end of life include:

- carers' having a good knowledge of dementia progression,
- high health literacy,
- a lasting (enduring) Power of Attorney,
- knowing the end of life wishes of the person with dementia and
- being satisfied with support from their social network.

Knowing which modifiable factors reflecting preparation for end of life are most closely associated with grief before the death will inform the development of a resource for carers. If this study is successful in developing the first evidence-based intervention for family carers to reduce grief before the death and improve preparation for end of life, it has the potential to reduce carer distress during the lifetime of the person with dementia, bringing benefits for the person with dementia as well as their carer. It will enable discussions to ensure care at the end of life is planned and in accordance with the person's wishes; and may reduce the prevalence of complicated grief after the death of the person with dementia.

The study builds on the previous research of the CI and the Marie Curie Palliative Care Research Department (MCPCRD), within UCL's Division of Psychiatry where the study will take place. In 2013, the MCPCRD systematically reviewed the prevalence and predictors of grief before and after the death in carers of people with dementia.[3] Our analysis of primary care data found that carers of people with dementia used more psychotropic drugs prior to bereavement than other carers.[18] Mentor Dr Karen Harrison-Dening and supervisor Dr Liz Sampson reviewed evidence on advance care planning (ACP) in dementia and found considerable barriers to implementing ACP in practice. They found that carers' capacity to make best interest decisions about end of life is influenced by religious beliefs, education, guilt and burden.[19] Their qualitative work identified that even in mild stages, people with dementia have difficulty envisaging themselves being more dependent on others.[14] The 3-year Compassion study, led by Dr Jones and Dr Sampson (National Institute for Health Research [NIHR] portfolio ref. CRN-PCRN 12621; 12623) [20], involved a small cohort study of people with advanced dementia and their family carers. We found that 26% of carers reported depression, 41% anxiety and grief before death was high. Carers were offered minimal emotional support before and after their relative's death [21]. We developed the Compassion Intervention to promote integrated palliative

dementia care.[22, 23] This was tested in two care homes where the CI was employed as an Interdisciplinary Care Leader. Few carers were aware of common end of life symptoms.[24] The importance of studying grief and end of life support for carers of people with dementia was strongly endorsed by carers of the Alzheimer's Society Research Network whom the CI consulted in a specially convened focus group. Network members expressed major concerns in the current provision of end of life preparation and information as well as grief support, reinforcing this as a neglected topic requiring more research and development.

3 OBJECTIVES

3.1 Primary Objective

This study aims to examine the relationship between family and friend carers' feelings of grief before the death of a person with dementia and how well carers are prepared for that death.

The hypothesis that will be tested is that modifiable factors indicating preparation for end of life are associated with lower grief before the death in carers of people with dementia.

3.2 Secondary Objectives

- To examine the prevalence and severity of grief before the death in carers of people with dementia (Quantitative interviews)
- To identify which modifiable factors reflecting preparation for end of life are most strongly related to grief before the death (Quantitative interviews)
- To examine the extent to which carers feel prepared for the future and end-of-life care for their relative with dementia (Quantitative and qualitative interviews)
- To explore whether carers recognize grief during caring and what supports they think would be helpful (Quantitative and qualitative interviews)
- To identify unmet needs for information about end of life symptoms and emotional support for carers (Qualitative interviews)
- To explore how carers experience and cope with changes in grief over time (Qualitative interviews)

4 STUDY DESIGN

This is a cross-sectional study using mixed methods. One hundred and fifty carers of people with a diagnosis of dementia will be recruited to take part in the study. They will take part in a quantitative interview with a range of questionnaires. A smaller purposive sample of 20 of these participants will be invited to take part in a qualitative interview as an additional component. The two components will enable exploration or the objectives listed in section 3.2 above. The content and procedures for each interview is described below. Participants will not be paid to participate in this study.

4.1 Quantitative interviews (n=150)

The study will aim to recruit 150 carers over a 15 month period starting in late 2017. The recruitment and consent process is described in detail in Section 6 and the power calculation in Section 7. Carers will provide written, informed consent before completing a face-to-face interview in a location of their choice. Previous experience in research with carers indicates that the majority will wish to be interviewed in their own home or the home of the person with dementia. Researchers will undertake the interview in pairs to begin with but on their own after training is complete. They will adhere to the UCL lone worker policy.

Researchers will ask questions and record answers on the Case Report Form (Appendix 1). The CRF contains demographic questions about the carer and some basic information about the person with dementia (such as dementia severity, type of diagnosis and time since diagnosis).

The Marwit-Meuser Caregiver Grief Inventory Short Form (MMCGI-SF) [25] will be used to assess severity of grief before death. This scale contains three subscales: heartfelt sadness and longing, worry and felt isolation, and personal sacrifice burden; a cutoff of 70/90 is considered a high level of grief.[25] The Clinical Dementia Rating scale will assess dementia severity based on the carer's report [26]. To test the primary hypothesis we will collect a number of measures to reflect the five modifiable factors that suggest preparation for end of life:

1. Greater knowledge of how dementia progresses (Dementia Knowledge Assessment Scale [27])
2. Greater knowledge of the person with dementia's end of life preferences (Discussed wishes regarding end of life with your relative? Have a good understanding of their wishes for end of life care?)
3. Having a lasting Power of Attorney or other formal advance directives in place - a proxy indication of "preparedness" (binary variable; any form of directive in place/not in place)
4. Higher satisfaction with communication with healthcare providers (Health Literacy Questionnaire [HLQ, excluding Social Support subscale] which examines how well carers understand health information and navigate the health system [28]) (See Appendix 2)
5. Higher satisfaction with support for health from social network (HLQ-Social Support subscale.[28])

A number of other measures have been included for other exploratory analysis and to control for possible confounders. These include:

- Townsend Deprivation Index (identified through the participant's postcode)
- Hospital Anxiety and Depression Scale (HADS) [29]
- Relationship Closeness Scale [30] completed to reflect current relationship as well as relationship prior to dementia [31]
- Subscales (denial, self-blame, acceptance, active coping, humour, and substance abuse) from the Brief Coping Orientation to Problems Experienced scale (Brief COPE) [32]
- Religiosity using the Duke University Religion Index (DUREL) [33]
- Questions about the experience of taking part in the study (See justification and questions in Section 'Assessment and Management of Risk' in this protocol).

After agreeing to a date for the interview carers will be sent the Health Literacy Questionnaire (HLQ) [28] and be encouraged to complete this before the face-to-face interview. The purpose of this is to reduce the time required to complete the face-to-face interview so that it is less burdensome for the carer. The questionnaire is suitable for this purpose as it contains neutral questions about communicating with healthcare professionals.

4.2 Qualitative semi-structured interviews (n=20)

A sub-sample of the 150 carers will be invited to participate in an additional set of semi-structured open-ended questions to enable more in-depth exploration of some of the secondary objectives as outlined in section 3.2 above. The interview will explore the dynamic and changing nature of grief over time, how carers identify with the concept of grief and whether they consider they are going through a grief experience. It will also examine what supports they have found helpful and what they perceive to be unmet information and support needs and possibly programs/resources that might address these needs. The interview guide (Appendix 3) provides a list of questions that will be used as a guide for a fluid conversation that will pick up on areas considered relevant by the participant. Qualitative interviews will be audio-recorded with permission from the participant on an encrypted digital recorder and then transcribed verbatim by the research team.

Participants will be purposively selected to provide a mix of responses representing male and female participants, adult child and spouse participants, different ethnicity as well as carers of people at

different severity of dementia. Participants who agree to participate in the quantitative interviews will also be asked to participate in the qualitative interview after completing the quantitative interview. If the sample is not representing a mix of carers based on the above categories, we will reduce invitations to those who are not represented in the sample. We will aim to interview carers until saturation of data is reached. We envisage this will be between 15-20 carers. Once we have achieved saturation we will cease inviting carers to take part in this component of the study. Carers will have the choice of completing this interview on the same day or another day if they are feeling tired.

5 ELIGIBILITY CRITERIA

5.1 Inclusion Criteria

Carers of people with dementia providing practical, social, emotional or supervisory support to a friend or family member. This will include carers of people with dementia living at home or in a care home. Carers will be 18 years of age or over and living in England. The person they care for will have received a formal diagnosis of any dementia related disease.

5.2 Exclusion Criteria

Carers who are not able to communicate in English or who do not have capacity to provide informed written consent.

6 RECRUITMENT

6.1 Identifying potential participants

Participants will be identified and approached for consent from multiple sources as described below.

6.1.1 Join Dementia Research

The study will recruit participants through the Join Dementia Research (JDR) website. The study is eligible to be included on the NIHR CRN portfolio as the funder (Alzheimer's Society) is an NIHR non-commercial partner. All studies on the NIHR CRN portfolio are eligible for inclusion on the JDR website to recruit participants.

JDR is an on-line self-registration service that enables volunteers with memory problems or dementia, carers of those with memory problems or dementia and healthy volunteers to register their interest in taking part in research, giving their permission for researchers to contact them about relevant studies. The purpose of JDR is to allow such volunteers to be identified by researchers as potentially eligible for their studies. Researchers can then contact volunteers, in line with the volunteers preferred method of contact, to further discuss potential inclusion.

JDR is funded by Department of Health working in partnership with the charities Alzheimer's Society and Alzheimer's Research UK and is Health Research Authority (HRA) endorsed. The on-line service and all associated documentation, methods of contacting volunteers and handling their data, were reviewed by a specially convened HRA committee which included experts in research ethics, data protection and information governance. Further information on JDR is available here:

http://www.crn.nihr.ac.uk/dementia/about-dementia-research/join-dementia-research/

The JDR will register the study and enter in the eligibility requirements including being a carer of someone with dementia and being over the age of 18 living within a specific distance of 3 postcodes (one each in London and North and South England; distances and postcodes can be extended during recruitment according to recruitment progress). Once full ethical approval is granted, the study will become live on the JDR website. When live, the research team members who have been registered to access the study (CI and research assistant) will receive a list of potentially eligible carers. Carers who express a specific interest in this study will be flagged on the system and will be a priority for contacting

by the research team with a requirement to contact them within five days of expressing interest. Potentially eligible carers will be contacted to see whether they would like to be involved in the study and if so, will be sent the PIS. After 3 days we will telephone them to ask if they have read the PIS and are happy to be involved. If they are, a time and date will be arranged for the quantitative interview.

We will record the number of matched volunteers. We will also maintain a log of those we invite to participate but who do not agree to be involved. The log will include the carer's gender, age category (18-39; 40-49, 50-59, 60-69, 70-79 and 80+) and relationship to person with dementia (spouse; adult child; other relative; other friend). This information will not identify the carer but will enable the research team to compare responders and non-responders and to calculate a response rate.

6.1.2 NHS services

NHS services will assist with recruitment as and will include those providing memory assessment services/memory clinics, Community Mental Health Teams, Admiral Nurses (attached to NHS services), GP clinics and other dementia support programmes. Administrative staff or clinicians at NHS sites will identify carers potentially eligible for the study from databases they have routine access to. The research team will not have any access to the service's databases. These databases will only be accessed by clinicians/administrators who have routine access to these databases through their usual employment. Recruiting services will mail by post or email an expression of interest letter (See Appendix 4) to carers. The letter provides brief information about what the study is examining and what participating in the study involves. GP clinics will display flyers promoting the study (Appendix 5). Carers who are interested in learning more about the study can either telephone or email the research team directly using contact details in the letter, or will be able to return a reply slip with a pre-paid envelope with their name and phone number for the research team to call them back. If agreed by the NHS service, a staff member from the service will invite (face-to-face or by telephone) carers to participate. If the carer is interested the NHS staff member will ask them if they agree for their contact details to be forwarded to the researcher or if they would prefer to contact the researcher directly.

NHS services will record a log of people who are sent the expression of interest letter. The log will record the same un-identifiable data as reported above in Section 6.1.1 (gender, age category and relationship).

The following NHS services have agreed to support recruitment:

- Barnet, Enfield & Haringey Mental Health NHS Trust
- Camden and Islington NHS Foundation Trust

The Dementia Research Review Board of the Sussex Partnership NHS Foundation Trust will review the research study at their next board meeting on the 12/10/2017 before they will confirm provisional support for the study.

6.1.3 Non-NHS services

Other non-NHS services including care homes, Admiral nursing services that are not attached to NHS services and branches of the Alzheimer's Society will also be invited to assist with recruitment. Recruitment through these services will be undertaken using the same approach as that used with NHS services. In addition, researchers may attend carer education/support groups to discuss the study and identify any interested carers or may promote the study via their newsletters.

6.1.4 Monitoring recruitment

After 50 carers have been recruited to the study we will undertake summary statistics to assess the mix of carers in terms of dementia severity, gender, relationship and mix of deprivation.

6.2 Obtaining consent

Telephone or email contact with the research team will enable carers to be screened for eligibility and to provide more details about the study and answer carers' questions. The research team will maintain a log of calls for those who do not proceed to an interview. This log will not record any identifiable information but will record reasons why the person was not eligible or did not want to participate, along with the date of the call and where they had been informed about the study.

If the carer is eligible and interested in being involved they will be sent a copy of the PIS (Appendix 6). After 3 days we will telephone them to ask if they have read the PIS and are still happy to be involved. If they are, a time and date will be arranged for the quantitative interview. Interviews will be conducted in a location suitable for the carer – either in their own home, at a meeting room on the 6th Floor, Maple House, 149 Tottenham Court Road, London W1T 7NF or another location of their choice (provided it is suitable for a private, quiet conversation). Researchers will follow the UCL lone worker policy. Once a date has been agreed, carers will be sent a letter confirming the interview details (See Appendix 7) and asking they complete the enclosed Health Literacy Questionnaire (HLQ, Appendix 2). They will be able to complete the HLQ before the interview if they wish to reduce the number of questionnaires that will need to be undertaken on the day of the interview.

A sub-sample of carers (see selection criteria in Section 4.2) will be asked whether they would also like to take part in the additional qualitative semi-structured interview. We will endeavour to complete both the quantitative and qualitative interviews on the same day but will give carers the option of splitting it over two days if they want a break. The PIS indicates that only 20 carers will be invited for this additional component. Carers will be given this option at the end of the quantitative interview based on the purposive sampling strategy described in Section 4.2. They will either be able to continue on with the second interview or an alternative interview date will be arranged.

On the day of the quantitative interview, the researcher will go through the details on the PIS and check that the carer understands all parts of the PIS. The carer will be given an opportunity to ask any questions and be reminded that they can withdraw participation at any time. If they are still happy to participate they will be asked to complete and sign two copies of the consent form (Appendix 8) before commencing the interview(s). The researcher undertaking the interview will also sign both copies of the consent form. One copy along with the PIS will be left with the participant and the researcher will take the other copy of the consent form. The consent form also includes a question to consent to the research team contacting them within the next 2 years to be asked whether they are interested in participating in any extensions of this study or related research studies. In particular, the final work stream of the study will involve developing a resource for carers. Carers recruited for the interviews will be invited to support developing or testing this resource. Participation in this final work stream will involve signing a separate consent form with a study amendment or new ethics approval process.

6.3 Withdrawing from the study

During the consent process it will be explained to participants that they are free to withdraw at any stage. As the initial interview is conducted on the same day as consent is provided, it is unlikely that participants will want to withdraw from the study on the same day. If they find the interview difficult or long, however, they may wish to cease the interview. Data collected to this point will be included in the analysis (if sufficient to warrant inclusion) as long as the participant agrees.

6.4 What happens if a participant loses capacity after consenting?

As consent will take place on the same day as the interview it is unlikely that they could lose capacity within the same day. If they agree to take part in the second interview on a date in the future we will briefly review the Participant Information Sheet before completing the second interview to check that they still understand what participating involves and still have capacity to take part.

7 DATA ANALYSIS

7.1 Statistical Analysis

The statistical analysis will be overseen by the project statistician (Victoria Vickerstaff). Multivariable regression analysis will be used to enable us to explore the impact of a range of modifiable factors reflecting preparation for end of life on the MMCGI-SF, our main outcome. This type of analysis also allows us to control for potential confounding variables. The analysis will use the MMCGI-SF as the dependent variable with five predictor variables: knowledge of how dementia progresses; knowledge of the person with dementia's end of life preferences; having a lasting Power of Attorney or other formal advance directive in place; satisfaction with communication with healthcare providers; and satisfaction with support for health from your social network (detailed in Section 4.1).

The latter two items are extracted from the Health Literacy Questionnaire [28]. Health literacy is likely to be related to deprivation, which we will measure using the Townsend Deprivation Index. We will first examine whether there is collinearity between the health literacy and deprivation variables. If they are not related we will add deprivation as a covariate. Other potential confounding variables will be included in the analysis:

- Relationship type: being a spouse/partner, a child or another relationship (categorical variable; i.e. 2 covariates)
- Gender (binary measure)
- Care home status: living at home or in a care home (binary measure)
- Religiosity (continuous measure)

In total there are 10 potential covariates to be included in the model. A sample of 15 participants per covariate is preferable while ten may be sufficient.[34]. We will aim to recruit 150 participants for an adequately powered analysis.

7.2 Qualitative Analysis

We will aim to interview carers until saturation of data is reached. We envisage this will be between 15-20 carers. Once we have achieved saturation we will cease inviting carers to take part in this component of the study. In qualitative studies robust data needs to be in-depth and a key method of assessing data quality is whether saturation is reached, where no new themes are being identified. A sample of 15-20 participants is likely to be adequate for data saturation and to provide a range of diverse views from carers representing a mix of gender, relationship and dementia severity (as described in Section 4.2).

Qualitative interviews will be audio-recorded on an encrypted digital recorder and then transcribed verbatim by the research team. Transcripts will be entered into NVivo qualitative software package (QSR International) to support data coding. This data will be thematically analysed [35, 36] by coding chunks of text and grouping these codes into themes and sub-themes that address the study objectives. Two researchers will independently code and analyse each interview independently and then compare codes and themes to ensure rigour in analysis. Discrepancies will be discussed until consensus on themes is reached. Interviews will be coded as collected to enable subsequent interviews to draw on and explore themes arising. While we aim to recruit carers from a mix of categories (gender, relationship type and dementia severity) we will not be able to make comparisons between groups because of the small numbers representing each group (eg there may be only one male son caring for someone with mild dementia). The themes identified will help to draw out individual experiences in relation to carer grief and access to supports to supplement and expand the quantitative data.

8 PATIENT AND PUBLIC INVOLVEMENT (PPI)

This study is one component of a fellowship study focusing on grief amongst family and friends caring for someone with dementia and the relationship between preparation for end of life and grief before death in dementia care. The full study has been reviewed by the Alzheimer's Society Research Network, which consists of people with dementia and family and friend carers. Seven Network members participated in a focus group to provide feedback on the study and expressed passionate views about the lack of information about dementia progression and end of life care and also the lack of service response to their grief throughout the trajectory of dementia. Written ratings were received from another 45 Network members in which two thirds rated the study between 1-4 on a priority rating from 1=highest priority to 10=lowest priority. Many provided positive feedback such as

> *"One effect on carers of people with dementia has often been described as a living bereavement, if this project can help to improve the type and level of appropriate support to carers then it will be very welcome."*
>
> *"Important. There is a general reluctance to look ahead after a diagnosis of dementia, and the progression of the disease is not always explained clearly to carers."*
>
> *"From my personal experience as a carer of a relative with dementia I suffered a more intense level of grief coming to terms with the fact that the person I cared for was not the person I knew and loved. It was at this point that my relative died to me, their actual death was a relief to me that their suffering had ended. This loss referred to as 'grief before death' is very real indeed and from personal experience there was little to no support apart from family members, to help me cope with my relative who no longer was the person I knew and loved."*

Carers are also involved as monitors of the study and involved in the project Steering Group and an Expert by Experience Group reviewing all aspects of the study, reviewing analyses and providing suggestions for dissemination. Refer to the 'Monitoring and Auditing' Section of this document for the research governance structure for this study which incorporates input from carers.

9 FUNDING AND SUPPLY OF EQUIPMENT

The study funding has been reviewed by the UCL/UCLH Research Office, and deemed sufficient to cover the requirements of the study. The research costs for the study have been supported by an Alzheimer's Society Senior Research Fellowship, Grant Reference number 325 (AS-SF-16-004), Funding: £300,662 (1/4/2017-31/3/2020). The funding covers costs of a computer for the CI, a computer for the Research Assistant and an encrypted digital recorder for the study all located at UCL. Contracting costs for Dementia UK to support recruitment of carers and Admiral Nurses are also included in the budget. Admiral Nurses will be recruited for another element of this study which will have a separate protocol and ethics application. Mail out and postage costs incurred by services distributing expression of interest letters have been included in the grant budget.

10 DATA HANDLING AND MANAGEMENT

Questionnaires will be collected on a paper based Case Report Form (CRF) (See Appendix 1 [CRF] and Appendix 2 [HLQ]). The HLQ may be self-completed by the carer prior to the face-to-face interview and collected by the researcher at the time of the interview. The CRF will be completed at the interview by the researchers at a location selected by the participants (most likely in their own homes). The CRF and HLQ will be returned by the researcher to UCL and locked in a filing cabinet in the secure UCL offices.

The subsample of 20 carers taking part in the semi-structured interviews will be asked to provide consent for audio-recording the interview using an encrypted digital recorder. The encrypted recorder requires a 4 digit PIN to be entered to turn it on. Listening to any recordings also requires entering another password. If participants consent to be audio recorded the researcher will download the audio-recording to a secure University College London (UCL) computer as soon as feasible after completing the interview. Once downloaded it will be deleted from the digital recorder. If they do not consent to be audio-recorded, the researcher will take written notes from the interview. Audio-recordings and written notes will be transcribed verbatim by the research team and saved on secure UCL computers.

All paper documents (HLQ, CRF, and semi-structured interview notes) for the study will be stored in accordance with the Declaration of Helsinki. All the information will be kept strictly confidential and held in accordance with the principles of the Data Protection Act (1998). Each participant will be assigned a research number and all data will be stored without subject name or address or date of birth. Data will be held on a secure database on a password-protected computer in the Marie Curie Palliative Care Research Department, Division of Psychiatry, 6th Floor Maple House, 149 Tottenham Court Road, UCL. Access to data will be restricted to appropriate members of the research team.

As per the research governance framework overseeing the study (See diagram in the 'Monitoring and Auditing' section), the Data monitoring and research ethics team will review and oversee all data collection and monitoring procedures.

11 PEER AND REGULATORY REVIEW

The study has been peer reviewed in accordance with the requirements outlined by UCL. The study was presented at workshops and seminars within UCL and received feedback from attendees. The CI received input into the design from Dr Louise Jones, previous head of the MCPCRD, the MCPCRD statistician and Professor Michael King, joint director of the Priment Clinical Trials Unit and joint lead on the UCL arm of the London Research Design Service. After this input the study was successfully awarded funding by the Alzheimer's Society in an open competitive grant scheme.

The Sponsor considers the procedure for obtaining funding from Alzheimer's Society to be of sufficient rigour and independence to be considered an adequate peer review.

12 ASSESMENT AND MANAGEMENT OF RISK

12.1 Assessment and management of risk to participants

The interview covers topics about future planning and plans for end of life care as well as loss and grief during caring for someone with dementia. These are sensitive topics that may arouse an emotional response from participants. We have developed a procedure to minimise and respond to any participant who becomes distressed. The procedure draws on the framework for ethical-decision making that has been developed in the UK for research with bereaved family and carers [37] and which are mostly applicable to this study.

Prior to the interview, participants will be informed that the interview may be emotional and tiring and to think about and agree on avenues of post-interview support. Prior to the interview, participants will also be asked to make the interviewer aware if they want to pause the recording. This will also be offered to carers who appear upset or appear to be tiring during the interview. They will be offered a break, to postpone the interview or to withdraw their participation. At the end of the interview carers will receive information on local carer support agencies and if they are experiencing distress will be advised to contact their GP or Alzheimer's Society National Dementia Helpline. We will facilitate this

process if necessary. We have also included three questions from the above mentioned framework at the end of the CRF [37]:

- Do you feel you could cope with the length of the interview?
- Did you find talking in the interview helpful?
- Did you feel the interview caused you distress?

These questions will enable us to monitor the impact of the study. Sque et al [37] in their sample of bereaved carers (n=31) found that 90% could easily cope with the length of the interview, most found it very helpful (81%) or a little helpful (16%) and 58% found it a little distressing with only 3% reporting it caused a lot of distress. We will revise the protocol if we are finding that this study is causing greater distress and burden and is unhelpful. We will call participants two days later to check whether thinking about the interview has raised any concerns or questions for them.

In our extensive experience of undertaking interviews with carers of people with dementia and addressing topics such as grief, loss and end of life care, we find that interviews can provide a cathartic experience for carers, providing them an opportunity to talk about their thoughts and feelings to in impartial researcher who is disconnected to their personal social network. Death and end of life care are topics that tend to be avoided in society and yet impact all of us. Providing an avenue to talk about some of these issues can be welcomed by participants who have not had an opportunity to express these thoughts before. Family carers may be motivated to participate to educate others about their experiences of care to help improve services and to be able to talk about issues they haven't previously had an opportunity to discuss. The benefits of learning about the process of grief and how we can improve supports to carers is an important area of research with the growing number of people living with dementia and as dementia is now the largest cause of death in the UK [1].

12.2 Assessment and management of risk to research staff

Research staff undertaking interviews within participants' homes also face potential risks. Research staff will follow the following procedures to try to identify, minimise and manage risks following the UCL's lone worker policy.

13 RECORDING AND REPORTING OF EVENTS AND INCIDENTS

13.1 Definitions of Adverse Events

This is an observational study, there are no interventions, and we do not anticipate any adverse events associated with this project. We will however, use the standard definitions of adverse events as supplied by the UCL JRO.

Term	Definition
Adverse Event (AE)	Any untoward medical occurrence in a patient or study participant, which does not necessarily have a causal relationship with the procedure involved.
Serious Adverse Event (SAE).	Any adverse event that: • results in death, • is life-threatening*, • requires hospitalisation or prolongation of existing hospitalisation**, • results in persistent or significant disability or incapacity, or • consists of a congenital anomaly or birth defect

*A life- threatening event, this refers to an event in which the participant was at risk of death at the time of the event; it does not refer to an event which hypothetically might have caused death if it were more severe.
** Hospitalisation is defined as an in-patient admission, regardless of length of stay. Hospitalisation for pre-existing conditions, including elective procedures do not constitute an SAE.

13.2 Assessments of Adverse Events

In the unlikely event that this occurs, each adverse event will be assessed for severity, causality, seriousness and expectedness as described below.

13.3 Severity

Category	Definition
Mild	The adverse event does not interfere with the participant's daily routine, and does not require further procedure; it causes slight discomfort
Moderate	The adverse event interferes with some aspects of the participant's routine, or requires further procedure, but is not damaging to health; it causes moderate discomfort
Severe	The adverse event results in alteration, discomfort or disability which is clearly damaging to health

13.4 Causality

The assessment of relationship of adverse events to the procedure is a clinical decision based on all available information at the time of the completion of the case report form. As above we do not anticipate any adverse events will arise from this project.

However, if necessary the following categories will be used after review by the CI to define the causality of the adverse event:

Category	Definition
Definitely:	There is clear evidence to suggest a causal relationship, and other possible contributing factors can be ruled out.
Probably:	There is evidence to suggest a causal relationship, and the influence of other factors is unlikely
Possibly	There is some evidence to suggest a causal relationship (e.g. the event occurred within a reasonable time after administration of the study procedure). However, the influence of other factors may have contributed to the event (e.g. the participant's clinical condition, other concomitant events).
Unlikely	There is little evidence to suggest there is a causal relationship (e.g. the event did not occur within a reasonable time after administration of the study procedure).

	There is another reasonable explanation for the event (e.g. the participant's clinical condition).
Not related	There is no evidence of any causal relationship.
Not Assessable	Unable to assess on information available.

13.5 Expectedness

Category	Definition
Expected	An adverse event which is consistent with the information provided in the Participant Information Sheet **or clearly defined in this protocol.**
Unexpected	An adverse event which is not consistent with the information provided in the Participant Information Sheet **or clearly defined in this protocol.**

13.6 Recording adverse events

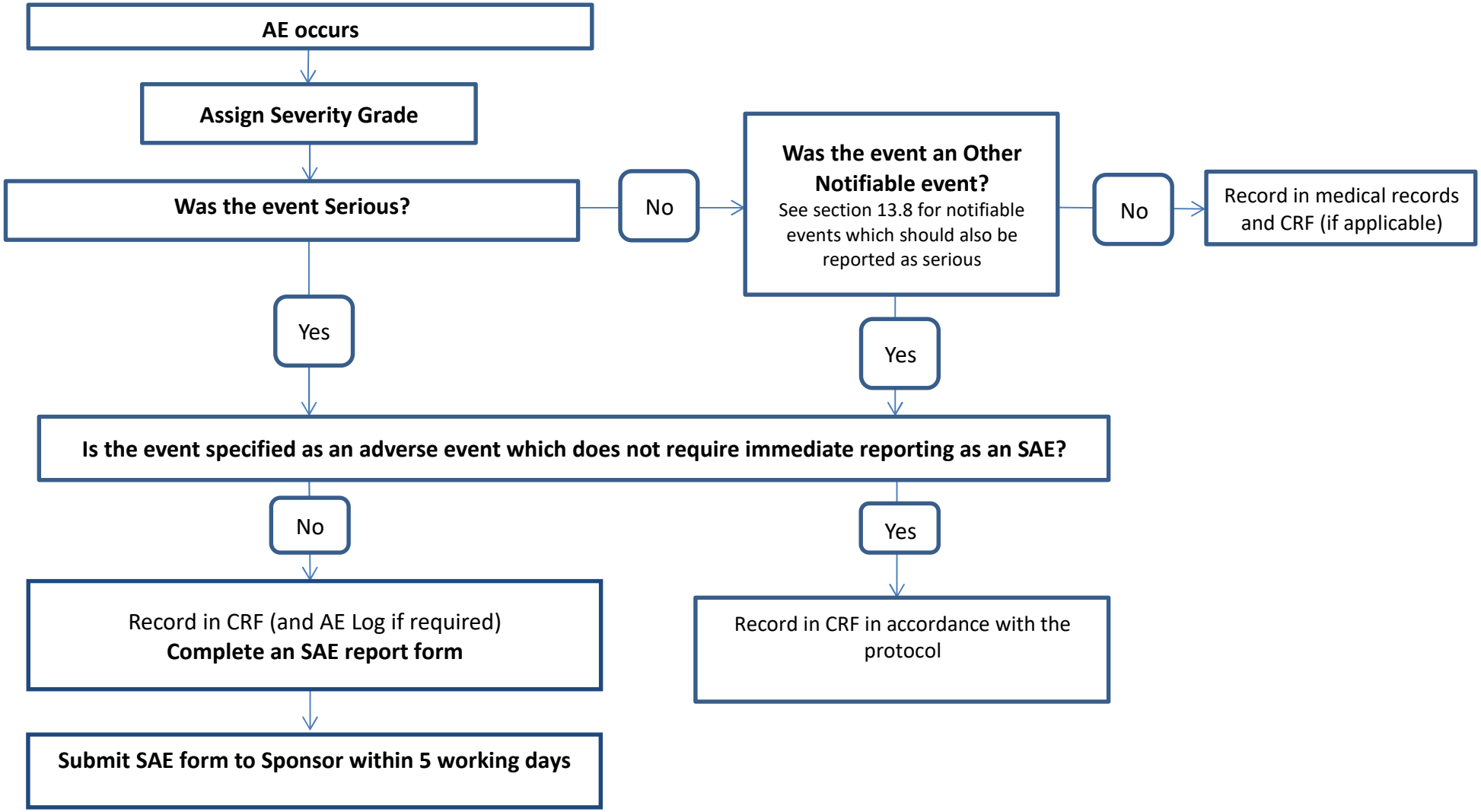
In the unlikely occurrence of an adverse events this will be will be recorded in the CRF.

13.7 Procedures for recording and reporting Serious Adverse Events

All serious adverse events will be reported to the CI and recorded in the CRF, and the sponsor's AE log.

All SAEs (except those specified in section 16.5 as not requiring reporting to the Sponsor) must be recorded on a serious adverse event (SAE) form. The CI will complete an SAE form and the form will be emailed to Research-incidents@ucl.ac.uk within 5 working days of becoming aware of the event. The CI will respond to any SAE queries raised by the sponsor as soon as possible. Where the event is unexpected and thought to be related to the procedure this must be reported by the Investigator to the Health Research Authority within 15 days.

Flow Chart for SAE reporting



13.8 Protocol deviations and notification of protocol violations

A deviation is usually an unintended departure from the expected conduct of the study protocol/SOPs, which does not need to be reported to the sponsor. The CI will monitor protocol deviations.

A protocol violation is a breach which is likely to effect to a significant degree –

(a) the safety or physical or mental integrity of the participants of the study; or
(b) the scientific value of the study.

The CI and sponsor will be notified immediately of any case where the above definition applies during the study conduct phase.

13.9 Trust incidents and near misses

An incident or near miss is any unintended or unexpected event that could have or did lead to harm, loss or damage that contains one or more of the following components:

a) It is an accident or other incident which results in injury or ill health.
b) It is contrary to specified or expected standard of patient care or service.
c) It places patients, staff members, visitors, contractors or members of the public at unnecessary risk.
d) It puts the Trust in an adverse position with potential loss of reputation.
e) It puts Trust property or assets in an adverse position or at risk.

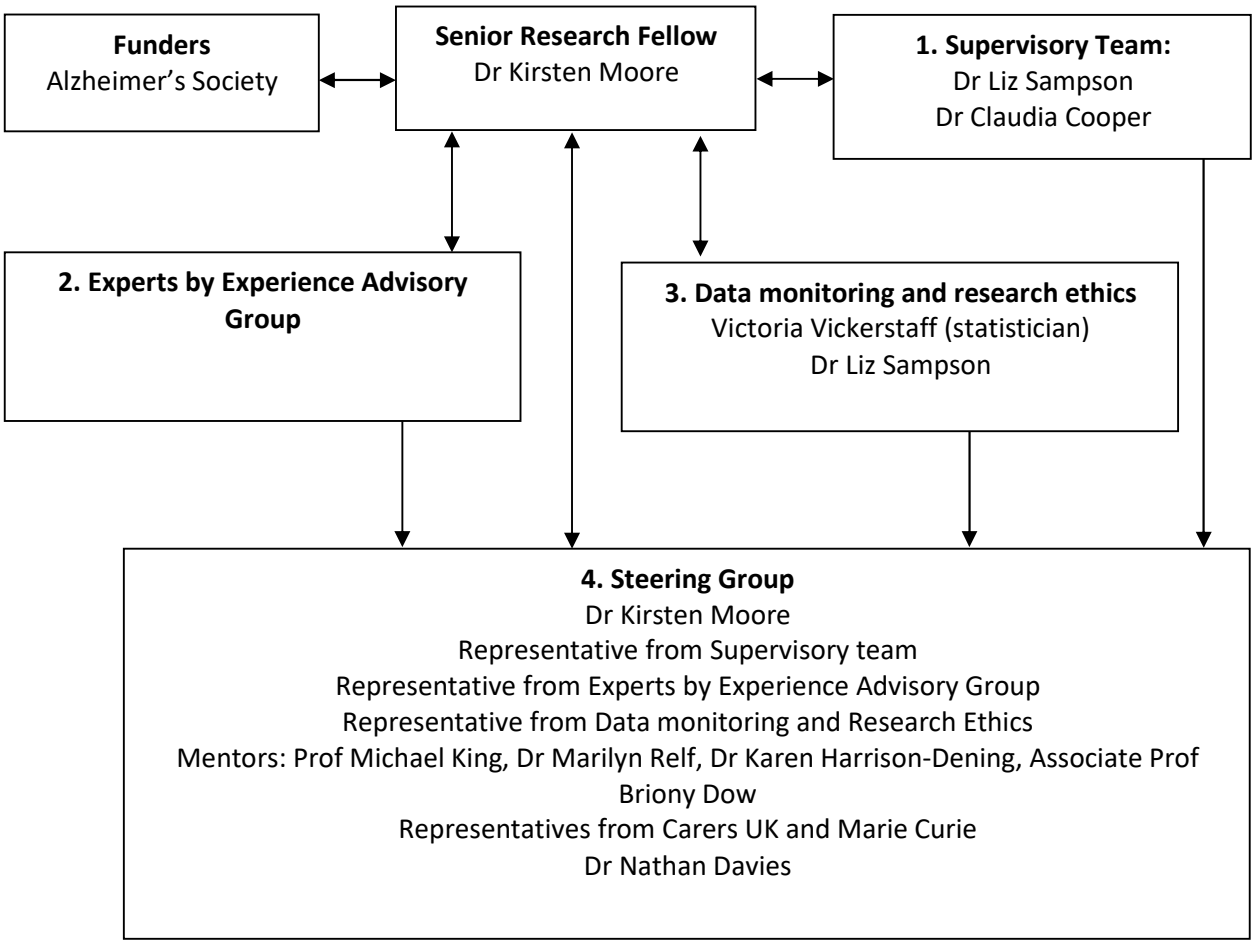
Incidents and near misses must be reported to the Trust through DATIX as soon as the individual becomes aware of them.

A reportable incident is any unintended or unexpected event that could have or did lead to harm, loss or damage that contains one or more of the following components:

a) It is an accident or other incident which results in injury or ill health.
b) It is contrary to specified or expected standard of patient care or service.
c) It places patients, staff members, visitors, contractors or members of the public at unnecessary risk.
d) It puts the Trust in an adverse position with potential loss of reputation.
e) It puts Trust property or assets in an adverse position or at risk of loss or damage.

14 MONITORING AND AUDITING

The CI will ensure there are adequate quality and number of monitoring activities conducted by the study team. This will include adherence to the protocol, procedures for consenting and ensure adequate data quality. The CI will inform the sponsor should she have concerns which have arisen from monitoring activities, and/or if there are problems with oversight/monitoring procedures. The study Governance Framework provides a clear framework for governance of the study including a data monitoring and research ethics group as shown in the governance structure below.



15 TRAINING

The CI will review and provide assurances of the training and experience of all staff working on this study. Appropriate training records will be maintained in the study files. The CI will complete UCL core training requirements supervising staff as well as statistical courses on regression and statistics for health research (statistics will also be overseen by the study's statistician Victoria Vickerstaff). Other compulsory training for researchers involved in the study will include Good Clinical Practice and SLMS Information Governance annual training.

Interviews will be undertaken by the CI and the Research Assistant who will be employed. The CI has a psychology and social science background and extensive research experience in undertaking interviews with carers of people with dementia across all stages of dementia progression. The Research Assistant will be employed at a level 6B and will have research experience and a degree relevant to mental health and dementia care. The Research Assistant will be provided with training

from the CI to conduct the interviews. The Research Assistant will observe the CI complete 1-2 interviews. When they feel confident to complete the interview they will complete the interview under observation from the CI. It is envisaged that they will be observed for 2-3 interviews until they feel confident and the CI feels they have achieved the level of competency required for completing the interviews. This training process will also involve debriefing sessions and reflection on the topic and nature of the interviews. After the initial training period, the research assistant will also have regular debriefing sessions with the CI as well as any additional sessions if the research assistant feels they need it. They will ring or meet with the CI directly after any interviews they have found distressing.

Additional clinical support to the CI and Research Assistant will be provided by the fellowship supervisor Dr Liz Sampson and co-supervisor Dr Claudia Cooper, both experienced, internationally renowned dementia and end of life care researchers and Old Age Psychiatrists.

16 INTELLECTUAL PROPERTY

We do not anticipate that this study will generate any intellectual property.

17 INDEMNITY ARRANGEMENTS

University College London holds insurance against claims from participants for harm caused by their participation in this clinical study. Participants may be able to claim compensation if they can prove that UCL has been negligent.

18 ARCHIVING

UCL and each participating site recognise that there is an obligation to archive study-related documents at the end of the study (as such end is defined within this protocol). The CI confirms that she will archive the study master file at UCL for the period stipulated in the protocol and in line with all relevant legal and statutory requirements.

19 PUBLICATION AND DISSEMINATION POLICY

We will disseminate findings via academic journals, conferences, to research participants and via social media and relevant websites (e.g. Alzheimer's Society, National Council for Palliative Care, Marie Curie, Cruse Bereavement Care and carer support agencies). Admiral Nurses on the research team will help dissemination of the resource into their practice. The project's steering group will provide further guidance on dissemination. A half day forum will be held at the end of the study to promote the study findings to members of the Steering Group, study participants and interested stakeholders. Study participants and recruiting agencies will also receive a lay summary of the key findings. A publication plan has been developed that defines authorship and an outline for planned publications arising from the fellowship.

20 REFERENCES

1. Office for National Statistics. Deaths Registered in England and Wales, 2013. In: *Series DR*. 2014.
2. Lindauer A, Harvath TA. Pre-death grief in the context of dementia caregiving: a concept analysis. *J Adv Nurs* 2014, 70(10):2196-2207.

3. Chan D, Livingston G, Jones L, Sampson EL. Grief reactions in dementia carers: a systematic review. *Int J Geriatr Psychiatry* 2013, 28(1):1-17.
4. Romero MM, Ott CH, Kelber ST. Predictors of grief in bereaved family caregivers of person's with Alzheimer's disease: a prospective study. *Death Stud* 2014, 38(6-10):395-403.
5. Schulz R, Mendelsohn AB, Haley WE, Mahoney D, Allen RS, Zhang S *et al*. End-of-life care and the effects of bereavement on family caregivers of persons with dementia. *The New England journal of medicine* 2003, 349(20):1936-1942.
6. Hebert RS, Prigerson HG, Schulz R, Arnold RM. Preparing caregivers for the death of a loved one: a theoretical framework and suggestions for future research. *Journal of palliative medicine* 2006, 9(5):1164-1171.
7. Hebert RS, Schulz R, Copeland V, Arnold RM. What questions do family caregivers want to discuss with health care providers in order to prepare for the death of a loved one? An ethnographic study of caregivers of patients at end of life. *Journal of palliative medicine* 2008, 11(3):476-483.
8. Steinhauser KE, Christakis NA, Clipp EC, McNeilly M, Grambow S, Parker J *et al*. Preparing for the end of life: preferences of patients, families, physicians, and other care providers. *J Pain Symptom Manage* 2001, 22(3):727-737.
9. Barry LC, Kasl SV, Prigerson HG. Psychiatric disorders among bereaved persons: the role of perceived circumstances of death and preparedness for death. *Am J Geriatr Psychiatry* 2002, 10(4):447-457.
10. Hebert RS, Dang Q, Schulz R. Preparedness for the death of a loved one and mental health in bereaved caregivers of patients with dementia: findings from the REACH study. *Journal of palliative medicine* 2006, 9(3):683-693.
11. Schulz R, Boerner K, Klinger J, Rosen J. Preparedness for death and adjustment to bereavement among caregivers of recently placed nursing home residents. *Journal of palliative medicine* 2015, 18(2):127-133.
12. Coulter A, Jo E. Patient-focused interventions: A review of the evidence. In.: Picker Institute Europe,; 2006.
13. Bostock S, Steptoe A. Association between low functional health literacy and mortality in older adults: longitudinal cohort study. *BMJ (Clinical research ed)* 2012, 344:e1602.
14. Harrison Dening K, Jones L, Sampson EL. Preferences for end-of-life care: a nominal group study of people with dementia and their family carers. *Palliative medicine* 2013, 27(5):409-417.
15. Hirschman KB, Kapo JM, Karlawish JH. Identifying the factors that facilitate or hinder advance planning by persons with dementia. *Alzheimer Dis Assoc Disord* 2008, 22(3):293-298.
16. Almack K, Cox K, Moghaddam N, Pollock K, Seymour J. After you: conversations between patients and healthcare professionals in planning for end of life care. *BMC palliative care* 2012, 11:15.
17. Sampson EL, Jones L, Thune-Boyle IC, Kukkastenvehmas R, King M, Leurent B *et al*. Palliative assessment and advance care planning in severe dementia: an exploratory randomized controlled trial of a complex intervention. *Palliative medicine* 2011, 25(3):197-209.
18. Sampson EL, Lodwick R, Rait G, Candy B, Low J, King M *et al*. Living with an older person dying from cancer, lung disease or dementia: Health outcomes from a general practice cohort study. *Journal of Pain and Symptom Management* 2016, ahead of print.
19. Harrison Dening K, Jones L, Sampson EL. Advance care planning for people with dementia: a review. *Int Psychogeriatr* 2011, 23(10):1535-1551.
20. Jones L, Harrington J, Scott S, Davis S, Lord K, Vickerstaff V *et al*. CoMPASs: IOn programme (Care Of Memory Problems in Advanced Stages of dementia: Improving Our Knowledge): protocol for a mixed methods study. *BMJ open* 2012, 2(6).

21. Moore KJ, Davis S, Gola A, Harrington J, Kupeli N, Vickerstaff V *et al*. Experiences of end of life amongst family carers of people with advanced dementia: longitudinal cohort study with mixed methods. *BMC Geriatr* 2017, 17(1):135.
22. Elliott M, Harrington J, Moore K, Davis S, Kupeli N, Vickerstaff V *et al*. A protocol for an exploratory phase I mixed-methods study of enhanced integrated care for care home residents with advanced dementia: the Compassion Intervention. *BMJ open* 2014, 4(6):e005661.
23. Jones L, Candy B, Davis S, Elliott M, Gola A, Harrington J *et al*. Development of a model for integrated care at the end of life in advanced dementia: A whole systems UK-wide approach. *Palliative medicine* 2015.
24. Moore KJ, Elliott M, Kupeli N, Davis S, Harrington J, Vickerstaff V *et al*. A qualitative analysis of barriers to future care discussions with family members of care home residents with advanced dementia. *BMJ supportive & palliative care* 2015, 5(1):112-113.
25. Marwit SJ, Meuser TM. Development of a short form inventory to assess grief in caregivers of dementia patients. *Death Stud* 2005, 29(3):191-205.
26. Morris JC. The Clinical Dementia Rating (CDR): current version and scoring rules. *Neurology* 1993, 43(11):2412-2414.
27. Annear MJ, Toye CM, Eccleston CE, McInerney FJ, Elliott KE, Tranter BK *et al*. Dementia Knowledge Assessment Scale: Development and Preliminary Psychometric Properties. *J Am Geriatr Soc* 2015, 63(11):2375-2381.
28. Osborne RH, Batterham RW, Elsworth GR, Hawkins M, Buchbinder R. The grounded psychometric development and initial validation of the Health Literacy Questionnaire (HLQ). *BMC Public Health* 2013, 13:658.
29. Zigmond AS, Snaith RP. The hospital anxiety and depression scale. *Acta Psychiatr Scand* 1983, 67(6):361-370.
30. Whitlatch CJ, Schur D, Noelker LS, Ejaz FK, Looman WJ. The stress process of family caregiving in institutional settings. *Gerontologist* 2001, 41(4):462-473.
31. Fauth E, Hess K, Piercy K, Norton M, Corcoran C, Rabins P *et al*. Caregivers' relationship closeness with the person with dementia predicts both positive and negative outcomes for caregivers' physical health and psychological well-being. *Aging Ment Health* 2012, 16(6):699-711.
32. Carver CS. You want to measure coping but your protocol's too long: consider the brief COPE. *International journal of behavioral medicine* 1997, 4(1):92-100.
33. Koenig HG, Büssing A. The Duke University Religion Index (DUREL): A Five-Item Measure for Use in Epidemological Studies. *Religions* 2010, 1:78-85.
34. Tabachnick BG, Fidell LS. Using Multivariate Statistics, 2nd Edition. New York: Harper & Row; 1989.
35. Braun V, Clarke V. Using thematic analysis in psychology. *Qualitative Research in Psychology* 2006, 3(2):77-101.
36. Petty NJ, Thomson OP, Stew G. Ready for a paradigm shift? Part 2: introducing qualitative research methodologies and methods. *Manual therapy* 2012, 17(5):378-384.
37. Sque M, Walker W, Long-Sutehall T. Research with bereaved families: a framework for ethical decision-making. *Nurs Ethics* 2014, 21(8):946-955.

21 LIST OF APPENDICES

1. Case report form – Quantitative interview
2. Pre-interview questionnaire - Health Literacy Questionnaire
3. Semi-Structured Interview guide
4. Letter of invitation distributed by recruiting agencies with expression of interest form
5. Flyer advertising for participants
6. Participant information sheet
7. Cover letter for posted Participant Information Sheet
8. Consent form