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The Community Ageing Research 75+ Study (CARE75+): an experimental ageing and frailty research cohort

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Abstract

Introduction: The Community Ageing Research 75+ Study (CARE75+) is a longitudinal cohort study collecting an extensive range of health, social and economic data, with a focus on frailty, independence and quality of life in older age. CARE75+ is the first international experimental frailty research cohort designed using Trial within Cohort (TwiCs) methodology, to align applied epidemiological research with clinical trial evaluation of interventions to improve the health and wellbeing of older people living with frailty.

Methods and analysis: Prospective cohort study using a trial within cohort (TwiCs) design. One thousand community-dwelling older people (≥75years) will be recruited from UK general practices. Nursing home residents, those with an estimated life expectancy of three months or less and people receiving palliative care will be excluded. Data collection assessments will be face-to-face in the person's home at baseline, six months, 12 months, 24 month and 48 months, including assessments of frailty, cognition, mood, health-related quality of life, comorbidity, medications, resilience, loneliness, pain and self-efficacy. A modified protocol for follow-up by telephone or web-based will be offered at six months. Consent will be sought for data linkage and invitations to additional studies, including intervention studies using the TwiCs design. A blood sample bio-bank will be established for future basic science studies.

Ethics and dissemination: CARE75+ was approved by the NRES Committee Yorkshire & the Humber - Bradford Leeds 10th October 2014 (14/YH/1120). Formal written consent is sought if an individual is willing to participate and has capacity to provide informed consent. Consultee assent is sought if an individual lacks capacity.

Study results will be disseminated in peer-reviewed scientific journals and scientific conferences. Key study results will be summarised and disseminated to all study participants

via newsletters, local older people's publications and local engagement events. Results will be reported on a bespoke CARE75+ website.

Trial registration

ID ISRCTN16588124 (date of registration 26th February 2016 - retrospectively registered)

Strengths and limitations of this study

- CARE75+ is a prospective cohort study recruiting older people aged 75 and over, designed using Trial within Cohort (TwiCs) methods, collecting an extensive range of demographic, health and socioeconomic data at baseline, six, 12, 24 and 48 months.
- Our recruitment strategy, including home consent visits, home assessments, and use
 of researchers with community language skills, is designed to optimise the
 recruitment of older people across the frailty spectrum.
- CARE75+ will recruit participants from a variety of ethnic backgrounds and those with advanced frailty who are often underrepresented in research.
- Care home residents are not eligible for the study, aligned with the TwiCs design, meaning that findings cannot be generalised to this group of especially frail older people.
- CARE75+ is a cohort of high strategic relevance, which will help shape future UK and international health and research policy in ageing and frailty.

Introduction

Global ageing demographic projections indicate that there will be two billion people aged over 65 worldwide by 2050 [1, 2]. Frailty is an especially problematic expression of population ageing, with profound implications for planning and delivery of health and social care services globally. It is a condition characterised by loss of biological reserves, failure of homeostatic mechanisms and increased vulnerability to adverse outcomes following relatively minor stressor events [3, 4]. Thus, a mild infection, new medication, or minor surgery can result in a sudden, disproportionate change in health status or functional status for an older person with frailty, for example a change from independence to dependence, a fall, or development of delirium. Frailty is also associated with an increased risk of a range of adverse outcomes, including future disability, admission to hospital, long-term care residence and mortality [5].

To date, the healthcare response to frailty has been predominantly reactive and secondary care based. However, there is increasing recognition that frailty should be identified and managed as a long-term condition with preventative and proactive care models [6]. Furthermore, with the widespread introduction of robustly developed tools to detect frailty in primary care such as the electronic Frailty Index (eFI) based on routinely available primary care electronic health record (EHR) data in the UK [7], primary care teams can now more readily and reliably identify older people with frailty within their patient populations. These novel approaches are providing opportunities to develop and deliver services according to frailty status rather than chronological age.

Improved management of frailty requires an integrated approach spanning primary care, secondary care and social services that incorporates consideration of frailty transitions and health trajectories. Where possible, integrated care pathways should be developed and implemented based on suitably targeted, evidence-based interventions. Although

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The Trial within Cohort (TwiCs) design [10] is an innovative research methodology that has the potential to enhance participation of older people with frailty in a range of studies including clinical trials, and to increase the capacity to conduct high quality frailty research [11]. The TwiCs design has several key features including the establishment of an observational cohort to both provide longitudinal data and function as a recruitment platform for multiple trials and other research studies. Each individual trial uses random selection of some (not all) participants from the cohort; intervention-centred information and consent is applied. The process aims to replicate the real world of routine health care by taking informed consent only from those randomised to receive an intervention, as the ongoing cohort study provides a natural control group.

Methods and analysis

Aim

Our aim is to establish a longitudinal cohort of older people to investigate frailty, disability and quality of life in older age and to act a recruitment platform for future studies (substudies) to enable the development and evaluation of interventions to improve outcomes for older people.

Patient and public involvement

We have established a Frailty Oversight Group (FOG) as a central component of the CARE75+ study. The FOG comprises a core reference group of four key individuals with links to local community organisations involved in the support of older people living with frailty, and a minority ethnic group advocate from the local authority. The FOG play a key

role in developing research questions for the cohort, including reviewing any proposed data analyses or nested studies.

The FOG had close involvement in developing and piloting the outcome assessment schedule for the study, highlighting the need to include measures that extend beyond traditional health domains into areas such as loneliness and resilience in later life. The FOG contributed to the development of all study materials, including invitation letters and participant information sheets, to ensure alignment with the needs of older people. Results are disseminated widely to participants, including through regular newsletters and an annual celebration event.

Design

A multi-site, community-based cohort study using a TwiCs design [10].

Inclusion criteria

Community dwelling older people aged ≥75 years.

Exclusion criteria

People with terminal cancer, life expectancy of three months or less and people in receipt of palliative care services will be excluded. Care home residents and people living at home who are bedbound will be excluded. However, we will attempt to follow-up people who transition to a care home during the course of the study.

Assessments

The CARE75+ assessment includes detailed information on the demographic, health and social circumstances of participants. An extensive range of measures are collected using validated instruments, including assessments of frailty, cognition, mood, health-related

- Comorbidities data, collected via the primary care electronic health record (EHR),
 and by self-report using the Katz comorbidity questionnaire [16]. This questionnaire
 asks questions on various health conditions requiring a 'yes' or 'no' response.
- General health and health related quality of life, using the RAND short-form 36-Item Health Survey (SF36) [17] which includes 36 questions spanning eight health domains: physical functioning; bodily pain; role limitations due to physical health problems; role limitations due to personal or emotional problems; general mental health; social functioning; energy/fatigue; and general health perceptions. It also includes a single item that provides an indication of perceived change in health. The SF36 enables calculation of Physical Component Summary (PCS) and Mental Component Summary (MCS) scores, and derivation of an overall health utility score, the short-form 6 dimension score (SF6D) suitable for use in economic evaluations [18].
- Health related quality of life using the EuroQol five dimension health questionnaire (five-level version) EQ5D-5L [19]. The EQ5D-5L five dimensions are: mobility, self-care, usual activities, pain/discomfort and anxiety/depression. Each dimension has 5 levels of severity: no problems, slight problems, moderate problems, severe problems and extreme problems. The scores for each of the five dimensions are combined in a five digit number representing health status that can be converted into a utility index (0 for dead, 1 for perfect health and negative values for states worse than death) for use in economic evaluations.
- Basic activities of daily living (ADL) using the Barthel index (BI) [20]. The BI assesses functional status on a 20 point scale by recording ability to complete ten basic activities of daily living; bathing, bladder function, bowel function, dressing, feeding, grooming, mobility, stairs, toilet use and transfers. Higher scores indicate greater independence.

Measures of frailty:

- Research standard 60 item frailty index, based on the cumulative deficit model of frailty [22], and previously validated as part of the English Longitudinal Study of Ageing (ELSA) [23]. The frailty index score is calculated an equally weighted proportion of the number of deficits present in an individual relative to the total possible.
 - The phenotype model of frailty, based on the five physical characteristics as reported in the original Cardiovascular Health Study (slow walking speed, weight loss, exhaustion, weak grip strength, low energy expenditure) [3]. Slow walking speed is assessed by a timed three metre walk and results stratified by height and gender using values described in the original Cardiovascular Health Study, from which the phenotype model was derived [3]. Weight loss is determined by the following question. "In the last year, have you lost more than 10 pounds unintentionally?" Exhaustion is identified using the following questions: "How often in the last week do you feel that everything you did was an effort?" and "could not get going?". Responses are: rarely or none of the time (< 1 day) = 0; some or a little of the time (1 - 2 days) = 1; moderate amount of the time (3 - 4 days) = 2; most of the time = 3. If the participant answers "2" or "3" to either question they meet the criterion for exhaustion. Hand grip strength is assessed using a Jamar dynamometer and stratified using criteria from the Cardiovascular Health Study [3] with the mean of three attempts calculated for the dominant and non-dominant hand. Low activity is assessed using data obtained from the Physical Activity domain of the SF36

- [17]. Those with no characteristics are identified as fit, one or two characteristics as pre-frail and three to five characteristics as frail.
- The seven category Clinical Frailty Scale (CFS) [22], which is a validated measure of frailty based on clinical descriptors and pictographs, designed for specialist and non-specialist use in routine clinical practice. The CFS is an ordinal measure, with scores ranging from one (fit) to seven (severe frailty).
- The Edmonton Frail Scale (EFS) [24], which is a validated frailty measure designed for specialist and non-specialist use that records information on nine frailty domains (cognition, general health, functional independence, social support, medication use, nutrition, mood, continence, functional performance). The EFS is scored out of a total of 17, with higher scores indicating increasing frailty.
- The electronic frailty index (eFI) score [7], based on the cumulative deficit model of frailty, including 36 variables recorded in the primary care EHR as part of routine care. The eFI score is calculated as an equally weighted proportion of the number of deficits present in an individual relative to the total possible. The eFI enables identification of frailty categories (fit, mild frailty, moderate frailty, severe frailty) and is obtained directly from the primary care EHR.
- Height weight and body composition: researcher assessment using bio-impedance scales (Marsden BFA-220P Body fat analyser). Weight loss is obtained by self-report at baseline and calculated from previously recorded weight data at follow-up timepoints.
- Blood pressure (Life source auto inflation blood pressure monitor): sitting (three times), standing (once).
- Mobility, calculated using the timed-up-and-go-test (TUGT) [25]. The TUGT assesses
 a person's mobility and requires both static and dynamic balance. It measures the

- Pain, measured using the Geriatric Pain Measure Short Form [26]. This
 questionnaire includes items of pain intensity (current and last 7 days), and
 dichotomous items on how pain is impacting on a person's mobility, ability to
 accomplish tasks and to sleep. Items are combined to derive an overall summary
 score.
- Loneliness recorded using the 11 item De Jong Gierveld Loneliness scale [27]. Subcategories of social and emotional loneliness are calculated and a total score is derived enabling identification of categories: not lonely; moderately lonely; severely lonely; very severely lonely.
- Resilience, measured using the Brief Resilience scale (BRS) [28]. The six items in
 the BRS include five response options, enabling calculation of an overall score
 ranging from 1 to 6, with higher scores indicating greater resilience.
- Self-efficacy, measured using the General Self-Efficacy Scale [29]. This scale lists
 ten items with four response options enabling generation of a summary score ranging
 from 10 to 40, with higher scores indicating greater resilience.
- Low mood, assessed using the Geriatric Depression Scale Short-Form with a score
 of ≥5 indicating an abnormal low mood state [30].
- Self-reported falls.

- Full blood count (Leeds & Bradford sties only): haemoglobin and mean cell volume;
 red blood cell (RBC) count; mean cell haemoglobin concentration; mean cell
 haemoglobin; RBC distribution width, white blood cell count (including neutrophils,
 lymphocytes; monocytes; eosinophils; basophils); and platelets
- Frozen blood aliquots (Leeds & Bradford sites only) for future biochemical analysis,
 including:
 - Routine biochemistry and haematology: renal profile; liver profile; serum albumin; bone profile; glucose; glycosylated haemoglobin; lipid profile; uric acid; clotting.
 - Endocrine function: cortisol; thyroid function; IGF-1; DHEAS; testosterone;
 oestradiol; vitamin D; PTH; neuronal specific protein.
 - Immune function: highly sensitive CRP; inflammatory cytokines; rheumatoid factor; markers of immunosenescence.
 - Nutritional markers: vitamin A; vitamins B2, B6, B12; vitamin C; ferritin; folate; homocysteine.
 - Biomarkers of ageing: DNA repair capacity; telomere length; markers of oxidative stress.
 - o Genetic markers: DNA; RNA; plasma.

The CARE75+ data dictionary is available as an appendix file (see Additional file 1).

Assessment schedule

Participants will be assessed at baseline, six, 12, 24 and 48 months. Face-to-face assessments will be conducted in the participant's home. The feasibility of a modified, telephone-based or web-based assessment protocol will be tested at the six month time point for participants who are willing and able to undertake assessments in the alternative formats.

research and will act as a recruitment platform for additional studies (sub-studies), including qualitative studies as well as randomised controlled trials (RCTs) using TwiCs methods. Therefore, the initial recruitment target is based on appropriate sample size calculations for pilot RCTs of interventions to inform the design of future definitive RCTs alongside applied epidemiological investigation of modifiable component of frailty.

Previous observational studies involving older people with frailty have identified that between 600 - 1000 participants are required for reliable estimates of the main effects [31]. Following an initial pilot phase involving 200 participants to test recruitment methods and gather data on rates of assent to participation in future trials, we plan to recruit 1000 participants over a four year period. Previous observational studies involving the oldest old have reported 18 month attrition rates of around 25% due to mortality and withdrawal of consent [8]. As our cohort will include older people with frailty who are at increased risk of adverse outcomes we plan to recruit a minimum of 250 participants per year thereafter, to maintain a legacy cohort for future clinical trials. Findings from the CARE75+ study will inform the design of a future definitive experimental frailty research cohort of sufficient size to nest a series of definitive intervention trials targeted at a range of potentially modifiable components of frailty, including people living with different frailty severity grades.

Recruitment

We will work with general practices to identify and recruit participants in primary care.

Following initial piloting of recruitment methods in Bradford and Leeds, West Yorkshire, we will extend recruitment to other practices in England, using the skills and experience of staff within the National Institute for Health Research Clinical Research Networks (NIHR CRN).

Participant contact

Potential participants will be posted a study invitation pack containing a letter of invitation, a user-friendly participant information leaflet with photographs of the research staff involved in the home visits, and a supporting letter from their general practice. Potential participants who are not interested in participating in the study will be invited to contact their general practice to opt out. If potential participants do not opt out, contact details of eligible participants will be provided to the research team via a secure email system. The invitation letter will be followed up after two weeks with a telephone call from a researcher to discuss the study in more detail. If initial interest is expressed, the researcher and potential participant will arrange a home visit for an in-depth discussion of the study, where informed, written consent to participate will be sought.

The recruitment methods take into account the range of physical and cognitive challenges encountered by older people. Experience from previous cohort studies involving older people with frailty, disability and cognitive impairment has demonstrated that direct telephone calls or in-person visits are the only reliable methods of finding out whether potential participants are interested in participating, and may be preferred because they are seen as less of a burden [31]. Recruitment procedures will ensure that an older person with frailty receives all the necessary information to make an informed decision about participation. Procedures have been developed in close partnership with lay representatives through our Patient and Public Involvement Frailty Oversight Group [32], established as part of the National Institute

Participant consent

Following initial telephone contact, researchers will visit participants who express an interest in participation and verbally explain the study in detail, including providing a comprehensive study information leaflet. Potential participants will be able to have an advocate, family member or friend present and will be offered 48 hours to reflect on the information before deciding to consent. For individuals whose first language is not English, a community language speaking researcher will be assigned where possible, or a suitable advocate identified.

Researchers will assess an individual's capacity to consent in accordance with the Mental Capacity Act (MCA) [33]. Formal written consent will be sought if an individual is willing to participate and has capacity to provide informed consent. The consent form will detail all processing and disclosure of the information collected including data analysis, data linkage, providing contact details to future researchers, and the storage and use of blood samples. Some components of the consent will be optional (for example taking and storing blood, consenting to be approached about other studies). Written consultee assent will be sought if individual participants do not have capacity to consent.

Data collection methods

We plan face-to-face data collection, but we will test the feasibility of telephone or webbased modified data collection procedure for participants who are willing, and able, at the six month time point.

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Prescribed medications, comorbidity data and eFI scores will be obtained from general practice EHRs, extracted using standardised reporting templates developed for the SystmOne [34] and EMISWeb [35] primary care EHR systems.

All data will be collected using a bespoke electronic data capture application (EDCA), the CARE75+app developed and tested by Tigerteam Software Ltd^a. Blood samples will be collected at baseline and 12 months from participants in the Bradford and Leeds sites.

Research staff training

Research staff will undertake a bespoke training programme, depending on skills and experience, including: the Mental Capacity Act [33]; research with older people; phlebotomy and safeguarding vulnerable adults. Additionally, staff will receive training in completion of the individual assessment measures and data entry into the Electronic Data Capture Application (EDCA).

Plans to promote participant retention and complete follow-up

We will seek broad and enduring consent for data linkage and use of collected data following withdrawal or death, aligned with Medical Research Council (MRC) guidelines for maximising the use of cohort data [36].

We will post newsletters to participants at least twice a year to provide study updates and encourage continued engagement. We will hold annual engagement events, where feasible to do so, and promote the study locally via affiliated newsletters (e.g. Age UK Voice magazine) and local forums.

The EDCA will comprise two main components: a Data Collection Application (DCA) and Back Office System (BOS) containing personal identifiable information. The DCA will run on Microsoft Windows platform using an encrypted embedded database to temporarily store data. The BOS database will be on a Microsoft SQL server hosted at Bradford Teaching Hospitals NHS Foundation Trust (BTHFT). All data will be captured off-line in the community. Data will be uploaded regularly to ensure no identifiable data remains on the portable device for longer than 48 hours. Named researchers will have access to the individual details only whilst data collection takes place. A participant's details will only be released to one researcher at a time via the BOS management system. Access to modules and functions of both the DCA and BOS will governed by usernames, passwords and role specific access permissions, to maximise data security.

Remote site data (outside BTHFT) and the on-line completion forms (optional 6 month follow-up protocol) will be transferred to the BIHR-CARE database via the web application auecr.bradfordhospitals.nhs.uk hosted on the web server bhts-bihrweb. The site will be protected by SSL certificates, to encrypt the transfer of data over the internet. Access to the web application https://auecr.bradfordhospitals.nhs.uk on the server bhts-bihrweb will be restricted and protected by the Threat Management Gateway (TMG) software and SSL certificates. Remote site administrators and researchers will only have access to their own local participants.

Access to the BIHR-CARE database information will be based on role specific permissions. The chief investigator and project manager will have access to all data, at all levels for administration and governance purposes. Local site administrators will have access to local participant details. Researchers will have access to individual (site specific) case information only at the time of data collection. Researchers will have a maximum of three participants

available on portable devices (laptops) at any one time. Pathology laboratory staff will have access to blood sample data entry pages only. Statisticians and other members of the CARE75+ research team will only have access to pseudo anonymised i.e. those with unique identifiers for use in data linkage or anonymous data. Individual participants will be limited to access to a blank follow up questionnaire to complete and submit. All submitted data is final and data access is only available to the Super Administrator at BTHFT.

Data quality

Data quality will be enhanced by integral features of the data capture software, which will identify missing data and outlying values in real time. The software will automatically calculate the total scores for composite assessments. This will increase research efficiency and research data quality by reducing resource required for data cleansing, coding for analysis and reduce inputting errors.

Statistical methods

We plan interim data analyses after the completion of each stage i.e. baseline, 6, 12, 24 and 48 month follow-up of the study. We will assess frailty transitions using multivariate statistical methods. We will estimate health and social care resource use associated with frailty using economic modelling techniques.

We will conduct applied epidemiological investigation of the association between potentially modifiable components of frailty and outcomes, including: how pain modifies the association between frailty and disability; how resilience modifies the association between frailty and disability; and the association between frailty, mood and outcomes. We will assess frailty transitions using transition modelling. We will estimate health and social care resource use associated with frailty using economic modelling techniques.

Data will be made available to external investigators upon request and reviewed by the CARE75+ Data Request Review Committee (DRRC), comprising the Chief Investigator, CARE75+ project manager, database manager, an independent member and independent lay representative from the Frailty Oversight Group [32].

The ethnic diversity of our planned recruitment sites will enable the investigation of ageing, frailty and disability in different cultural contexts.

Missing data

Methods for dealing with missing data will depend on the amount of missing data and patterns of missingness for individual variables as part of individual analyses. We will undertake sensitivity analysis to investigate the impact of missing data and we will explore the use of appropriate imputation methods.

Ethics and dissemination

This study was approved by the NRES Committee Yorkshire & the Humber - Bradford Leeds on the 10th October 2014 (14/YH/1120). CARE75+ is an observational study with low risk to participants. Cohort governance will be provided by the National Institute for Health Research Collaboration for Leadership in Applied Health Research and Care Yorkshire & Humber (NIHR CLAHRC YH) Frailty Theme [37] Operational Group comprised of the Theme Leads, Theme Manger, Project Managers and co-applicants. Independent scrutiny will be provided by the Frailty Oversight Group [32], which is comprised of lay members with networks into the wider community of older people in Bradford. Day to day monitoring, including data quality checks and validations will be the responsibility of a dedicated database manager.

Access to data

BTHFT will be the data controller for CARE75+. Data will be made available to external researchers in accordance with CARE75+ data sharing protocols following review of the CARE75+ data dictionary (supplementary file 1) and completion of the CARE75+ data request form (supplementary file 2), review by the DRRC and completion of a data sharing transfer agreement.

Ancillary and post-study care

We anticipate that some participants may have potentially unmet care needs and may wish to discuss these with the researcher. We will ensure that researchers are able to signpost participants to local statutory and voluntary organisations (e.g. Age UK), or request a GP referral for social services assessment so that appropriate plans can be made for ongoing care.

Safeguarding issues identified during the assessment visits will be reported to the Research Project Manager who will then take advice from the Adult Safeguarding Co-ordinator in the relevant local authorities.

Dissemination policy

Study results will be disseminated in peer-reviewed scientific journals and submitted for consideration at local, national and international scientific conferences. Key study results will be summarised and disseminated to all study participants via newsletters, local older people's publication (e.g. Voice magazine, Age UK) and local engagement events. Results will be reported on a bespoke CARE75+ website.

Research outputs using data from the CARE75+ study will be required to acknowledge the data source and funder using standardised wording. Additionally, studies involving

participants identified from the cohort (sub-studies) will be required to acknowledge the CARE75+ cohort in all reports. The full protocol and participant level dataset will be made available to not-for-profit investigators. Enquiries should be made to the CARE75+ Chief Investigator and will be reviewed by the DRRC.

Discussion

CARE75+ will use novel TwiCs methodology to align applied epidemiological research into ageing and frailty with clinical trials of interventions, potentially accelerating the translational research pathway in this important area.

We describe methods to recruit a cohort of older people and collect an extensive range of health, social and economic outcome data. We plan to collect a range of validated measurements of frailty in CARE75+, including the eFI, which has been made available to every general practice in England through a national implementation project, facilitating the rapid translation of research findings into clinical practice. Our recruitment strategy, including home consent visits, home assessments, and use of researchers with community language skills, is designed to optimise the recruitment of older people across the frailty spectrum and from a variety of ethnic backgrounds, including those with advanced frailty who are often underrepresented in research. Care home residents are not eligible for the study, aligned with the TwiCs design, meaning that findings cannot be generalised to this group of especially frail older people.

Our vision for CARE75+ is a cohort of high strategic relevance, which will help shape future UK and international health and research policy in ageing and frailty.

References

- Kinsella KG, Phillips DR. Global aging: The challenge of success. Vol. 60. 2005:
 Population Reference Bureau Washington, DC.
- 2. United Nations. The World at Six Billion. 1999.

 www.un.org/esa/population/publications/sixbillion/sixbilpart1.pdf. Accessed 15 Feb 2018.
- Fried LP, Tangen CM, Walston J, Newman AB, Hirsch C, Gottdiener J, Seeman T, Tracy,
 R, Kop WJ, Burke G, McBurnie MA. Frailty in older adults: evidence for a phenotype. J.
 Gerontol. A Biol. Sci. Med. Sci. 2001; 56: M146-M157.
- 4. Walston J, Hadley EC, Ferrucci L, Guralnik JM, Newman AB, Studenski SA, Ershler WB, Harris T, Fried LP. Research agenda for frailty in older adults: toward a better understanding of physiology and aetiology: summary from the American Geriatrics Society/National Institute on Aging Research Conference on Frailty in Older Adults. J Am Geriatr Soc. 2006; 54: 991-1001.
- 5. Clegg A, Young J, Iliffe S, Rikkert MO, Rockwood K. Frailty in elderly people. Lancet. 2013; 381; 752-62.
- 6. Harrison JK, Clegg A, Conroy SP, Young J. Managing frailty as a long-term condition. Age and Ageing: 2015; 44: 732- 5.
- 7. Clegg A, Bates C, Young J, Ryan R, Nichols L, Ann Teale, E, Mohammed MA, Parry J, Marshall T. Development and validation of an electronic frailty index using routine primary care electronic health record data. Age Ageing. 2016; 45: 353-60.
- 8. Davies K, Collerton JC, Jagger C, Bond J, Barker SA, Edwards J, Hughes J, Hunt JM, Robinson L. Engaging the oldest old in research: lessons from the Newcastle 85+ study. BMC Geriatr. 2010; 10: 64.
- 9. Bootsma-Van der Wiel A, Van Exel E, De Craen AJM, Gussekloo J, Lagaay AM, Knook DL, Westendorp RGJ. A high response is not essential to prevent selection bias: results from the Leiden 85-plus study. J Clin Epidemiol. 2002; 55: 1119-25.
- Relton C, Torgerson D, O'Cathain A, Nicholl J. Rethinking pragmatic randomised controlled trials: introducing the cohort multiple randomised controlled trial design. BMJ.
 340: c1066

- 12. Evans JR, Fletcher AE, Wormald RP, Ng ES, Stirling S, Smeeth L, Breeze E, Bulpitt CJ, Nunes M, Jones D, Tulloch A. Prevalence of visual impairment in people aged 75 years and older in Britain: results from the MRC trial of assessment and management of older people in the community. British Journal of Ophthalmology. 2002; 86: 795-800.
- 13. Electronic LogMar Vision Test, Thompson Software Soultions; http://www.thomson-software-solutions.com/test-chart-lite. Accessed 15 Feb 2018.
- 14. Pirozzo S, Papinczak T, Glasziou P. Whispered voice test for screening for hearing impairment in adults and children: systematic review. BMJ. 2003; 327: 967.
- 15. Nasreddine ZS, Phillips NA, Bédirian V, Charbonneau S, Whitehead V, Collin I, Cummings JL, Chertkow H. The Montreal Cognitive Assessment, MoCA: a brief screening tool for mild cognitive impairment. J Am Geriatr Soc. 2005; 53: 695-9.
- 16. Katz JN, Chang LC, Sangha O, Fossel AH, Bates DW. Can comorbidity be measured by questionnaire rather than medical record review? Med Care. 1996; 34: 73-84.
- 17. Hays RD, Sherbourne CD, Mazel RM. The rand 36-item health survey 1.0. Health economics. 1993; 2:217-27.
- 18. Brazier J, Roberts J, Deverill M. The estimation of a preference-based measure of health from the SF-36. Journal of Health Economics. 2002; 21:271-92.
- 19. EuroQoL. EQ-5D-5L. 24/01/2018]; Available from: https://euroqol.org/eq-5d-instruments/eq-5d-5l-about/. Accessed 15 Feb 2018.
- 20. Mahoney FI, Barthel DW. Functional Evaluation: The Barthel Index. Md State Med J, 1965; 14: 61-5.
- 21. Nouri F, Lincoln N. An extended activities of daily living scale for stroke patients. Clin Rehabil. 1987; 1: 301-5.

- 22. Rockwood K, Song X, MacKnight C, Bergman H, Hogan DB, McDowell I, Mitnitski A. A global clinical measure of fitness and frailty in elderly people. Canadian Medical Association Journal. 2005;173:489-95.
- 23. Marshall A, Nazroo J, Tampubolon G, Vanhoutte B. Cohort differences in the levels and trajectories of frailty among older people in England. J Epidemiol Community Health. 2015; 69:316-21.
- 24. Rolfson DB, Majumdar SR, Tsuyuki RT, Tahir A, Rockwood K. Validity and reliability of the Edmonton Frail Scale. Age Ageing. 2006; 35: 526-9.
- 25. Podsiadlo D, Richardson S. The timed "Up & Go": a test of basic functional mobility for frail elderly persons. J Am Geriatr Soc. 1991; 39:142-8.
- 26. Blozik E, Stuck AE, Niemann S, Ferrell BA, Harari D, Renteln-Kruse WV, Gillmann G, Beck JC, Clough-Gorr KM. Geriatric Pain Measure short form: development and initial evaluation. J Am Geriatr Soc. 2007; 55: 2045-50.
- 27. Gierveld JD, Van Tilburg T. The De Jong Gierveld short scales for emotional and social loneliness: tested on data from 7 countries in the UN generations and gender surveys. Eur J Ageing. 2010; 7:121-30.
- 28. Smith BW, Dalen J, Wiggins K, Tooley E, Christopher P, Bernard J. The brief resilience scale: assessing the ability to bounce back. Int J Behav Med. 2008; 15:194-200.
- 29. Schwarzer R, Jerusalem M. The general self-efficacy scale (GSE). Anxiety Stress Coping. 2010; 12: 329-45.
- 30. Yesavage JA, Sheikh JI. 9/Geriatric depression scale (GDS) recent evidence and development of a shorter version. Clin Gerontol. 1986; 5:165-73.
- 31. Collerton J, Barrass K, Bond J, Eccles M, Jagger C, James O, Martin-Ruiz C, Robinson L, von Zglinicki T, Kirkwood T. The Newcastle 85+ study: biological, clinical and psychosocial factors associated with healthy ageing: study protocol. BMC Geriatr. 2007; 7: 14.
- 32. Heaven A, Brown L, Foster M, Clegg A. Keeping it credible in cohort multiple
 Randomised Controlled Trials: the Community Ageing Research 75+ (CARE75+) study

- 33. Department of Health, Mental Capacity Act. 2005, London, HMSO.
- 34. tpp. Systmone. https://www.tpp-uk.com/products/systmonline Accessed 15 Feb 2018.
- 35. emis health. EMIS web. https://www.emishealth.com/products/emis-web/?tab=primary-care. Accessed 15 Feb 2018.
- 36. MRC. Maximising the value of UK population cohorts. 2014

 https://www.mrc.ac.uk/publications/browse/maximising-the-value-of-uk-population-cohorts/.

 Accessed 15 Feb 2018.
- 37. CLAHRC Yorkshire & Humber. Primary care-based management of frailty in older people. 2017 07/12/17]; Available from: http://clahrc-yh.nihr.ac.uk/our-themes/primary-care-based-management-of-frailty-in-older-people. Accessed 15 Feb 2018.

Author contributions

AH, LB, AC & JY provided major contributions to the manuscript. ET, RH, KS, GM, TY, VG, BH, CCG provided oversight and guidance to the study design. All authors contributed to the writing and approved the final manuscript.

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Competing interests

None.

Word count

4,495 words (main manuscript)

Additional Files

Additional file 1

Excel .xls

CAREDataDictionaryPub

Data collected during CARE75+ assessments, including all variable and value names and labels.

References

1. Heaven, A., et al., Keeping it credible in cohort multiple Randomised Controlled Trials: the Community Ageing Research 75+ (CARE 75+) study model of patient and public involvement and engagement. Res Involv Engagem, 2016. 2: p. 30.

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| ConcernsGettingOutAntiSocialBeha ConcernsGettingOutFalling ConcernsGettingOutCrime ConcernsGettingOutOther ConcernsGettingOutOther ConcernsGettingOutOther ConcernsGettingOutOther ConcernsGettingOutOther ConcernsGettingOutOther ConcernsGettingOutOther ConcernsGettingOutOtherDetails HowSafeDoYouFeelCrossingRoads How safe feel crossing roa 1 Very safe Fairly safe Fairly safe 97/98/99 Missing 97/98/99 Missing 97/98/99 Missing 97/98/99 Missing 97/98/99 Missing 97/98/99 Fairly Fairly Fairly Fairly Fairly Fairly Fairly | | HowSafeDoYouFeelDuringNight | How safe (would) feel wal | 1 | Very safe | NB this are | a - 🍇 🚉 ค្គ in 15 | min walk |
| ConcernsGettingOutAntiSocialBeha ConcernsGettingOutFalling ConcernsGettingOutCrime ConcernsGettingOutOther ConcernsGettingOutOther ConcernsGettingOutOther ConcernsGettingOutOther ConcernsGettingOutOther ConcernsGettingOutOther ConcernsGettingOutOther ConcernsGettingOutOtherDetails HowSafeDoYouFeelCrossingRoads How safe feel crossing roa 1 Very safe Fairly safe Fairly safe 97/98/99 Missing 97/98/99 Missing 97/98/99 Missing 97/98/99 Missing 97/98/99 Missing 97/98/99 Fairly Fairly Fairly Fairly Fairly Fairly Fairly | | | | | Fairly safe | | h 20 seigi s rela | |
| ConcernsGettingOutAntiSocialBeha ConcernsGettingOutFalling ConcernsGettingOutCrime ConcernsGettingOutOther ConcernsGettingOutOther ConcernsGettingOutOther ConcernsGettingOutOther ConcernsGettingOutOther ConcernsGettingOutOther ConcernsGettingOutOther ConcernsGettingOutOtherDetails HowSafeDoYouFeelCrossingRoads How safe feel crossing roa 1 Very safe Fairly safe Fairly safe 97/98/99 Missing 97/98/99 Missing 97/98/99 Missing 97/98/99 Missing 97/98/99 Missing 97/98/99 Fairly Fairly Fairly Fairly Fairly Fairly Fairly | | | | | A bit unsafe | | 19. I | |
| ConcernsGettingOutAntiSocialBeha ConcernsGettingOutFalling ConcernsGettingOutCrime ConcernsGettingOutOther ConcernsGettingOutOther ConcernsGettingOutOther ConcernsGettingOutOther ConcernsGettingOutOther ConcernsGettingOutOther ConcernsGettingOutOther ConcernsGettingOutOtherDetails HowSafeDoYouFeelCrossingRoads How safe feel crossing roa 1 Very safe Fairly safe Fairly safe 97/98/99 Missing 97/98/99 Missing 97/98/99 Missing 97/98/99 Missing 97/98/99 Missing 97/98/99 Fairly Fairly Fairly Fairly Fairly Fairly Fairly | | | | | Very unsafe | | to te | |
| ConcernsGettingOutAntiSocialBeha ConcernsGettingOutFalling ConcernsGettingOutCrime ConcernsGettingOutOther ConcernsGettingOutOther ConcernsGettingOutOther ConcernsGettingOutOther ConcernsGettingOutOther ConcernsGettingOutOther ConcernsGettingOutOther ConcernsGettingOutOtherDetails HowSafeDoYouFeelCrossingRoads How safe feel crossing roa 1 Very safe Fairly safe Fairly safe 97/98/99 Missing 97/98/99 Missing 97/98/99 Missing 1 Very Missing 97/98/99 Missing 97/98/99 Missing 1 Very Missing 97/98/99 Missing 1 Very Missing | Vocavalue es fa | llows as adjacent question | | 97/98/99 | missing | | nloa Supe | |
| ConcernsGettingOutAntiSocialBeha ConcernsGettingOutFalling ConcernsGettingOutCrime ConcernsGettingOutOther ConcernsGettingOutOther ConcernsGettingOutOther ConcernsGettingOutOther ConcernsGettingOutOther ConcernsGettingOutOther ConcernsGettingOutOther ConcernsGettingOutOtherDetails HowSafeDoYouFeelCrossingRoads How safe feel crossing roa 1 Very safe Fairly safe Fairly safe 97/98/99 Missing 97/98/99 Missing 97/98/99 Missing 1 Very Missing 97/98/99 Missing 97/98/99 Missing 1 Very Missing 97/98/99 Missing 1 Very Missing | | | What concorns if any sto | n vou gottin | g out & abou | ı + | ded erieu | |
| 2 Fairly safe 3 A bit unsafe 6 7 Min 5 Min | | | vviiat concerns, ii dily, sto | p you gettin | 5 out & abot | 11. | fron (Al | |
| 2 Fairly safe 3 A bit unsafe 6 7 Min 5 Min | | | | 97/98/99 | missing | | min BES | |
| 2 Fairly safe 3 A bit unsafe 6 7 Min 5 Min | | | | - 1, 55, 55 | 58 | | p://k | |
| 2 Fairly safe 3 A bit unsafe 6 7 Min 5 Min | | | | | | | Al tr | |
| 2 Fairly safe 3 A bit unsafe 6 7 Min 5 Min | | | | | | | aini Pen | |
| 2 Fairly safe 3 A bit unsafe 6 7 Min 5 Min | | ConcernsGettingOutOtherDetails | | Verbatim | | | ng, a | |
| 2 Fairly safe 3 A bit unsafe 6 7 Min 5 Min | | | | | | | .con | |
| HowWorriedAboutBeingVictimOfC How worried about being 1 Very 2 Fairly | | HowSafeDoYouFeelCrossingRoads | How safe feel crossing roa | | | | simil on | |
| HowWorriedAboutBeingVictimOfC How worried about being 1 Very 2 Fairly | | | | | | | ı Jur | |
| HowWorriedAboutBeingVictimOfC How worried about being 1 Very 2 Fairly | | | | | | | ne 9, | |
| HowWorriedAboutBeingVictimOfC How worried about being 1 Very 2 Fairly | | | | | | | , 202 lolog | |
| HowWorriedAboutBeingVictimOfC How worried about being 1 Very 2 Fairly | | | | לצ' סכן וכ | เบเรรแห | | | |
| 2 Fairly 6 8 97/98/99 97/98/99 | | HowWorriedAboutBeingVictimOf0 | How worried about being | 1 | Verv | | | |
| 3 Not very 5 4 Not at all 97/98/99 97/98/99 | | | | | | | nce | |
| 4 Not at all 97/98/99 | | | | | • | | Bibl | |
| 97/98/99 <u>ම</u> | | | | 4 | Not at all | | iogr | |
| | | | | 97/98/99 | | | aph | |

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|---------------|-----------------------|--|--|------------------|----------------|---------|
| Required | | | Open: III'st published | | | |
| Field (please | Mawiahla | Variable Label | | Values | Valua Labal | |
| (X) | Variable ageEducation | Variable Label how old were you when you finished full time continuous education ' | ding | Values number | Value Label | comment |
| | agecuucation | now old were you when you linished full time continuous education | | - Hulliber | | |
| | PaidWork | what was the last paid work that you did?' | 2 | number | | |
| | raiawork | What was the last paid work that you did. | Pro | hamber 5 | | |
| | Qualifications | what was the highest educational qualification you attained?' | Protected by copyright, including | | 1 GCSE | |
| | | | id by | | 2 HNS/HND | |
| | | | / co | | 3 diploma | |
| | | | en-z pyri | | 4 AS and A le | vel |
| | | | ght, | 3 | 5 bachelor's | degree |
| | | | incl | 3 | 6 postgradua | te |
| | | | udir 1 | ! | 7 no qualifica | tions |
| | | | ng fo | 97/98/99 | missing | |
| | | | <u> </u> | | | |
| | | | inse ses r | <u> </u> | | |
| | VoluntaryWork | do you currently do any voluntary work?' | elat | | 1 yes | |
| | | | ed to | 07/00/00 | 2 no | |
| | | | o te | 97/98/99 | missing | |
| | | | Protected by copyright, including for uses related to text and data mining, Al train | | | |
| | | | g, Al trainin | | | |
| | | | ning, and similar technologies. | | | |
| | | | imilar ted | | | |
| | | | ; 9, 2023 ;hnologi | | | |
| | | | es. | • | | |
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| | | | lograph | | | |
| | | | ique de | . | | |
| | | For peer review only - http://bmjopen.bmj.com/site/about/guidelines.x | khtml = | - | | |

| red please | | | | |
|--------------------------|---------------------|----------|-------------|-----------|
| variable | Variable Label | Values | Value Label | l comment |
| HaveBrothers | did/do you have any | number | | |
| HaveSisters | did/do you have any | 97/98/99 | missing | |
| HaveSons | did/do you have any | | | |
| HaveDaughters | did/do you have any | | | |
| HaveGrandsons | did/do you have any | | | |
| HaveGranddaughters | did/do you have any | | | |
| | | | | |
| BrotherFirstName | did/do you have any | verbatim | | |
| SisterFirstName | did/do you have any | | | |
| SonFirstName | did/do you have any | | | |
| DaughterFirstName | did/do you have any | | | |
| GrandsonFirstName | did/do you have any | | | |
| GraddaughterFirstName | did/do you have any | | | |
| | | | | |
| BrotherAliveorDead | did/do you have any | 1 | alive | |
| SisterAliveorDead | did/do you have any | 2 | dead | |
| SonAliveorDead | did/do you have any | 97/98/99 | missing | |
| DaughterAliveorDead | did/do you have any | | | |
| GrandsonAliveorDead | did/do you have any | | | |
| GranddaughterAliveorDead | did/do you have any | | | |
| | | | | |

| lease | | | | | | | |
|-------|-------------------------|------------------------------------|----------------|---|---------------|---|-------|
| | Variable | Variable Label | Values | Value Label | | | |
| | Smoker | Have you ever smoked (this can | | | ips, piopes o | or cigars)? | |
| | | | | Yes | | | - |
| | | | | No | | | |
| | | | 97/98/99 | Missing | | | - |
| | | | | | | | |
| | SmokeRecently | Do you smoke at all nowadays'? | | ., | | | |
| | | | | Yes | | | - |
| | | | + | No | | | |
| | | | 97/98/99 | Missing | | | |
| | He Mar Cinnella | H | | | | | |
| | HowManyCigarettes | How many cigarettes as day do | | n a* * | | | + |
| | | | 97/98/99 | Missing | | _ | - |
| | II. M. D. III. O. D. | If a south of the south of | | | | B | + |
| | HowMnayRollUpsOrPipes | If you smoke, or have smoked, r | | n a* * | | ę | + |
| | | | 97/98/99 | Missing | | en : | - |
| | How Many Vacua | Approvimately bases | h m | | | BMJ Open: first published as 10.1136/bmjopen- | - |
| | HowManyYears | Approximately how mnay years | | N 4: : · · | | р ш | |
| | | | 97/98/99 | Missing | | <u>blisi</u> | |
| | CALC Cigaratte Peel Ver | Lifotimo ovenacione | | | | l ed | - |
| | CALC_CigarettePackYears | Lifetime exposure | | | | as 1 | + |
| | | | number | N dissips | | 10.1136/bmjopen- Protected by copy | - |
| | | | 97/98/99 | Missing | | 136/ cted | + |
| | CALC. Takana Pankiya wa | l :fating a grup a grup | | | | | + |
| | CALC_TobaccoPackYears | Lifetime exposure | | | | ope cop | + |
| | | | number | N dissips | | n-20 yrig | + |
| | | | 97/98/99 | Missing | | 1 2 8 | + |
| | detal Alaskal | Danisa and distributed a balin and | : | | 21 | 2018-026744 on 7 l | + |
| | drinkAlcohol | Do you ever drink alcohol incud | | Yes | me? | 74 Hin | + |
| | | | | | | on 7 g fo | - |
| | | | 07/09/00 | Missing | | r × u ⊞a | |
| | | | 97/98/99 | iviissirig | | rch inse | + |
| | AlcoholLast12Months | how often have you had no al | coholoic dripl | k of any kind | during the | | nthc2 |
| | AICOHOILASCIZIVIOHUIS | how often have you had na ale | 1 | almost over | ov dav | C D D | 1015: |
| | | | 2 | five or 6 da | y uay | o te | + |
| | | | 2 | three or for | ur dave a we | iloa xt a | |
| | | | 1 | once or twi | co a wook | ried d c | |
| | | | 5 | once or twi | ce a month | fron r (A lata | + |
| | | | 6 | almost ever five or 6 da three or for once or twi once or twi | counte of m | | |
| | | | 7 | once or twi | ce a vear | gng. | |
| | | | | not at all in | | raontas | |
| | | | | unsure | | <u> </u> | |
| | | | 97/98/99 | Missing | | pen.bm raining, | |
| | | | - 1, 20, 33 | 226 | | anc | |
| | AlcoholLast7Days | how many days out of the last 7 | ' (number | | | sin N | |
| | | 2, 22./5 53. 51 616 1450 7 | 97/98/99 | Missing | | nila on t | |
| | | | - //55 | 226 | | en.bmj.com/ on June ining, and similar tec | |
| | smallGlassOfWine | Thinking about the last 7 days, | h number | | | <u>H</u> 9, | |
| | standardGlassOfWine | g | 97/98/99 | Missing | | j.com/ on June 9, 2025 at Agence and similar technologies. | |
| | LargeGlassOfWine | | ,, -, - | | | es. | |
| | lowerStrengthBeer | | | | | Age | |
| | botlleOfBeer | | | | | nce | |
| | canOfBeer | | | | | Bib | |
| | Alcopop | | | Ì | | diographique | |
| | SingleSpirit | | | <u> </u> | | - 5 | + |

| Required | | | | |
|---------------------|--|--|--------------------|---|
| Field (please X) | Variable | Variable Label | Values | Value Label comment |
| | HearingAid | Do you have a hearing aid?' | 1 | Yes |
| | | | 2 | No Don't know |
| | | | 97/98/99 | Missing |
| | HearingAidUsage | How often do you use a hearing aid?' | | |
| | | | | Always Regularly |
| | | | 3 | Only on special occasions |
| | | | 97/98/99 | Never Missing |
| | HearingTest | Have you had a hearing test in the last | vear?' | |
| | | | 1 | Yes |
| | | | | No Don't know |
| | | | 97/98/99 | Missing |
| | DifficultyHearing | Interviewer's assessment of participar | | hearing so far No difficulty |
| | | | 2 | Some difficulty |
| | | | 97/98/99 | Unable to hear at all Missing |
| | HearingInQuietRoom | Do you have difficultly hearing someo | 1 | Yes |
| | | , , , | 2 | No Don't know |
| | | | 97/98/99 | Missing |
| | HearingInLoudRoom | Do you find it difficult to follow a conv | 1 | Yes |
| | | | | No Don't know |
| | | | 97/98/99 | Missing |
| | WhisperTestResult | Whisper hearing test result | | Pass |
| | | | 2 97/98/99 | Fail Missing |
| | Clarrence | Do you use slees/ | | |
| | GlassesOrLenses | Do you use glasses/contact lenses?' | 2 | Yes No |
| | | | 3 97/98/99 | Don't know Missing |
| | Glassas Orlaneas Head Feat | numpers of alasses " | | |
| | GlassesOrLensesUsedFor | purpose of glasses/lenses | 2 | Distance Reading |
| | | | | Both distance & reading Don't know |
| | | | 97/98/99 | Missing |
| | EyesightTested | eyesight tested by an optician in the | | Yes |
| | | | | No Don't know |
| | | | 97/98/99 | Missing |
| | RecognisingPeople | difficulty recognisign a friend across | | Yes |
| | | | | No Don't know |
| | | | 97/98/99 | Missing |
| | ReadingNewsprint | difficulty reading ordinary newsprint | | Yes |
| | | | | No Don't know |
| | | | 97/98/99 | Missing |
| | BlindorPartiallySighted | Registered blind or partially sighted | | Yes |
| | | | | No Don't know |
| | | | 97/98/99 | Missing |
| | LeftEye | (no pinholes) is the participant able to | | Yes |
| | | | 3 | No- form vision only No- no vision |
| | | | 97/98/99 | Missing |
| | Left Eye Yes Margin Label | logMAR margin of the last line read co | number 97/98/99 | Missing |
| | | | | TVII-35III B |
| | Left Eye Yes Num Letters Missed | total number of letters missed or inco | number 97/98/99 | |
| | RightEye | (no pinholes) is the participant able to | 1 | Yes 🖫 |
| | | , spanie asie to | 2 | No- for vision only |
| | | | 97/98/99 | No- no vesion Missing |
| | Right Eye Yes Margin Label | logMAR margin of the last line read co | number | st publi |
| | | | 97/98/99 | Missing a |
| | Right Eye Yes Num Letters Missed | total number of letters missed or inco | | as 10.1. |
| | Left Eye Pinholes | (with pinholes) is the participant able | 97/98/99 1 | Protected by |
| | | | | No-dorig vision only |
| | | | 97/98/99 | Missing 201 |
| | LeftEyePinholesYesMarginLabel | logMAR margin of the last line read co | number | Misting 18-026744 |
| | | | 97/98/99 | IVIIS@IIBO |
| | Left Eye Pinholes Yes Num Letters Missed | total number of letters missed or inco | number 97/98/99 | March Ense |
| | | | צל נטע ניי | for uses related to text and sion No-xt and sion Mischell |
| | RightEyePinholes | (with pinholes) is the participant able | 2 | Yes 중 별 호 No-호텔로 vision only |
| | | | 3 97/98/99 | No-꽠ૡૻૡૻsion Missis: |
| | Dicht. and the state of the sta | Inchian in the second of the s | , 55, 55 | No-and ged from http:// |
| | RightEyePinholesYesMarginLabel | logMAR margin of the last line read co | number 97/98/99 | Missing S |
| | RightEyePinholesYesNumLettersMissed | total number of letters missed or inco | number | d raini |
| | | | 97/98/99 | Millian technologies. |
| | CALC_LogMARLeftEye | no pinhole score | number | <u>ā</u> <u>ö</u> <u>s</u> |
| | | | 97/98/99 | lar tec |
| _ | CALC_LogMARightEye | no pinhole score | number 97/98/99 | nolog |
| | CALC LANABLE SERVICE CONTRACTOR | with wint -1 · · · | | ies. Ag |
| | CALC_LogMARLeftEyePinholes | with pinholes score | number 97/98/99 | . Agence |
| | CALC_LogMARRightEyePinholes | with pinholes | number | Bibliographique de l |
| | | | 97/98/99 | ra phi |
| | _ | ham. | | ue de |
| | For peer review only - | http://bmjopen.bmj.com/site/about/guide | eiines.xhtml | _ |

| olease | | | | | | | |
|---------------------------|--|--|----------|---|-------------|-------------|----------|
| Variable | | | Values | Value Labe | comment | | |
| SF-36HealthSurv | У | In general how would you say your health is?' | | Excellent Very Good | | | |
| | | | | Good | | | |
| | | | | Fair | | | |
| | | | | Poor | | | |
| | | | 97/98/99 | Missing | | | |
| | | | | | | | |
| healthCompared | ToAYearAgo | Compared to one year ago, how would your rate your health in general now? | 1 | Much bette | er now than | one vear ag | 0 |
| Treditireompared | iorticarrigo | compared to one year ago, now would your rate your nearth in general now. | | Somewhat | | | |
| | | | | About the | | | |
| | | | | Somewhat | | | |
| | | | | Much wors | e now than | one year ag | 0 |
| | | | 97/98/99 | Missing | | | |
| | | | | | | | |
| VigorousActivitie | s_SF36Activities | does you health now limit you in these activities? If so how much?' | 1 | Limited a lo | ot | | |
| Moderate Activiti | es_SF36Activities | | 2 | Limited a li | ttle | | |
| | Activities_SF36Activities | | | Not limited | l at all | | |
| | tairsActivities_SF36Activities | | 97/98/99 | Missing | | | |
| | tivities_SF36Activities StoopingActivities_SF36Activities | | | | | | |
| | nAMile_SF36Activities | | | | | | |
| | ocksActivities_SF36Activities | | | | | | |
| WalkingOneBlock | Activities_SF36Activities | | | | | | |
| BathingOrDressir | ngYourself_SF36Activities | | | | | | |
| | let | | | \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ | | | |
| | ucedTimeSpentOnWork | During the past 4 weeks, have you had any of the following problems with your work | | Yes No | | | |
| HealthIssuesAcco | omplishedLess tedOtherActivities | | 97/98/99 | No Missing | | | |
| | cultiesPerformingWork | | 5,,50,33 | .,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | | | |
| | | | | | | | |
| Emotionallssues | Reduced Time Spent On Work | During the past 4 weeks, have you had any of the following problems with your work | 1 | Yes | | | |
| | AccomplishedLess | | | No | | | |
| EmotionalIssues | DidntDoWorkAsCarefully | | 97/98/99 | Missing | | | |
| . Llocabble to the format | Activities | During the past 4 weeks to what extent has very aborded by the control of the state | | Not at all | | | |
| HealthInterfered. | Activities | During the past 4 weeks, to what extent has your physical health or emotional proble | | Not at all Slightly | | | |
| | | | | Moderately | <i>J</i> | | |
| | | | | Quite a bit | | | |
| | | | | Extremely | | | |
| | | | 97/98/99 | Missing | | | |
| | | | | | | | |
| BodilyPain | | How much bodily pain have you had during the past 4 weeks?' | | None | | | |
| | | | | Very mild Mild | | | |
| | | | | Moderate | | | |
| | | | | Severe | | | |
| | | | 6 | Very severe | 9 | | |
| | | | 97/98/99 | Missing | | | |
| | | B | _ | | | | |
| PainInterfereWit | l Work | During the past 4 weeks, how much did pain interfere with your normal work (includi | | Not at all | | | |
| | | <u> </u> | | A little bit Moderately | , | | |
| | | ir st | | Quite a bit | | | |
| | | <u> </u> | | Extremely | | | |
| | | ishe | 97/98/99 | Missing | | | |
| | | a s | | | | | |
| | | 70 to 10.1 | | | | | |
| FeelFullOfPep_Fe | | How much time during the past 4 weeks have /did you?' | | All of the T | | | |
| FeelNervous_Feelin | | l by c | | Most of the | | | |
| FeltCalm_Feeling | | copy. | | Some of th | | | |
| ALotOfEnergy_Fe | | 7-2018 | | A Little of t | | | |
| FeltDownhearted | _FeelingResponses | 7. Ó | | None of the | e Time | | |
| FeelWornOut_Fe | | includii | 97/98/99 | Missing | | | |
| BeenHappy_Feel | | ling fo | | | | | |
| FeelTired_Feeling | nesponses | 7 Mar or use | | | | | |
| HowOftenHealth | InterferedActivities | During the past 4 weeks, how much of the tਜ਼ਾਉ ਨੂੰ ਤੋਂ ਤੋਂ During the past 4 weeks, how much of the tਜ਼ਾਉ ਨੂੰ ਤੋਂ | 1 | All of the ti | me | | |
| | | nee ate | | Most of the | | | |
| | | J to | | Some of th | | | |
| | | text a | | A little of th | | | |
| | | perieu t and o | | None of the | e time | | |
| | | d from data r | 97/98/99 | Missing | | | |
| | | NBES nini | | | | | |
| SickEasier_Health | Expectation | How True or False is each of the following statements for you?' | 1 | Definitely T | rue | | |
| | ly_HealthExpectation | A j | | Mostly True | | | |
| | se_HealthExpectation | ainin . | | Don't Know | | | |
| HealthIsExcellent | _HealthExpectation | ng, ar | | Mostly Fals | | | |
| | | nd 8 | | Definitely F | alse | | |
| | | similar J | 97/98/99 | Missing | | | |
| CALC AvgSF36Ph | ysicalFunctioning | <u>م</u> 2 | number | | | | |
| | leLimitationPhysicalHealth | | | | | | |
| CALC_AvgSF36Rc | leLimitationEmotionalProblems | 9, 2025 at | | | | | |
| CALC_AvgSF36En | ergyOrFatigue | ss. | | | | | |
| CALC AVGSE36En | notionalWellbeing | g en c | | | | | _ |
| | | • `` | | | | | <u> </u> |
| CALC_AvgSF36So | | <u></u> | | | | | |
| | in | Bibliog | | | | | |

| d (please | Variable | Variable Label | Values | Value Labe | comme |
|-----------|----------------------------------|--|---------------|-----------------------------------|----------|
| | MoCAlternatingTrailMaking | number letter sequencing | 1 | correct | |
| | MoCAVisuoconsturctinalCube | completion of 3D cube | 2 | incorrect | |
| | MoCAVisuoconsturctinalContour | drawing of clock face outline | 97/98/99 | Missing | |
| | MoCAVisuoconsturctinalHands | placement of clock hands | , , , , , , , | | |
| | MoCAVisuoconsturctinalNumbers | placement of clock numbers | | | |
| | MOCAVISAGCOTISCATCATIATIVATIDETS | placement of clock numbers | | | |
| | NA - A Na - Size of the sa | | 1 | | |
| | MocANamingLion | | | correct | |
| | MocANamingRhino | | | incorrect | |
| | MocANamingCamel | | 97/98/99 | Missing | |
| | | | | | |
| | MoCADigitsBackward | repetition of digits forward | 1 | correct | |
| | MoCADigitsForward | repetition of digits backwards | 2 | incorrect | |
| | | | 97/98/99 | Missing | |
| | | | | | |
| | MoCAVigalence | recognition of 'A' in letter sequence | 1 | 0-1 error | |
| | | | 2 | >1 error | |
| | | | 97/98/99 | Missing | |
| | | | 31/30/33 | 1411331116 | |
| | MacASorial | number of correct subtractions of 7 starting | 0 | correct cub | traction |
| | MoCASerial | number of correct subtractions of 7 starting | | correct sub | lraction |
| | | | 1 | | |
| | 1 | | 2 | | |
| | | | 3 | | |
| | | | 4 | | |
| | | | 5 | B = | |
| | | | 97/98/99 | Missing | |
| | | | | Missing Den | |
| | MoCASentenceRepetitionOne | repeat sentence | 1 | co r ect | |
| | MoCASentenceRepetitionTwo | repeat sentence | | in Korrect | |
| | Woodsetteneckepetitioniwo | repeat sentence | 97/98/99 | Messing | |
| | | | 31/30/33 | A INITESTINE | |
| | | | | led . | |
| | | | _ | ္က ဗ | |
| | | | 3 | 10. | |
| | | | number | 10.1136/br | |
| | MoCAVerbalFluency | tell me as many words as you can beginning | number 🖁 | 5/b | |
| | | | 97/98/99 | M je sing | |
| | | | 7 | en- | |
| | | | 2 | 201 | |
| | | | , | 80 | |
| | | | 97/98/99 | 267 | |
| | MoCAAbstractionOne | what is the likeness of train and bicycle? | 1 | correct | |
| | MoCAAbstractionTwo | what is the likeness of ruler and watch | 7 | incerrect | |
| | WOCAADSTRACTIONTWO | what is the likeliess of fuler and watch | 07/09/00 8 | Manager C | |
| | | | 97/98/99 | S RAILE SING | |
| | | | 9 | 20 19 19 19 | |
| | | | | March 2019. Use | |
| | MoCADelayedRecallFace | recall of words read earlier | 15 | ### Willed | |
| | MoCADelayedRecallVelvet | | 23 | recalled | d |
| | MoCADelayedRecallChurch | | 3 | magnrect | |
| | MoCADelayedRecallDaisy | | 97/98/99 | Sing | |
| | MoCADelayedRecallRed | | | Marrect Descriptions (ABES) | |
| | | | | ES. | |
| | MoCAOrientationDate | orientation to time and place | 12 | ċo≱ect | |
| | MoCAOrientationMonth | The state of the state place | | inerrect | |
| | MoCAOrientationYear | | 97/98/99 | | |
| | MoCAOrientationDay | | | | |
| | | | 2 | bmj.com/ | |
| | MoCAOrientationPlace | | | i ö | |
| | MoCAOrientationCity | | 2 0 | on J | |
| | | | <u> </u> | | |
| | MoCAOrientationEducation | years of formal education | 19 | <15 | |
| | | | 97/98/99 | >=133 | |
| | | | 97/98/99 | Mesing | |
| | | | | , a | |
| | CALC_MoCA | score out of 30 >=26 'normal' | 0-30 | Age | |
| | | | 97/98/99 | M ន់ sing | |
| | | | , = = , = 0 | B | |
| | | | | Bibliographique de | |
| | | | | भूग्बर | |
| | I | | | | |
| | | | | <u>a</u> : | |

| iired | | | | | | | | | |
|--|--|--|-------------------------|-----------------|--------------|--------------|---------------|---------|---|
| (please Variable | Variable Label | Values | Value Labe | l comment | | | | | |
| MyocardialInfarction CongestiveHeartFailure | Have you ever had a heart attack Have you ever been treated for heart failure? | | yes no | | | | | | |
| Peripheral Vascular Disease | Have you had an operation to unclog or bypass the ar | | not sure | | | | | | |
| Cerebrovascular Accident Hemiplegia | Have you had a stroke, cerebrovascular accident, bloo Do you have difficulty moving an arm or leg as a result | | | ovascular ac | cident? | | | | |
| Asthma | Do you have asthma? | | | | | | | | |
| | | | | | | | | | |
| AsthmaMedicines | Do you take medications for your asthma?' | | no yes, only w | yith flare uns | of my asth | ma | | | |
| | | | yes, I take | | | | ot having a f | lare up | |
| | | 97/98/99 | Missing | | | | | | |
| emphysema | Do you have emphysema, chronic bronchitis, or chron | | 1 yes | | | | | | |
| | | | 2 no 3 not sure | | | | | | |
| | | 97/98/99 | Missing | | | | | | |
| emphysemaMedicines | Do you take medicines for your lung disease?' | 2 | 2 no | | | | | | |
| | | | 1 yes, only w | | | | - | 1 | |
| | | 97/98/99 | yes, I take Missing | medicine reg | gularly even | when I'm n | ot naving a f | lare up | |
| UlcerDisease | Do you have stomach ulcers or peptic ulcer disease dia | agnosed by | endoscony (| or unner gi o | or harium sy | vallow study | | | |
| Oicei Disease | bo you have stomach dicers of peptic dicer disease di | agnosed by | endoscopy | or upper gre | Darium Sv | vallow study | : | | |
| HasDiabetes | Do you have diabetes? | | Yes, treated No | d by modifyi | ng my diet | | | | |
| | | 3 | Yes, treate | | tions taken | by mouth | | | |
| | | 97/98/99 | Yes, treated Missing | d by insulin | | | | | |
| | | | | | | | | | |
| Diabetes Caused Problems | Has the diabetes caused any of the following problem | | Problems v Problems v | | | ophthalmol | ogist | | |
| | | 3 | 3 unsure | | | | | | |
| | | 97/98/99 | Missing | | | | | | |
| ProblemsWithKidneys | Have you ever had problems with your kidneys?' | | Poor kidne No | y function (b | olood tests | show high cr | eatinine) | | |
| | | 1 | B Have used | hemodialysi | s or peritor | eal dialysis | | | |
| | | 97/98/99 | Have received Missing | ved kidney t | ransplantat | on | | | |
| | | 37/38/33 | IVIISSITIE | | | | | | |
| ConnectiveTissueDisese | Do you have Rheumatoid Arthritis? | | 1 Yes 2 No | | | | | | |
| | | 3 | Not sure | | | | | | |
| | | 97/98/99 | Missing | | | | | | |
| ConnectiveTissueDiseaseMedications | Do you take medications for it regularly?' | | 1 Yes | | | | | | |
| | | | Not sure | | | | | | |
| | | 97/98/99 | Missing | | | | | | |
| ConnectiveTissueDiseaseType | do you have?' | 1 | 1 Lupua | | | | | | |
| | | | 2 Polymyalgi | | | | | | |
| | | | neither lup not sure | ous nor polyr | nalgia | | | | |
| | | 97/98/99 | Missing | | | | | | |
| Dementia | Do you have any of the following conditions? | 1 | 1 Yes | | | | | | |
| Cirrhosis Leukemia | | | Not sure | | | | | | |
| Lymphoma | | 97/98/99 | | | | | | | |
| Aids Cancer | | | | | | | | | |
| | Has the cancer spread or metastasized to other parts | | 1 Yes | | | | | | |
| CancerSpread | | | Not sure | | | | | | |
| | | 97/98/99 | Missing | | | | | | |
| CALC_KatzCormbidity | total score plus age based on the Charlson index scori | number | | | | | | | |
| II. mantanaian | | | 1 / | | | | | | |
| 16 Any athereseleratic disease | Does the participant's GP record identify | 2 | Yes | | | | | | |
| Any atherosclerotic disease Ischaemic heart disease | | I . | 2 No | | | | | | |
| Cerebrovascular disease | | B S | Iviissiiig | | | | | | |
| Peripheral vascular disease Heart failure | | /J Ope | | | | | | | |
| Atrial fibrillation | | n: first | | | | | | | |
| Atrial flutter Osteoarthritis | | st publ | | | | | | | - |
| Cervical or lumbar spondylosis | | lished | | | | | | | |
| Rheumatoid arthritis Other arthritis (specified) | 77 | <u>a</u> | | | | | | | |
| Arthritis (type not specified) | Protected by |).1136/bı | | | | | | | |
| Joint replacement Cataract | d by c | s/bmjop | | | | | | | |
| Cataract surgery | Pyri | pen-2(| | | | | | | |
| Age related macular degeneration Glaucoma Diabetic eye disease | 97 7, | 2018-02 | | | | | | | |
| Registered blind | copyright, including | 26744 | | | | | | | |
| Registered partially sighted Any cancer | for | 17 | | | | | | | |
| Any cancer, excluding nonmelanoma skin of Any cancer <5 years since diagnosis | uses . | March 2019. Download Enseignement Super | | | | | | | |
| Chronic obstructive pulmonary disease (CC | P e e e e e e e e e e e e e e e e e e e | 2019. gnem | | | | | | | |
| Asthma Other respiratory disease | to te | Down ent Su | | | | | | | |
| Diabetes mellitus | X a a | loade | | | | | | | |
| Hypothyroidism Hyperthyroidism | da aa aa | ded from http | | | | | | | - |
| Dementia | | | | | | | | | |
| Parkinson's disease Anxiety | ing, Alt | | | | | | | | - |
| Depression | Al training. | open.t | | | | | | | |
| Anaemia: WHO criteria for haemoglobin co Anaemia: Joosten's criterion for haemoglob | 0) | | | | | | | | |
| Osteoporosis | | or or | | | | | | | 1 |
| Fractured hip, wrist or backbone | iliar te | une June | | | | | | | |
| Renal function using modification of diet in | technologies. | 9, 2025 | 1 Normal/mi | | | | | | |
| | ogies. |)25 at / | Moderately Severely re | | _ | | | | |
| | | A ge | 4 Verv sever | | | | | | |
| | | 98/98/99 | Missing | | | | | | - |
| | | ₩ | | | 1 | | 1 | | |
| Calculate total number of diseases | Total number of diseases from GP record (excluding of | 3 | Missing | | | | | | |

| Variable | Variable Label | Values | Value Label | commer |
|------------------------|---|---|-------------|---|
| FallsInLast12Months | in the last 12 months have you had a fall | 1 | Yes | |
| | | 2 | no | |
| | | 3 | not sure | |
| | | 97/98/99 | missing | |
| | | | | |
| | | | | |
| HowManyFalls | How mnay time s have you fallen in the I | | | |
| | | 97/98/99 | missing | |
| | | | ., | BMJ Open: first published |
| FallsFractures | have you broken any bones/had and from | | Yes | - g |
| | | | no | <u>en</u> |
| | | | not sure | first |
| | | 97/98/99 | missing | <u> </u> |
| | | | | olist |
| FallsBrokenBones | How many times has a fall resulted in a | number | | l ed |
| ransbrokenbones | How many times has a fall resulted in a b | | missing | as 10.1136/bmjopen-2018-026744 Protected by copyright, includir |
| | | 97/98/99 | missing | s 10.1136/bmjopen-2018-026744 o Protected by copyright, including |
| | | | | 36/I |
| FallsAccidentEmergency | did you go to Aand E follwing a fall? | 1 | Yes | ₽ Ž |
| ransaccidentemergency | uid you go to Aand E follwing a fail: | | no ; | cop |
| | | | not sure | า-20 vria |
| | | 97/98/99 | missing | <u> </u> |
| | | 31/36/33 | IIIISSIIIg |)267 nclu |
| FallsGetAandE | How many times did you attend A&E | number | | '44 o |
| TansectAanaL | Trow many times and you attend Age | 97/98/99 | | |
| | | 31730733 | IIIISSIIIg | C E E E E E E |
| | | | | rch : |
| | | | | 201s gne elate |
| FallsStayOvernight | were you admitted to a hospital follow | 1 | Yes | ed to |
| - amoona y o comingino | | | no | te Si |
| | | | not sure | loac Lper ct ar |
| | | 97/98/99 | missing | ied d d |
| | | .,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | | ricata (Ata |
| FallsGetAdmited | How many times were you admitted to a | number | | BES # |
| | , | 97/98/99 | missing | |
| | | , , , , , , , | | A ∰. |
| FallsSeenGP | Have you (or your carer) ever seen your | 1 | Yes | n 7 March 2019. Downloaded from http://bmjopen.bmj.com/ on June 9, 2025 at Agence Enseignement Superieur (ABES). for uses related to text and data mining. Al training, and similar technologies. |
| | , | | no ! | na. |
| | | | not sure | j.co and |
| | | 97/98/99 | missing | sin (|
| | | | | on J ilar |
| FallsSpecialist | Have you ever seen a falls specialist?' | 1 | Yes | une |
| | | 2 | no | 9, 2 hno |
| | | 3 | not sure | 025 logi |
| | | 97/98/99 | missing | at / es. |
| | | | | ∖ger |
| LossOfConfidence | Have your falls caused any of the following | 1 | Yes | ıce |
| WorryAboutFalling | | | no | Bibl |
| GoingOutLessOften | | 3 | not sure | Bibliographique de |
| IncreaseCareReceive | | 97/98/99 | missing | <u>ai</u> |

| Required Field (please | | Open: firs | | |
|---------------------------|---|---|----------------------------------|---|
| () | Variable | Variable Label | Values | Value Label comment |
| | TookPresMed | Number of prescribed medications | number | |
| | | <u> </u> | 97/98/99 | Missing |
| | | Pr 2 | | |
| | Medication*_MedicationName | Name of prescribed medication 2-30- | verbatim | |
| | | 36/I | 97/98/99 | Missing |
| | | Dosage of prescribed medications vegoatim | | |
| | Medication*_Dosage | Dosage of prescribed medications verbatim | number | DATE OF THE PARTY |
| | | yright. | 97/98/99 | Missing |
| | | Frequency of prescribed medica | number | |
| | Medication _frequency | rrequency of presented medicagonic674 | 97/98/99 | Missing |
| | | g i | | |
| | TookNonPresMed | Number of non-prescribed medicine vitam | nin or mineral supplement number | |
| | | Ens. | 97/98/99 | Missing |
| | | s reli | | |
| | NonPresMedication*_NonPresMedicationName | Name of non-prescribed medica | verbatim | |
| | | Dow to t | 97/98/99 | Missing |
| | | Dosage of non-prescribed medicage and 1-30 To the support of the | | |
| | NonPresMedication*_NonPresMedicationDosage | Dosage of non-prescribed medica sverba | atim number | |
| | | date | 97/98/99 | Missing |
| | | Frequency of non-prescribed medication | | |
| | NonPresMedication*_NonPresMedicationFrequency | Frequency of non-prescribed medication | number | |
| | | _ 0 | 97/98/99 | Missing |
| | | trair e | | |
| | COUNT_PrescribedMedication | n.br | number | |
| | COUNT New Properties days direction | //bmjopen.bmj.com/ on June 9, 2 g, Al training, and similar technol | | |
| | COUNT_NonPrescribedMedication | d d on | number | |

| Required | | | | | | | | | |
|------------------|--|--|------------|---------------------------|-----------------|----------------|----------------|--------------|-------|
| Field (please X) | Variable | Variable Label | Values | Value Label | comment | | | | |
| | WalkAroundOutside_NEADLPartOne | what have you actually done in the la | | not at all | | | | | |
| | ClimbStairs_NEADLPartOne | | 1 | with help | | | | | |
| | GetInAndOutOfCar_NEADLPartOne | | 2 | on your ow | n with diffic | ulty | | | |
| | WalkOverUnevenGround_NEADLPartOne | | | on your ow | n | | | | |
| | CossRoads_NEADLPartOne | | 97/98/99 | Missing | | | | | |
| | TravelOnPublicTransport_NEADLPartOne | | | | | | | | |
| | ManageToFeedYourself_NEADLPartOne MakeYourselfAHotDrink_NEADLPartOne | | | | | | | | |
| | TakeHotDrinksFromOneDrinksToAnother_NEADLPartOne | | | | | | | | |
| | DoTheWashingUp_NEADLPartOne | | | | | | | | |
| | MakeYourselfAHotSnack_NEADLPartOne | | | | | | | | |
| | <u>-</u> | | | | | | | | |
| | ManageOwnMoney_NEADLPartTwo | what have you actuallydone in the l | 0 | no | | | | | |
| | WashItemsOfClothing_NEADLPartTwo | | 1 | with help | | | | | |
| | DoOwnHousework_NEADLPartTwo | | 2 | on your ow | n with diffic | ulty | | | |
| | DoOwnShopping_NEADLPartTwo | | | on your ow | n | | | | |
| | DoFullClothesWash_NEADLPartTwo | | 97/98/99 | Missing | | | | | |
| | ReadNewspapersOrBooks_NEADLPartTwo | | | | | | | | |
| | UseTelephone_NEADLPartTwo | | | | | | | | |
| | WriteLetters_NEADLPartTwo GoOutSocially_NEADLPartTwo | | | | | | | | |
| | ManageGarden_NEADLPartTwo | | | | | | | | |
| | Drive_NEADLPartTwo | | | | | | | | |
| | | | | | | | | | |
| | CALC_NEADL | Total NEADL. Higher score = more inde | number 0-0 | 56 | | | | | |
| | | | 97/98/99 | Missing | | | | | |
| | | | | | | | | | |
| | Feeding | Do you have any difficulty with the fol | | uanble | | | | | |
| | | | | needs help | | eading butte | er or require | s modified o | liet |
| | | | | independer | nt | | | | |
| | | | 97/98/99 | Missing | | | | | |
| | Dathing | | 0 | dependent | | | | | |
| | Bathing Control of the Control of th | | | independer | | wer) | | | |
| | | | 97/98/99 | Missing | 11 (01 111 3110 | Weij | | | |
| | | | 37730733 | IVIISSIIIB | | | | | |
| | Grooming | | 0 | needs help | with persor | nal care | | | |
| | | B | | independer | | | ng | | |
| | | BMJ | 97/98/99 | Missing | | | | | |
| | | pen | | | | | | | |
| | Dressing | : first | | dependent | | | | | |
| | | 70 | | needs help | | | | | |
| | | ublis | | independer | nt including | buttons and | zips | | |
| | | hed | 97/98/99 | Missing | | | | | |
| | Dowels | as 10 Pro | 0 | incontinont | or poods o | 20002 | | | |
| | Bowels | 10.113 Protect | | incontinent occasional | | nemas | | | |
| | | 36/bmj | | continent | accident | | | | |
| | | .1136/bmjopen | 97/98/99 | Missing | | | | | |
| | | | 01700700 | | | | | | |
| | Bladder | -201 | 0 | unable (or | catherterise | d and unabl | e to manage | alone) | |
| | | 5 | | occasional | | | Į , | | |
| | | cluc | 2 | continent | | | | | |
| | | | 97/98/99 | Missing | | | | | |
| | | for | | | | | | | |
| 1 | ToiletUse | March 2019. Downloaded from http Enseignement Superieur (ABES) uses related to text and data minin | | dependent | | | | | |
| | | 1 201 eign rela | | needs some | | | hings alone | | |
| | | nted (| | independer | nt (on/off ar | n wiping) | | | |
| | | to te | 97/98/99 | Missing | | | | | |
| | Transfers | nloa Supe exta | 0 | unable, no | sitting halan | l | | | |
| | Transfers | nd ded | | major help | | | sical) can sit | up | |
| | | fron lata | | minor help | | | sicary carrist | ~ ~ | |
| | | mini mini | | independer | | , :, | | | |
| | | g, ://b | 97/98/99 | Missing | | | | | |
| | | Al tr | | | | | | | |
| | Mobility | aini. | 0 | immobile o | r <50 yards | | | | |
| | | | | wheelchair | | | | | |
| | | and s | | walks with | | | | | yards |
| | | یل on ال | | independer | nt but may ι | ise any walk | ing aide >50 |) yards | |
| | | lar te | 97/98/99 | Missing | | | | | |
| | Stairs | techn | | - اعمران | | | | | |
| | Stairs | 0 N | | unable | (vombel! | cical second | ا ا | | |
| | | 025 at logies. | | needs help independer | | sicai, carryin | ig aid) | | |
| | | <u> </u> | 97/98/99 | Missing | | | | | |
| | | ence | 57,50,55 | 1111331118 | | | | | |
| | CALC_Barthel_Index | Total BARTHEL. Higher score mens m | number 0-2 | 20 | | | | | |
| | | | 97/98/99 | Missing | | | | | |
| | | raph | | | | | | | |
| | | jqu | | | | | | | |

| (please | Variable | Variable Label | Values | Value Label | comment | |
|---------|--|--|--|--------------|------------|--------|
| | Height Weight time of Day | time measurements are taken | hh.mm | | | |
| | _ | | | | | |
| | Demispan | from middel of collar bone to index finger | number cm | | | |
| | DemispanHeight | Calculation of height from demispan | number cm | | | |
| | Height | | number cm | | | |
| | | | | | | |
| | Weight | | number kg | | | |
| | BodyFatPercentage | | number % | | | |
| | FatMass | | number kg | | | |
| | | | | | | |
| | Fat Free Mass | | number kg | | | |
| | BodyWaterPercentage | | number % | | | |
| | | | | | | |
| | MuscleMass | | number kg | | | |
| | BoneMass | | number kg | | | |
| | | | | | | |
| | CALC_DemiSpanHeight | | | | | |
| | CALC_BMI | | number | | | |
| | Woightlass | In the last year, have you lost more than 10lk | BM | yes | | |
| | WeightLoss | in the last year, have you lost more than 10k | ВМታ'Ор⊌ n:¶irst.pu 97/98/99 | no | | |
| | | | n:ന് | not sure | | |
| | | | 97/98/99 | Missing | | |
| | SittingBloodPresssure | | yes yes | 1 | | |
| | | | | 2 | | |
| | | | 97/98/995 | Missing | | |
| | ReasonNoSittingBloodPressure | | ictedim | | | |
| | Reasonivosittingbioourressure | | verbay c | Participant | refused | |
| | | | oen-2 opyri | Cuff the wro | | |
| | | | 9ht, i | Monitor ma | | Talvav |
| | | | as 10.1136/bm/dpen-2018-026744 gin 7 | StandingBlo | oderessure | raker |
| | SittingSystolic | BP reading | num Er regr | n Hg | | |
| | Sitting Diastolic | BP reading | 97/98/99 | Missing | | |
| | SittingPulse | pulse | arch : Ensei ses r | | | |
| | StandingBloodPresssure | | yes yes | 1 | | |
| | | | no to t | 2 | | |
| | | | 97/98/99 | Missing | | |
| | ReasonNoStandingBloodPressure | | num 97/98 Enseignement Superieum (ABES) 99 Enseignement Superieum (ABES) 97/98 uses related to that and that milling yes no 97/98 verbum 17/98 verbu | | | |
| | | | rom (ABI ata m | | | |
| | StandingSystolic | BP reading | numl a 0 | n Hg | | |
| | Standing Diastolic StandingPulse | BP reading pulse | y//9 8 /99 | Missing | | |
| | | 1 | hand similer of the state of t | | | |
| | Dominant Hand | Which is the dominant hand? | ng, aı | right | | |
| | | | nd si | left | | |
| | Dominant Hand First Attempt | grip strength in dominant hand | number k | 4 | | |
| | DominantHandSecondAttempt | | tech | | | |
| | DominantHandThirdAttempt | | technologieser nums | | | |
| | NondominantHandFirstAttempt | grip strength in passive hand | number k | 4 | | |
| | | | Agence | | | |
| | NondominantHandSecondAttempt | | _ | | | |
| | NondominantHandSecondAttempt NondominantHandThirdAttempt | | се <u>В</u> | | | |
| | | mean grip strength dominant hand | number graphique de l | Α | | |

Page 44 of 55

| <u> </u> | Variable | Variable Label | BMJ C | Values | Value Label | comment | |
|----------|---------------------------|--|--|------------|--------------|----------------|-------|
| | WalkTime | over a 3 metre distance | Oper | number se | | | |
| | | | — : | 97/98/99 | Missing | | |
| | | | Tst + | | | | |
| | ExhaustionPartA | How often in the last week did you feel 'everything I did was an eff | ort?' <u>5</u> | 0 | rarely or no | one of the tir | ne |
| | | · · · | ishe | | some or a l | | |
| | | | <u>ö</u> . | 2 | moderate a | amount of th | e tim |
| | | | s 10 Pro | 3 | most of the | e time | |
| | | | .113 tect | 97/98/99 | Missing | | |
| | | | ed t | | | | |
| | ExhaustionPartB | How often in the last week did you feel 'I could not get going'?' | : 10.1136/bmjopen-2018-02 Protected by copyright, in | 0 | rarely or no | ne of the tir | ne |
| | | , , , | pen opy | | some or a l | | |
| | | | -201 righ | | moderate a | | |
| | | | | | most of the | | |
| | | | 26744 1cludii | 97/98/99 | Missing | | |
| | | | | 2.755,55 | | | |
| | TUGTSkipped | was the TUGT missed out? | for | 1 | yes | | |
| | - Compression | 1122 112 1 2 2 1 1113324 3461 | Mar | | no | | |
| | | | nsei nsei | | | | |
| | TUGNotDoneReason | reason for skipping TUGT | 201s igne | verbatim | | | |
| | To Shot Done Readon | reason for snipping root | March 2019. Downloaded from http Enseignement Superieur (ABES) uses related to text and data minir | verbatiiii | | | |
| | chairUsed | | tey of the state o | 1 | yes | | |
| | | | loac uper | | no | | |
| | | | ieu : | | | | |
| | ChairHeight | height of the chair used to stand up from | from (Al | number m | m | | |
| | Chairres ₆ | neight of the origin about to stand up from | BES | | | | |
| | Able To Get Up From Chair | | | 1 | yes | | |
| | Abicioactopiromenai | | A j | | no | | |
| | | | ://bmjopen.brr | 97/98/99 | Missing | | |
| | | | n.bm | 37730733 | 1411331118 | | |
| | TimeToGetUp | time taken to complete in seconds | nj.co , and | number se | rs | | |
| | Time to det op | time taken to complete in seconds | | 97/98/99 | Missing | | |
| | | | ال on ال | 3.730/33 | 551116 | | |
| | WalkingAidUsed | walking aid used to complete the TUGT | June ir tec | 1 | Independer | nt | |
| | - Indosed | manning and about to complete the 1001 | | | 1x walking | | |
| | | | 9, 2025 at | | 2x walking | | |
| | | | 5 at | | Walking Zin | | |
| | | | Age | | Wheeled Zi | | |
| | | | | | 3-wheeled | | _ |
| | | | e B; b | | 4-wheeled | | |
| | | | <u>bl</u> iog | | Kitchen tro | | |
| | | | gra | 97/98/99 | Missing | пеу | |

| ed blease | | | | | |
|--------------------------------------|---|---|---|-------------|---|
| Variable ClinicalFrailtyResearcher | | Variable Label Researcher frailty assessi | | | Value Label comment very fit; robust, active, energetic, well motivated and fit. These people commonly exercise regularlry and are in the most fit group for their age |
| | | , | | | well; without active disease, but less fit htan people in category 1 |
| | | | | | well; with terated comorbid disease. Disease symptoms are controlled compared with those in category 4 apparently vulnerable; although not frankly dependent, these people commonly complain of beign 'slowed up' or have disease symptoms |
| | | | | | mildly frail; with limited dependence on others for instrumental activities of daily living |
| | | | | | moderately frail; help is needed with both instrumental and non-instrumental activities of daily living severely frail; completely dependent on others for the activities of daily living or terminally ill |
| | | | | | 9 missing |
| ClinicalFrailtyIsClinicianPresent | | Is a registrar present to c | omplete 2nd part of the | a | 1 yes |
| | | | | | 2 no |
| ClinicalFrailtyClinican | | Clinician frailty assessme | nt based on observation | | very fit; robust, active, energetic, well motivated and fit. These people commonly exercise regularlry and are in the most fit group for their age |
| | | | | | well; without active disease, but less fit htan people in category 1 |
| | | | | | well; with terated comorbid disease. Disease symptoms are controlled compared with those in category 4 apparently vulnerable; although not frankly dependent, these people commonly complain of beign 'slowed up' or have disease symptoms |
| | | | | | mildly frail; with limited dependence on others for instrumental activities of daily living |
| | | | | | moderately frail; help is needed with both instrumental and non-instrumental activities of daily living severely frail; completely dependent on others for the activities of daily living or terminally ill |
| | | | | 9: | 9 missing |
| CALC_FriedTotalScore | | Fried frailty score | | | D not frail |
| | | | | | 1 pre frail |
| | | | | | 2 pre frail |
| | | | | | 1 moderate frailty |
| | | | | | 5 severe frailty 9 missing |
| DonEuron House | | Capacitation | m mu hamalatest at the | | |
| PenFromHand PenFromHand | | Can you take this oen fro | un my nand if I hold it hei | | 1 yes |
| | | | | | 9 missing |
| BustrainTimetable | | Are you able to use a bus | or train timetable?' | | 1 yes |
| | | · | | | 2 no |
| | | | | 97/98/9 | 9 missing |
| SitUprightforTwoHours | | Are you able to sit uprigh | nt in a chair for two hours | | l yes |
| | | | | | 2 no |
| CoinFromTable | | Are you able to pick up a | 10p coin from a table?' | | l yes |
| | | | | | 2 no 9 missing |
| | | | | | |
| EFSCognition | | draw 10 past 11 on clock | tace | | D no errors |
| | | | | | 2 other errors |
| | | | | 97/98/9 | 9 missing |
| EFSAdmitted | | How many hospital admi | ssions in the past year | | |
| | | | | | 1 1 or 2 2 >2 |
| | | | | 97/98/9 | 9 missing |
| EFSSocial Support EFSS ocial Support | | can you count on someo | ne? | | D always |
| | | | _ | | 1 sometimes |
| | | | | | 2 never |
| FFCFowerAM Adjustics | | At time as do you forgot to | pen : | | |
| EFSForgetMedication | | At times do you forget to | ា take your prescription m | | D no |
| | | | blis | | 9 missing |
| EFSNutrition | | Have you lost weight and | ्र I clotឆ្ses become loose? | | |
| | | | s 10.1 | | 1 yes |
| | | | 136/b | 97/98/9 | 9 missing |
| EFSMood | | Do you often feel sad or | depr e ssed?' | | 0 no |
| | | | ∘n-201 | | 1 yes 9 missing |
| | | | t, in cl | | |
| EFSContinence | | Do you have a problem lo | osing control of urine who | | 0 no |
| | | | n 7 Ma | | 9 missing |
| CALC_EdmontonFrailScale | | total score out of 17 | arch 2 Ensei; | 0- | 5 not frail |
| | | | larch 2019. Downloaded from Enseignement Superieur (A | 6- | 7 vulnerable |
| | | | Down! | | 9 mild frailty 1 moderate frailty |
| | | | o adec perie | 12-1 | 7 severe frailty |
| | | | d from (AE | 97/98/9 | 9 missing |
| EFIGPScore | | data extracted from GP s | _ - | | |
| | Fit (eFI score 0 - 0.12) | : People who have no or | 世w Igng-term conditions と 週 年 10 | that are us | sually well controlled. This group would mainly be independent in day to day living activities. |
| | Mild frailty (eFl score 0.13 – 0.24) | : People who are slowing | sign in sign older age and may | need help | with personal activities of daily living such as finances, shopping, transportation. |
| | oderate Frailty (eFI score 0.25 – 0.36) | : People who have difficu | भ्र ह ies अ vith outdoor activit | ies and ma | y have mobility problems or require help with activites such as washing and dressing. |
| Mc | | | ™ o | | |
| Mc | Course Freits. 1 Ft | Deniel 1 | umengent for nersonal ca | res and hav | re a range of long-term conditions/multimorbidity. Some of this group may be medically stable but others can be unstable and at risk of dying within 6 - 12 mon |
| Mc | | : People who are often do missing | tec e | | |
| | | | technolo | | |
| CALC_ELSAFrailtyIndex | 99 | | gune 9, 2025 at A | | |
| | 0-10 11-14 | missing very fit well | gune 9, 2025 at Agenc | | |
| | 0-10 11-14 | very fit well vulnerable | dune 9, 2025 at Agence Bible technologies. | | |

BMJ Open

| | | comment | Value Labe | Values | Variable La | Variable | |
|--|---------------|----------------|-------------|----------|-------------|-----------------------------|--|
| | | | Yes | 1 | Have you s | Sleep | |
| | | | No | 2 | | | |
| | | | Not sure | 3 | | | |
| | | | Missing | 97/98/99 | | | |
| | | | | | | | |
| | oout | ns walking a | no problen | 1 | EQ5D | HealthRelatedMobility | |
| | | ems | slight prob | 2 | | | |
| | | oroblems | moderate p | 3 | | | |
| | | olems | severe prol | 4 | | | |
| Pro | | valk | unable to v | 5 | | | |
| lect | | | Missing | 97/98/99 | | | |
| edit | | | | | | | |
| y c | r dressing | ns washing c | no problen | 1 | | HealthRelatedSelfCare | |
| ору | | ems | slight prob | 2 | | | |
| righ | | roblems | moderate p | 3 | | | |
| , | | | severe prol | | | | |
| clu | s | vash or dres | | 5 | | | |
| ding | | | Missing | 97/98/99 | | | |
| for | | | | , , | | | |
| use | al activities | rs doing usu | no problen | 1 | s | HealthRelatedUsualActivitie | |
| 38 | | | slight prob | | | | |
| elate | | | moderate p | 3 | | | |
| <u>a</u> | | | severe prol | 4 | | | |
| — te | vities | lo usual acti | | | | | |
| <u> </u> | Vicies | lo usuui ueti | Missing | 97/98/99 | | | |
| | | | IVIISSIIIE | 37730733 | | | |
| lata | | discomfort | no pain or | 1 | | HealthRelatedPain | |
| ₹. | rt | or discomfo | | | | Healtimelateuram | |
| ning | | pain or disco | <u> </u> | | | | |
| | | or discomf | | | | | |
| trai | | in or discon | | | | | |
| ning | HOLL | iiii or discon | | | | | |
| Protected by copyright, including for uses related to text and data mining, Al training, and similar technologies. | | | Missing | 97/98/99 | | | |
| <u>s</u> | | | | | | | |
| | | | | | | | |
| ar te | | | not and | | | Health Dalota d America | |
| <u>;;</u> | | or depress | | | | HealthRelatedAnxiety | |
| <u>o</u> | | ious or depr | | | | | |
| gies | | anxious or | | | | | |
| <u>Y</u> | | xious or dep | | | | | |
| | epressed | anxious or d | | | | | |
| | | | Missing | 97/98/99 | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | score | total EQ5D | CALC_EQ5D5L | |

| ld (please | | | | Value Labe no yes | |
|------------|-------------------------------|---------------------------|------------|-------------------------|---|
| | Variable | Variable Label | Values | Value Labe | comm |
| | PainStoppedActivity | has pain | 0 | no | |
| | PainStoppedClimbing | | 2 | yes | |
| | PainStoppedWalkingMoreThan200 | | 97/98/99 | Missing | |
| | PainStoppedWalkingLessThan200 | | | | rot |
| | PainCutDownActivities | | | | cte |
| | PainAccomplishingLess | | | | <u>ф</u> |
| | PainLimitedWork | | | | 00 |
| | PainWorkRequireExtraEffort | | | | byri |
| | PainTroubleSleeping | | | | ght, |
| | PainPreventSocialActivities | | | | inc |
| | | | | | Protected by copyright, including for uses related to text and data mining, |
| | PainToday | on a scale of 0-10 with 0 | number 0-2 | 10 | ng f |
| | PainLast7Days | | 97/98/99 | Missing | <u>و</u> |
| | | | | | ses |
| | | | | | re s |
| | | | | | ated |
| | | | | | 6 |
| | CALC_GeriatricPainMeasure | Geriatric Pain Measure to | number 0-4 | 40 | ext |
| | | | 97/98/99 | Missing | and |
| | | | | | dat |
| | | | | | a m |
| | | | | | ini, |
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| | | | | | technologies |

| Required Field (please | | | | | | |
|---------------------------|---|--|----------------------|-------------------|----------|----------|
| ** | Variable | Variable Label | Values | Value Label com | nment | |
| | SomeoneToTalkTo_LoninessScale | the extent to which the statements apply | | yes | | |
| | MissHavingCloseFriend_LoninessScale | and a steel to the state of the apply | | 2 more or less | | |
| | SenseOfEmptiness_LoninessScale | | | 3 no | | |
| | PeopleICanLeanOn LoninessScale | | | missing | | |
| | MissCompanyOfOthers_LoninessScale | | 5.756750 | 11110511118 | | |
| | CircleOfFriendsLimited_LoninessScale | | | | | |
| | PeoplelTrustCompletely_LoninessScale | | | | | |
| | PeoplelFeelCloseTo_LoninessScale | | | | | |
| | MissHavingPeopleAround_LoninessScale | | | | | |
| | FeelRejected_LoninessScale | <u> </u> | | | | |
| | CallFriendsWheneverINeed_LoninessScal | O Pe | | | | |
| | Call Helius Whellever Meeu_Lolliness3Ca | | | | | |
| | CALC_emotionalLoneliness | yes or more or less on ? 2,3,5,6,9,10 | number | | | |
| | CALC_emotionalconeliness | yes of filore of less off (2,5,5,6,9,10) | number | | | |
| | CALC missings metionall analysis | | | | | |
| | CALC_missingemotionalLoneliness | | | | | |
| | CALC assistantiness | no or more or loss on 21.4.7.9.11 | | | | |
| | CALC_socialLoneliness | no or more or less on ?1,4,7,8,11 number of missing items rect number of missing items | | | | |
| | | Ctec | | | | |
| | CALC_misssingsocialLoneliness | number of missing items | | | | |
| | | ÖÖ | | | | |
| | CALC_totalLonliness | De Jong Gierveld scale sum of emotional and social lon ஆineதீs | 0-2 | not lonely | | |
| | | right, | 3-8 | moderately lone | ely | |
| | | | 9-10 | severely lonely | | <u> </u> |
| | | including | | very serverly lor | nely | |
| | | | 97/98/99 | Missing | | |
| | | for t | | | | |
| | CALC_LonelinessScore | loneliness category | | Not Ionely | | |
| | | h 20 s reig | | Moderately lone | ely | |
| | | atec | | Severely lonely | | |
| | | loneliness category Barch 2019. Downloaded from text and dark and | | Very severely lo | nely | ļ |
| | | text! | 97/98/99 | Missing | | |
| | | and and | | | | |
| 1 | SatisfiedWithLife | basically satisfied with life | | yes | 1 | yes |
| 2 | DroppedActivities | dropped many activities and interests នី 🏯 🖁 | | no | 0 | no |
| 3 | FeelEmpty | | 97/98/99 | Missing | 97/98/99 | Missing |
| 4 | GetBored | often get bored | | | | |
| 5 | GetBored2 -?goodspirits? | in good spirits most of the time | | | | |
| 6 | SomethingBadGoingToHappen | in good spirits most of the time afraid that something bad is going to happen feel happy most of the time | | | | |
| 7 | FeelHappy | | | | | |
| 8 | FeelHelpless | often feel helpless | | | | |
| 9 | PreferToStayAtHome | prefer to stay at home rather than going out and doing fings | | | | |
| | Problems With Memory | more problems with memory than most | | | | |
| | WonderfulToBeAlive | think it's wonderful to be alive | | | | |
| | Worthless | worthless the way you are now | | | | |
| | FullOfEnergy | | | | | T |
| | SituationIsHopeless | full of energy Q Q S Situation is hopeless | | | | |
| | BetterOffThanYou | most people better off than you | | | | <u> </u> |
| | | Се | | | | |
| | GeriatricDepressionScale | total from 15 questions reverse score for items 1,5,7,11,13 🔁 5 suggests | s depressed number 0 | -15 | | |
| | one and a special production | 0 0 | 97/98/99 | 1 | | |
| | | <u>ម</u> ស ក | 31738733 | 1411351116 | | |
| | <u> </u> | phiqu | 1 | | <u> </u> | |

| equired ield (please | | | Open: first by Val | 1 | | |
|----------------------|---|------------------------------|-----------------------|--------|---------------|------------|
| () | Variable | Variable Label | Valu | S | Value Labe | l commer |
| | BounceBackQuickly_BriefResilienceScale | agreement with resilianc | e 5 | 1 | strongly ag | ree |
| | HardTimeThroughStressfulEvents_BriefResilienceScale | | ublished | 2 | agree | |
| | LongToRecoverFromStress_BriefResilienceScale | | ره ا | 2 | neutral | |
| | SnapBackFromSomethingBad_BriefResilienceScale | | rote | 4 | disagree | |
| | DifficultTimesLittleTrouble_BriefResilienceScale | | ecte | 5 | strongly dis | sagree |
| | TimeToGetOverSetBacks_BriefResilienceScale | | Protected by | 3/99 | Missing | |
| | | sum/6 items reverse scor | Jop / co | • | | |
| | CALC_briefResilianceScale | sum/6 items reverse scor | ir <u>s</u> un | per 1- | 6 higer=mor | e resilian |
| | | | 9 47/9 | 3/99 | Missing | |
| | | | inc | | | |
| | SolveDifficultProblems_SelfEfficacyScale | agreement with general s | e ludi | 1 | not at all tr | ue |
| | WaysToGetWhatIWant_SelfEfficacyScale | | ng i | 2 | hardly true | ! |
| | AccomplishMyGoals_SelfEfficacyScale | | or c | 3 | moderately | / true |
| | DealWithUnexpectedEvents_SelfEfficacyScale | | Ens Ises | 4 | exactly true | 2 |
| | HandleUnforeseenSituations_SelfEfficacyScale | | 9 6 8 | 3/99 | Missing | |
| | SolveMostProblems_SelfEfficacyScale | | nem ated |)) | | |
| | RemainCalm_SelfEfficacyScale | | ent | | | |
| | FindSeveralSolutions_SelfEfficacyScale | | Sur | | | |
| | ThinkOfASolution_SelfEfficacyScale | | ade erie anc | • | | |
| | HandleWhateverComes_SelfEfficacyScale | | d tro | 1 | | |
| | | | AB AB | | | |
| | CALC_SelfEfficacyScale | Total self-efficacy score- I | ni E G | oer 10 |)-40 | |
| | | | 97/9 | 3/99 | Missing | |

ng, and similar technologies.

.bmj.com/ on June 9, 2025 at Agence Bibliographique de l

| NB: Individual items in ELSA are pul | led from otl | ner assessm |
|---|---------------|-------------|
| | | |
| WalkingOneBlock_SF-36Activ | ities | |
| SitUprightForTwoHours AblaTaCatUpFramChair | | |
| AbleToGetUpFromChair ClimbingSeveralStairs SF-3 | 6Activiti | es |
| ClimbingStairs SF-36Activi | | |
| BendingKneelingStooping_SF | | ties |
| PenFromHand | | |
| ModerateActivities_SF-36Ac | tivities | |
| VigorousActivities_SF-36Ac | tivities | |
| CoinFromTable | | |
| HealthRelatedSelfCare HealthRelatedMobility | | |
| Bathing Bathing | | |
| Feeding | | |
| Transfers | | |
| ToiletUse | | |
| BustrainTimetable | | |
| MakeYourslefAHotSnack | | |
| DoOwnShopping_NEADLPartTwo | | |
| UseTelephone_NEADLPartTwo | | |
| EFSForgetMedication | • | |
| ManageOwnMoney_NEADLPartTw DoOwnHousework NEADLPartTw | | |
| ExhaustionPartA | | |
| Sleep | | |
| GoodSpirits | | |
| WonderfulToBeAlive | | |
| FeelHappy | | |
| ExhaustionPartB | | |
| Hypertension | | |
| Atherosclerotic | | |
| MyocardialInfarction | | |
| HeartFailure DiabetesMellitus | | |
| Cerebrovascular | | |
| COPD | | |
| RespiratoryAsthma | | |
| Osteoporosis | | |
| ExcludingNonmelanoma | | |
| Parkinson | | |
| NeurologicalDementia | | |
| eyesight 4 & 5 | | |
| hearing & vision 6 & 7 | | |
| FallsInLast12Months | | |
| FracturedHipWristBackbone Joint | | |
| geriatric pain measure 3 o | r | |
| MoCAOrientationDate | <u> </u> | |
| MoCAOrientationMonth | | |
| MoCAOrientationYear | | |
| MoCAOrientationDay | | |
| MoCASentenceRepetitionOne | | |
| MoCAVerbalFluency | | |
| delayed recall combines 5 | questions | |
| SF-36HealthSurvey' | | |
| <pre>GeriatricDepressionScale > CALC totalLonliness) >= 3</pre> | = 5 | |
| <pre>CALC_totalLonliness) >= 3 AtrialFibrillation</pre> | | |
| AtrialFlutter | | |
| Osteoarthritis | | |
| RheumatoidArthritis | | |
| OtherArthritis | | |
| Arthritis | | |
| Anxiety | | |
| Depression | | |
| RecognisingPeople | | |
| ReadingNewsprint HearingInQuietRoom | | |
| HearingInQuietRoom HearingInLoudRoom | | |
| PainStoppedWalkingMoreThan | 200 | |
| PainStoppedWalkingLessThan | | |
| MoCADelayedRecallFace | | |
| MoCADelayedRecallVelvet | | |
| MoCADelayedRecallChurch | | |
| MoCADelayedRecallDaisy | | |
| MoCADelayedRecallRed | | |
| | | |
| CALC_ELSAFrailtyIndex | | |

| B: Individual items in Fried are pulled from ot | ner assessment dat | ta where possibl | e to avoid overb | ourdening the | BMJ Openpant | |
|---|--------------------|------------------|------------------|---------------|--|--|
| | | | | | rst | |
| ALC_DemiSpanHeight | | | | | oubl | |
| ALC_BMI | | | | | published | |
| ValkTime | | | | | <u>හි</u> | |
| VeightLoss | | | | | Pro S | |
| xhaustionPartA | | | | |).11 ee | |
| xhaustionPartB | | | | | as 10.1136/bmjopen-2018-026744 on 7 Protected by copyright, including fo | |
| ominantHand | | | | | by mio | |
| ominantHandFirstAttempt | | | | | pen pen | |
| ominantHandSecondAttempt | | | | | -20 righ | |
| ominantHandThirdAttempt | | | | | nt, ir | |
| Ion Dominant Hand First Attempt | | | | | 267 nclu | |
| IonDominantHandSecondAttempt | | | | | 44 o | |
| lonDominantHandThirdAttempt | | | | | on 7 | |
| ALC_DominantMeanGripStrength | | | | | Mar Mar | |
| ALC_NonDominantMeanGripStrength | | | | | ch Sei | |
| ALC_FriedTotalScore | | | | | 201 gne elat | |
| | | | | | Downloaded from hent Superieur (ABE to text and data mi | |
| | | | | | s 10.1136/bmjopen-2018-026744 on 7 March 2019. Downloaded from http://bmjopen.bmj.com/ on June 9, 2025 at Agence Bibliographique de l Enseignement Superieur (ABES) . Protected by copyright, including for uses related to text and data mining, Al training, and similar technologies. | |

Project number: [office use only]



CARE75+ DATA REQUEST FORM

This form is to be used for all data request purposes including; sampling, preparatory work and research.

The request contact will be responsible for the transfer, storage and governance of the data in line with the data sharing agreement (appendix 1).

All sections *must* be completed.

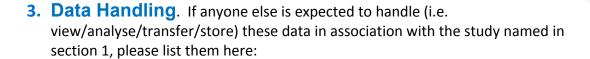
1. Office use only

| Data request number | |
|------------------------|---|
| Date of request | 4 |
| Date of review by DRRC | 4 |
| Date of DRRC query | |
| Date of query review | |
| Data sent | |

2. Request contact

| Study Name: | |
|-----------------|--|
| Requested by: | |
| Contact: | |
| Email | |
| Telephone | |
| Job role | |
| Organisation | |
| Date of request | |
| Date required | |

Project number: [office use only]



| Name | Affiliation | Title | Role in the project |
|------|-------------|-------|---------------------|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

4. Purpose of request

| Sampling i.e. participant contacts | |
|---|--|
| Scoping exercise e.g feasibility/protocol | |
| development | |
| Research e.g. analysis for | |
| funded/approved projects | |

| 5 . | Research question | and b | rief | summary | of research | (350 |
|------------|-------------------|-------|------|---------|-------------|------|
| | words) | | | | | |

6. What type of data do you require?

| Individual identifiable data (contains | |
|--|--|
| personal details) | |
| Pseudo-anonymised (contains unique id | |
| for data linkage) | |
| Anonymised (contains no identifiable | |
| details) | |

Enquiries to lesley.brown@bthft.nhs.uk

Project number: [office use only]



| Baseline | |
|---------------------|--|
| Six month follow-up | |
| 12 month follow-up | |
| 24 month follow-up | |
| 48 month follow-up | |
| Latest time-point | |

8. Selection criteria

| Included if: | |
|------------------|---|
| | |
| But excluded if: | 4 |
| | |

9. Specific data items required

| Date of | |
|--------------|---|
| Assessment | |
| required? | |
| Data | Variable name (please cut and paste from data dictionary) |
| dictionary | |
| sheet title | |
| Contact | · La |
| information | |
| Personal | |
| details | |
| Housing, | |
| Living | |
| Circumstance | |
| Education, | |
| Occupation | |
| Family Data | |
| Formal and | |
| Informal | |
| Support | |
| Smoking, | |
| Alcohol | |
| Hearing, | |
| Eyesight | |
| SF-36 | |

| | 1 |
|--|---|
| | J |
| | |
| | |

| MoCA | |
|-----------------|--|
| Co- | |
| morbidities | |
| Falls | |
| Medications | |
| Activities of | |
| Daily Living | |
| Height, | |
| Weight, BP, | |
| Grip | |
| Timed Up | |
| and Go, | |
| Walking | |
| Frailty | |
| Quality of Life | |
| and Sleep | |
| Pain | |
| Loneliness, | |
| Depression | |
| Resilience, | |
| Self-Efficacy | |

| 10. Please can you provide details of your intended ou | ıtput | (for example, | publication |
|--|-------|---------------|-------------|
| or report) | | | |
| | | | |

BMJ Open

The Community Ageing Research 75+ Study (CARE75+): an experimental ageing and frailty research cohort

| Journal: | BMJ Open |
|----------------------------------|---|
| Manuscript ID | bmjopen-2018-026744.R1 |
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Introduction: The Community Ageing Research 75+ Study (CARE75+) is a longitudinal cohort study collecting an extensive range of health, social and economic data, with a focus on frailty, independence and quality of life in older age. CARE75+ is the first international experimental frailty research cohort designed using Trial within Cohort (TwiCs) methodology, to align applied epidemiological research with clinical trial evaluation of interventions to improve the health and wellbeing of older people living with frailty.

Methods and analysis: Prospective cohort study using a trial within cohort (TwiCs) design. One thousand community-dwelling older people (≥75years) will be recruited from UK general practices. Nursing home residents, those with an estimated life expectancy of three months or less and people receiving palliative care will be excluded. Data collection assessments will be face-to-face in the person's home at baseline, six months, 12 months, 24 month and 48 months, including assessments of frailty, cognition, mood, health-related quality of life, comorbidity, medications, resilience, loneliness, pain and self-efficacy. A modified protocol for follow-up by telephone or web-based will be offered at six months. Consent will be sought for data linkage and invitations to additional studies, including intervention studies using the TwiCs design. A blood sample bio-bank will be established for future basic science studies.

Ethics and dissemination: CARE75+ was approved by the NRES Committee Yorkshire & the Humber - Bradford Leeds 10th October 2014 (14/YH/1120). Formal written consent is sought if an individual is willing to participate and has capacity to provide informed consent. Consultee assent is sought if an individual lacks capacity.

Study results will be disseminated in peer-reviewed scientific journals and scientific conferences. Key study results will be summarised and disseminated to all study participants

via newsletters, local older people's publications and local engagement events. Results will be reported on a bespoke CARE75+ website.

Trial registration

ID ISRCTN16588124 (date of registration 26th February 2016 - retrospectively registered; date of first participant recruitment January 2015)

Strengths and limitations of this study

- CARE75+ is a prospective cohort study recruiting older people aged 75 and over, designed using Trial within Cohort (TwiCs) methods, collecting an extensive range of demographic, health and socioeconomic data at baseline, six, 12, 24 and 48 months.
- Our recruitment strategy, including home consent visits, home assessments, and use
 of researchers with community language skills, is designed to optimise the
 recruitment of older people across the frailty spectrum.
- CARE75+ will recruit participants from a variety of ethnic backgrounds and those with advanced frailty who are often underrepresented in research.
- Care home residents are not eligible for the study, aligned with the TwiCs design, meaning that findings cannot be generalised to this group of especially frail older people.
- CARE75+ is a cohort of high strategic relevance, which will help shape future UK and international health and research policy in ageing and frailty.

 Global ageing demographic projections indicate that there will be two billion people aged over 65 worldwide by 2050 [1, 2]. Frailty is an especially problematic expression of population ageing, with profound implications for planning and delivery of health and social care services globally. It is a condition characterised by loss of biological reserves, failure of homeostatic mechanisms and increased vulnerability to adverse outcomes following relatively minor stressor events [3, 4]. Thus, a mild infection, new medication, or minor surgery can result in a sudden, disproportionate change in health status or functional status for an older person with frailty, for example a change from independence to dependence, a fall, or development of delirium. Frailty is also associated with an increased risk of a range of adverse outcomes, including future disability, admission to hospital, long-term care residence and mortality [5].

To date, the healthcare response to frailty has been predominantly reactive and secondary care based. However, there is increasing recognition that frailty should be identified and managed as a long-term condition with preventative and proactive care models [6-8]. Furthermore, with the widespread introduction of robustly developed tools to detect frailty in primary care such as the electronic Frailty Index (eFI) based on routinely available primary care electronic health record (EHR) data in the UK [9], primary care teams can now more readily and reliably identify older people with frailty within their patient populations. These novel approaches are providing opportunities to develop and deliver services according to frailty status rather than chronological age.

Improved management of frailty requires an integrated approach spanning primary care, secondary care and social services that incorporates consideration of frailty transitions and health trajectories. Where possible, integrated care pathways should be developed and implemented based on suitably targeted, evidence-based interventions. Although

recruitment to ageing and frailty observational research studies has historically been relatively high [10, 11], recruitment rates to clinical trials of frailty interventions have frequently been low.

The Trial within Cohort (TwiCs) design [12] is an innovative research methodology that has the potential to enhance participation of older people with frailty in a range of studies including clinical trials, and to increase the capacity to conduct high quality frailty research [13]. The TwiCs design has several key features including the establishment of an observational cohort to both provide longitudinal data and function as a recruitment platform for multiple trials and other research studies. Each individual trial uses random selection of some (not all) participants from the cohort; intervention-centred information and consent is applied. The process aims to replicate the real world of routine health care by taking informed consent only from those randomised to receive an intervention, as the ongoing cohort study provides a natural control group.

Methods and analysis

Aim

Our aim is to establish a longitudinal cohort of older people to investigate frailty, disability and quality of life in older age and to act a recruitment platform for future studies (substudies) to enable the development and evaluation of interventions to improve outcomes for older people.

Patient and public involvement

We have established a Frailty Oversight Group (FOG) as a central component of the CARE75+ study. The FOG comprises a core reference group of four key individuals with links to local community organisations involved in the support of older people living with frailty, and a minority ethnic group advocate from the local authority. The FOG play a key

The FOG had close involvement in developing and piloting the outcome assessment schedule for the study, highlighting the need to include measures that extend beyond traditional health domains into areas such as loneliness and resilience in later life. The FOG contributed to the development of all study materials, including invitation letters and participant information sheets, to ensure alignment with the needs of older people. Results are disseminated widely to participants, including through regular newsletters and an annual celebration event.

Design

 A multi-site, community-based cohort study using a TwiCs design [12].

Inclusion criteria

Community dwelling older people aged ≥75 years.

Exclusion criteria

People with terminal cancer, life expectancy of three months or less and people in receipt of palliative care services will be excluded. Care home residents and people living at home who are bedbound will be excluded. However, we will attempt to follow-up people who transition to a care home during the course of the study.

Assessments

The CARE75+ assessment includes detailed information on the demographic, health and social circumstances of participants. An extensive range of measures are collected using validated instruments, including assessments of frailty, cognition, mood, health-related

quality of life, comorbidity, medications, resilience, loneliness and self-efficacy (table 1). The selected measures have been carefully chosen to ensure that CARE75+ includes measures with the necessary validity, reliability and responsiveness to enable both applied epidemiological investigation and randomised trial evaluation of future interventions to improve outcomes.

List of current assessments

- Demographic information (age, sex, ethnicity, marital status, living circumstances, housing type, education, previous occupation).
- Family networks and informal support (self-report).
- Resource use: GP, hospital and outpatient admissions. Use of aids and adaptations (self-report)
- Formal care (self-report).
- Smoking habits & alcohol consumption (self-report).
- Vision LogMar Vision test [14] (Thompson Software Solutions) [15].
- Hearing (the Whispered Voice test) [16].
- Sleep (self-report).
- Medication (prescribed) details (name, dose, frequency) will be collected from
 Primary Care Electronic Health Records (EHR). Non-prescribed medication will be self-reported.
- Cognitive function assessed using the Montreal Cognitive Assessment (MoCA) [17],
 a brief cognitive assessment instrument. The MoCA assesses different cognitive
 domains: attention and concentration; executive function; memory; language;
 conceptual thinking; calculations; and orientation. The total possible score is 30, with
 higher scores indicating better cognitive function, and a score of ≥26 considered
 normal.

- Comorbidities data, collected via the primary care electronic health record (EHR),
 and by self-report using the Katz comorbidity questionnaire [18]. This questionnaire
 asks questions on various health conditions requiring a 'yes' or 'no' response.
- General health and health related quality of life, using the RAND short-form 36-Item Health Survey (SF36) [19] which includes 36 questions spanning eight health domains: physical functioning; bodily pain; role limitations due to physical health problems; role limitations due to personal or emotional problems; general mental health; social functioning; energy/fatigue; and general health perceptions. It also includes a single item that provides an indication of perceived change in health. The SF36 enables calculation of Physical Component Summary (PCS) and Mental Component Summary (MCS) scores, and derivation of an overall health utility score, the short-form 6 dimension score (SF6D) suitable for use in economic evaluations [20].
- Health related quality of life using the EuroQol five dimension health questionnaire (five-level version) EQ5D-5L [21]. The EQ5D-5L five dimensions are: mobility, self-care, usual activities, pain/discomfort and anxiety/depression. Each dimension has 5 levels of severity: no problems, slight problems, moderate problems, severe problems and extreme problems. The scores for each of the five dimensions are combined in a five digit number representing health status that can be converted into a utility index (0 for dead, 1 for perfect health and negative values for states worse than death) for use in economic evaluations.
- Basic activities of daily living (ADL) using the Barthel index (BI) [22]. The BI assesses
 functional status on a 20 point scale by recording ability to complete ten basic
 activities of daily living; bathing, bladder function, bowel function, dressing, feeding,
 grooming, mobility, stairs, toilet use and transfers. Higher scores indicate greater
 independence.

 Instrumental ADL, measured using the Nottingham Extended Activities of Daily Living
(NEADL) scale [23]. The NEADL includes questions on everyday activities in the
domains of mobility, kitchen, domestic and leisure and is scored between 0 and 66,
with higher scores indicating greater independence.

Measures of frailty:

- Research standard 60 item frailty index, based on the cumulative deficit model of frailty [24], and previously validated as part of the English Longitudinal Study of Ageing (ELSA) [25]. The frailty index score is calculated an equally weighted proportion of the number of deficits present in an individual relative to the total possible.
 - The phenotype model of frailty, based on the five physical characteristics as reported in the original Cardiovascular Health Study (slow walking speed, weight loss, exhaustion, weak grip strength, low energy expenditure) [3]. Slow walking speed is assessed by a timed three metre walk and results stratified by height and gender using values described in the original Cardiovascular Health Study, from which the phenotype model was derived [3]. Weight loss is determined by the following question. "In the last year, have you lost more than 10 pounds unintentionally?" Exhaustion is identified using the following questions: "How often in the last week do you feel that everything you did was an effort?" and "could not get going?". Responses are: rarely or none of the time (< 1 day) = 0; some or a little of the time (1 - 2 days) = 1; moderate amount of the time (3 - 4 days) = 2; most of the time = 3. If the participant answers "2" or "3" to either question they meet the criterion for exhaustion. Hand grip strength is assessed using a Jamar dynamometer and stratified using criteria from the Cardiovascular Health Study [3] with the mean of three attempts calculated for the dominant and non-dominant hand. Low activity is assessed using data obtained from the Physical Activity domain of the SF36

- [19]. Those with no characteristics are identified as fit, one or two characteristics as pre-frail and three to five characteristics as frail.
- The seven category Clinical Frailty Scale (CFS) [24], which is a validated measure of frailty based on clinical descriptors and pictographs, designed for specialist and non-specialist use in routine clinical practice. The CFS is an ordinal measure, with scores ranging from one (fit) to seven (severe frailty).
- The Edmonton Frail Scale (EFS) [26], which is a validated frailty measure designed for specialist and non-specialist use that records information on nine frailty domains (cognition, general health, functional independence, social support, medication use, nutrition, mood, continence, functional performance). The EFS is scored out of a total of 17, with higher scores indicating increasing frailty.
- The electronic frailty index (eFI) score [9], based on the cumulative deficit model of frailty, including 36 variables recorded in the primary care EHR as part of routine care. The eFI score is calculated as an equally weighted proportion of the number of deficits present in an individual relative to the total possible. The eFI enables identification of frailty categories (fit, mild frailty, moderate frailty, severe frailty) and is obtained directly from the primary care EHR.
- Height weight and body composition: researcher assessment using bio-impedance scales (Marsden BFA-220P Body fat analyser). Weight loss is obtained by self-report at baseline and calculated from previously recorded weight data at follow-up timepoints.
- Blood pressure (Life source auto inflation blood pressure monitor): sitting (three times), standing (once).
- Mobility, calculated using the timed-up-and-go-test (TUGT) [27]. The TUGT assesses
 a person's mobility and requires both static and dynamic balance. It measures the

time that a person takes to rise from a chair, walk three metres, turn around, walk back to the chair, and sit down. A person's usual walking aid is used if needed.

People completing the test in less than 20 seconds tend to be independently mobile, able to get in and out of a chair without assistance and climb stairs. People completing the test in 20-29 seconds demonstrate greater variability in mobility, balance and functional ability. Completion of the TUGT in 30 seconds or more identifies people likely to require assistance with getting in and out of a chair, climbing stairs and leaving the house.

- Pain, measured using the Geriatric Pain Measure Short Form [28]. This
 questionnaire includes items of pain intensity (current and last 7 days), and
 dichotomous items on how pain is impacting on a person's mobility, ability to
 accomplish tasks and to sleep. Items are combined to derive an overall summary
 score.
- Loneliness recorded using the 11 item De Jong Gierveld Loneliness scale [29]. Subcategories of social and emotional loneliness are calculated and a total score is derived enabling identification of categories: not lonely; moderately lonely; severely lonely; very severely lonely.
- Resilience, measured using the Brief Resilience scale (BRS) [30]. The six items in the BRS include five response options, enabling calculation of an overall score ranging from 1 to 6, with higher scores indicating greater resilience.
- Self-efficacy, measured using the General Self-Efficacy Scale [31]. This scale lists
 ten items with four response options enabling generation of a summary score ranging
 from 10 to 40, with higher scores indicating greater resilience.
- Low mood, assessed using the Geriatric Depression Scale Short-Form with a score of ≥5 indicating an abnormal low mood state [32].
- Self-reported falls.

- Frozen blood aliquots (Leeds & Bradford sites only) for future biochemical analysis, including:
 - Routine biochemistry and haematology: renal profile; liver profile; serum albumin; bone profile; glucose; glycosylated haemoglobin; lipid profile; uric acid; clotting.
 - Endocrine function: cortisol; thyroid function; IGF-1; DHEAS; testosterone;
 oestradiol; vitamin D; PTH; neuronal specific protein.
 - Immune function: highly sensitive CRP; inflammatory cytokines; rheumatoid factor; markers of immunosenescence.
 - Nutritional markers: vitamin A; vitamins B2, B6, B12; vitamin C; ferritin; folate;
 homocysteine.
 - Biomarkers of ageing: DNA repair capacity; telomere length; markers of oxidative stress.
 - Genetic markers: DNA; RNA; plasma.

The CARE75+ data dictionary is available as an appendix file (see Additional file 1).

Assessment schedule

 Participants will be assessed at baseline, six, 12, 24 and 48 months. Face-to-face assessments will be conducted in the participant's home. The feasibility of a modified, telephone-based or web-based assessment protocol will be tested at the six month time point for participants who are willing and able to undertake assessments in the alternative formats.

The assessment schedule for CARE75+ (baseline, six, 12, 24 and 48 months) has been carefully designed to accelerate the frailty translational research pathway by aligning robust epidemiological investigation with the typical follow-up schedule for feasibility and definitive trials of interventions.

Sample size

The CARE75+ study will generate a comprehensive dataset for applied epidemiological research and will act as a recruitment platform for additional studies (sub-studies), including qualitative studies as well as randomised controlled trials (RCTs) using TwiCs methods.

Therefore, the initial recruitment target is based on appropriate sample size calculations for pilot RCTs of interventions to inform the design of future definitive RCTs alongside applied epidemiological investigation of modifiable component of frailty.

Previous observational studies involving older people with frailty have identified that between 600 - 1000 participants are required for reliable estimates of the main effects [33]. Following an initial pilot phase involving 200 participants to test recruitment methods and gather data on rates of assent to participation in future trials, we plan to recruit 1000 participants over a four year period. Previous observational studies involving the oldest old have reported 18 month attrition rates of around 25% due to mortality and withdrawal of consent [10]. As our cohort will include older people with frailty who are at increased risk of adverse outcomes we plan to recruit a minimum of 250 participants per year thereafter, to maintain a legacy cohort for future clinical trials. Findings from the CARE75+ study will inform the design of a future definitive experimental frailty research cohort of sufficient size to nest a series of definitive intervention trials targeted at a range of potentially modifiable components of frailty, including people living with different frailty severity grades.

We will work with general practices to identify and recruit participants in primary care. Following initial piloting of recruitment methods in Bradford and Leeds, West Yorkshire, we will extend recruitment to other practices in England, using the skills and experience of staff within the National Institute for Health Research Clinical Research Networks (NIHR CRN).

The CARE75+ recruitment, consent, assessment and follow-up process is summarised in a study flowchart (figure 1).

Participant contact

Potential participants will be posted a study invitation pack containing a letter of invitation, a user-friendly participant information leaflet with photographs of the research staff involved in the home visits, and a supporting letter from their general practice. Potential participants who are not interested in participating in the study will be invited to contact their general practice to opt out. If potential participants do not opt out, contact details of eligible participants will be provided to the research team via a secure email system. The invitation letter will be followed up after two weeks with a telephone call from a researcher to discuss the study in more detail. If initial interest is expressed, the researcher and potential participant will arrange a home visit for an in-depth discussion of the study, where informed, written consent to participate will be sought.

The recruitment methods take into account the range of physical and cognitive challenges encountered by older people. Experience from previous cohort studies involving older people with frailty, disability and cognitive impairment has demonstrated that direct telephone calls or in-person visits are the only reliable methods of finding out whether potential participants are interested in participating, and may be preferred because they are seen as less of a burden [33]. Recruitment procedures will ensure that an older person with frailty receives all

the necessary information to make an informed decision about participation. Procedures have been developed in close partnership with lay representatives through our Patient and Public Involvement Frailty Oversight Group [34], established as part of the National Institute for Health Research Collaboration for Leadership in Applied Health Research and Care, Yorkshire and Humber (NIHR CLAHRC Yorkshire & Humber) programme.

Participant consent

Following initial telephone contact, researchers will visit participants who express an interest in participation and verbally explain the study in detail, including providing a comprehensive study information leaflet. Potential participants will be able to have an advocate, family member or friend present and will be offered 48 hours to reflect on the information before deciding to consent. For individuals whose first language is not English, a community language speaking researcher will be assigned where possible, or a suitable advocate identified.

Researchers will assess an individual's capacity to consent in accordance with the Mental Capacity Act (MCA) [35]. Formal written consent will be sought if an individual is willing to participate and has capacity to provide informed consent. The consent form will detail all processing and disclosure of the information collected including data analysis, data linkage, providing contact details to future researchers, and the storage and use of blood samples. Some components of the consent will be optional (for example taking and storing blood, consenting to be approached about other studies). Written consultee assent will be sought if individual participants do not have capacity to consent. Independent consent to participate will be obtained for participation in any future trial.

 We plan face-to-face data collection, but we will test the feasibility of telephone or webbased modified data collection procedure for participants who are willing, and able, at the six month time point.

Prescribed medications, comorbidity data and eFI scores will be obtained from general practice EHRs, extracted using standardised reporting templates developed for the SystmOne [36] and EMISWeb [37] primary care EHR systems.

All data will be collected using a bespoke electronic data capture application (EDCA), the CARE75+app developed and tested by Tigerteam Software Ltd^a. Blood samples will be collected at baseline and 12 months from participants in the Bradford and Leeds sites.

Research staff training

Research staff will undertake a bespoke training programme, depending on skills and experience, including: the Mental Capacity Act [35]; research with older people; phlebotomy and safeguarding vulnerable adults. Additionally, staff will receive training in completion of the individual assessment measures and data entry into the Electronic Data Capture Application (EDCA).

Plans to promote participant retention and complete follow-up

We will seek broad and enduring consent for data linkage and use of collected data following withdrawal or death, aligned with Medical Research Council (MRC) guidelines for maximising the use of cohort data [38].

We will post newsletters to participants at least twice a year to provide study updates and encourage continued engagement. We will hold annual engagement events, where feasible

 to do so, and promote the study locally via affiliated newsletters (e.g. Age UK Voice magazine) and local forums.

Data entry, coding, security and storage

The EDCA will comprise two main components: a Data Collection Application (DCA) and Back Office System (BOS) containing personal identifiable information. The DCA will run on Microsoft Windows platform using an encrypted embedded database to temporarily store data. The BOS database will be on a Microsoft SQL server hosted at Bradford Teaching Hospitals NHS Foundation Trust (BTHFT). All data will be captured off-line in the community. Data will be uploaded regularly to ensure no identifiable data remains on the portable device for longer than 48 hours. Named researchers will have access to the individual details only whilst data collection takes place. A participant's details will only be released to one researcher at a time via the BOS management system. Access to modules and functions of both the DCA and BOS will governed by usernames, passwords and role specific access permissions, to maximise data security.

Remote site data (outside BTHFT) and the on-line completion forms (optional 6 month follow-up protocol) will be transferred to the BIHR-CARE database via the web application auecr.bradfordhospitals.nhs.uk hosted on the web server bhts-bihrweb. The site will be protected by SSL certificates, to encrypt the transfer of data over the internet. Access to the web application https://auecr.bradfordhospitals.nhs.uk on the server bhts-bihrweb will be restricted and protected by the Threat Management Gateway (TMG) software and SSL certificates. Remote site administrators and researchers will only have access to their own local participants.

Access to the BIHR-CARE database information will be based on role specific permissions.

The chief investigator and project manager will have access to all data, at all levels for

administration and governance purposes. Local site administrators will have access to local participant details. Researchers will have access to individual (site specific) case information only at the time of data collection. Researchers will have a maximum of three participants available on portable devices (laptops) at any one time. Pathology laboratory staff will have access to blood sample data entry pages only. Statisticians and other members of the CARE75+ research team will only have access to pseudo anonymised i.e. those with unique identifiers for use in data linkage or anonymous data. Individual participants will be limited to access to a blank follow up questionnaire to complete and submit. All submitted data is final and data access is only available to the Super Administrator at BTHFT.

Data quality

 Data quality will be enhanced by integral features of the data capture software, which will identify missing data and outlying values in real time. The software will automatically calculate the total scores for composite assessments. This will increase research efficiency and research data quality by reducing resource required for data cleansing, coding for analysis and reduce inputting errors.

Statistical methods

We plan interim data analyses after the completion of each stage i.e. baseline, 6, 12, 24 and 48 month follow-up of the study. We will assess frailty transitions using multivariate statistical methods. We will estimate health and social care resource use associated with frailty using economic modelling techniques.

We will conduct applied epidemiological investigation of the association between potentially modifiable components of frailty and outcomes, including: how pain modifies the association between frailty and disability; how resilience modifies the association between frailty and disability; and the association between frailty, mood and outcomes. We will investigate

construct and criterion validity of a range of tests collected [39]. We will assess frailty transitions using transition modelling. We will estimate health and social care resource use associated with frailty using economic modelling techniques.

Methods for any additional analyses (subgroup and adjusted analyses)

Data will be made available to external investigators upon request and reviewed by the CARE75+ Data Request Review Committee (DRRC), comprising the Chief Investigator, CARE75+ project manager, database manager, an independent member and independent lay representative from the Frailty Oversight Group [34].

The ethnic diversity of our planned recruitment sites will enable the investigation of ageing, frailty and disability in different cultural contexts.

Missing data

Methods for dealing with missing data will depend on the amount of missing data and patterns of missingness for individual variables as part of individual analyses. We will undertake sensitivity analysis to investigate the impact of missing data and we will explore the use of appropriate imputation methods.

Ethics and dissemination

This study was approved by the NRES Committee Yorkshire & the Humber - Bradford Leeds on the 10th October 2014 (14/YH/1120). CARE75+ is an observational study with low risk to participants. Cohort governance will be provided by the National Institute for Health Research Collaboration for Leadership in Applied Health Research and Care Yorkshire & Humber (NIHR CLAHRC YH) Frailty Theme [40] Operational Group comprised of the Theme Leads, Theme Manger, Project Managers and co-applicants. Independent scrutiny will be provided by the Frailty Oversight Group [34], which is comprised of lay members with

Access to data

BTHFT will be the data controller for CARE75+. Data will be made available to external researchers in accordance with CARE75+ data sharing protocols following review of the CARE75+ data dictionary (supplementary file 1) and completion of the CARE75+ data request form (supplementary file 2), review by the DRRC and completion of a data sharing transfer agreement.

Ancillary and post-study care

We anticipate that some participants may have potentially unmet care needs and may wish to discuss these with the researcher. We will ensure that researchers are able to signpost participants to local statutory and voluntary organisations (e.g. Age UK), or request a GP referral for social services assessment so that appropriate plans can be made for ongoing care.

Safeguarding issues identified during the assessment visits will be reported to the Research Project Manager who will then take advice from the Adult Safeguarding Co-ordinator in the relevant local authorities.

Dissemination policy

Study results will be disseminated in peer-reviewed scientific journals and submitted for consideration at local, national and international scientific conferences. Key study results will be summarised and disseminated to all study participants via newsletters, local older

people's publication (e.g. Voice magazine, Age UK) and local engagement events. Results will be reported on a bespoke CARE75+ website.

Research outputs using data from the CARE75+ study will be required to acknowledge the data source and funder using standardised wording. Additionally, studies involving participants identified from the cohort (sub-studies) will be required to acknowledge the CARE75+ cohort in all reports. The full protocol and participant level dataset will be made available to not-for-profit investigators. Enquiries should be made to the CARE75+ Chief Investigator and will be reviewed by the DRRC.

Discussion

CARE75+ will use novel TwiCs methodology to align applied epidemiological research into ageing and frailty with clinical trials of interventions, potentially accelerating the translational research pathway in this important area.

We describe methods to recruit a cohort of older people and collect an extensive range of health, social and economic outcome data. We plan to collect a range of validated measurements of frailty in CARE75+, including the eFI, which has been made available to every general practice in England through a national implementation project, facilitating the rapid translation of research findings into clinical practice. Our recruitment strategy, including home consent visits, home assessments, and use of researchers with community language skills, is designed to optimise the recruitment of older people across the frailty spectrum and from a variety of ethnic backgrounds, including those with advanced frailty who are often underrepresented in research. Care home residents are not eligible for the study, aligned with the TwiCs design, meaning that findings cannot be generalised to this group of especially frail older people.

Author contributions

Anne Heaven (AH): substantial contribution to the conception and design of the work; drafting the work and critical revisions; approval of final manuscript; accountable for all aspects of the work

Lesley Brown (LB): substantial contribution to the conception and design of the work; drafting the work and critical revisions; approval of final manuscript; accountable for all aspects of the work

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Elizabeth Teale (ET) substantial contribution to the conception and design of the work; drafting the work and critical revisions; approval of final manuscript; accountable for all aspects of the work

Rebecca Hawkins (RH): substantial contribution to the conception and design of the work; drafting the work and critical revisions; approval of final manuscript; accountable for all aspects of the work

Karen Spilsbury (KS): substantial contribution to the conception and design of the work; drafting the work and critical revisions; approval of final manuscript; accountable for all aspects of the work

Gail Mountain (GM): substantial contribution to the conception and design of the work; drafting the work and critical revisions; approval of final manuscript; accountable for all aspects of the work

 Tracey Young (TY): substantial contribution to the conception and design of the work; drafting the work and critical revisions; approval of final manuscript; accountable for all aspects of the work

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Amrit Daffu-O'Reilly (ADOR): substantial contribution to the conception and design of the work; acquisition of data for the work; drafting the work and critical revisions; approval of final manuscript; accountable for all aspects of the work

Andrew Clegg (AC): substantial contribution to the conception and design of the work; acquisition of data for the work; drafting the work and critical revisions; approval of final manuscript; accountable for all aspects of the work

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Competing interests

None.

Word count

4,710 words (main manuscript)

Additional Files

Additional file 1

Excel .xls

CAREDataDictionaryPub

Data collected during CARE75+ assessments, including all variable and value names and

labels.

Figure 1



References

1. Kinsella KG, Phillips DR. Global aging: The challenge of success. Vol. 60. 2005: Population Reference Bureau Washington, DC.

- United Nations. The World at Six Billion. 1999.
 http://www.un.org/esa/population/publications/sixbillion/sixbilpart1.pdf. Accessed 15 Feb 2018.
- 3. Fried, L.P., et al., Frailty in older adults: evidence for a phenotype. J Gerontol A Biol Sci Med Sci, 2001. **56**(3): p. M146-56.
- Walston, J., et al., Research agenda for frailty in older adults: toward a better understanding of physiology and etiology: summary from the American Geriatrics Society/National Institute on Aging Research Conference on Frailty in Older Adults. J Am Geriatr Soc, 2006. 54(6): p. 991-1001.
- 5. Clegg, A., et al., Frailty in elderly people. Lancet, 2013. **381**(9868): p. 752-62.
- 6. Harrison, J.K., et al., Managing frailty as a long-term condition. Age Ageing, 2015. **44**(5): p. 732-5.
- 7. Multimorbidity: clinical assessment and management (NG56). National Institute for Health and Care Excellence, September 2016. NICE, London.
- 8. Fit for Frailty Part 2: Developing, commissioning and managing services for people living with frailty in community settings. British Geriatrics Society & Royal College of General Practioners. 2014.
- Clegg, A., et al., Development and validation of an electronic frailty index using routine primary care electronic health record data. Age Ageing, 2016. 45(3): p. 353-60.
- 10. Davies, K., et al., Engaging the oldest old in research: lessons from the Newcastle 85+ study. BMC Geriatr, 2010. **10**: p. 64.
- 11. der Wiel, A.B., et al., A high response is not essential to prevent selection bias: results from the Leiden 85-plus study. J Clin Epidemiol, 2002. **55**(11): p. 1119-25.
- 12. Relton, C., et al., Rethinking pragmatic randomised controlled trials: introducing the "cohort multiple randomised controlled trial" design. BMJ, 2010. **340**: p. 963-967.
- 13. Clegg, A., et al., Improving recruitment of older people to clinical trials: use of the cohort multiple randomised controlled trial design. Age Ageing, 2015. **44**(4): p. 547-50.
- 14. Evans, J.R., et al., Prevalence of visual impairment in people aged 75 years and older in Britain: results from the MRC trial of assessment and management of older people in the community. Br J Ophthalmol, 2002. **86**(7): p. 795-800.
- 15. Electronic LogMar Vision Test, Thompson Software Soultions; http://www.thomson-software-solutions.com/test-chart-lite. Accessed 15 Feb 2018.
- 16. Pirozzo, S., T. Papinczak, and P. Glasziou, Whispered voice test for screening for hearing impairment in adults and children: systematic review. BMJ, 2003. **327**(7421): p. 967.
- 17. Nasreddine, Z.S., et al., The Montreal Cognitive Assessment, MoCA: a brief screening tool for mild cognitive impairment. J Am Geriatr Soc, 2005. **53**(4): p. 695-9.
- 18. Katz, J.N., et al., Can comorbidity be measured by questionnaire rather than medical record review? Med Care, 1996. **34**(1): p. 73-84.
- 19. Hays, R.D., C.D. Sherbourne, and R.M. Mazel, The RAND 36-Item Health Survey 1.0. Health Econ, 1993. **2**(3): p. 217-27.
- 20. Brazier, J., J. Roberts, and M. Deverill, The estimation of a preference-based measure of health from the SF-36. J Health Econ, 2002. **21**(2): p. 271-92.
- 21. EuroQoL. EQ-5D-5L. Available from: https://euroqol.org/eq-5d-instruments/eq-5d-5l-about/. Accessed 15 Feb 2018.
- 22. Mahoney, F.I. and D.W. Barthel, Functional Evaluation: The Barthel Index. Md State Med J, 1965. **14**: p. 61-5.
- 23. Lincoln, N.B. and J.R. Gladman, The Extended Activities of Daily Living scale: a further validation. Disabil Rehabil, 1992. **14**(1): p. 41-3.

- 24. Rockwood, K., et al., A global clinical measure of fitness and frailty in elderly people. CMAJ, 2005. **173**(5): p. 489-95.
- 25. Marshall, A., et al., Cohort differences in the levels and trajectories of frailty among older people in England. J Epidemiol Community Health, 2015. **69**(4): p. 316-21.
- 26. Rolfson, D.B., et al., Validity and reliability of the Edmonton Frail Scale. Age Ageing, 2006. **35**(5): p. 526-9.
- 27. Podsiadlo, D. and S. Richardson, The timed "Up & Go": a test of basic functional mobility for frail elderly persons. J Am Geriatr Soc, 1991. **39**(2): p. 142-8.
- 28. Blozik, E., et al., Geriatric Pain Measure short form: development and initial evaluation. J Am Geriatr Soc, 2007. **55**(12): p. 2045-50.
- 29. De Jong Gierveld, J. and T. Van Tilburg, The De Jong Gierveld short scales for emotional and social loneliness: tested on data from 7 countries in the UN generations and gender surveys. Eur J Ageing, 2010. **7**(2): p. 121-130.
- 30. Smith, B.W., et al., The brief resilience scale: assessing the ability to bounce back. Int J Behav Med, 2008. **15**(3): p. 194-200.
- 31. Luszczynska, A., U. Scholz, and R. Schwarzer, The general self-efficacy scale: multicultural validation studies. J Psychol, 2005. **139**(5): p. 439-57.
- 32. Yesavage, J.A., Geriatric Depression Scale. Psychopharmacol Bull, 1988. **24**(4): p. 709-11.
- 33. Collerton, J., et al., The Newcastle 85+ study: biological, clinical and psychosocial factors associated with healthy ageing: study protocol. BMC Geriatr, 2007. **7**: p. 14.
- 34. Heaven, A., et al., Keeping it credible in cohort multiple Randomised Controlled Trials: the Community Ageing Research 75+ (CARE 75+) study model of patient and public involvement and engagement. Res Involv Engagem, 2016. **2**: p. 30.
- 35. Department of Health, Mental Capacity Act. 2005, London, HMSO.
- 36. tpp. Systmone. https://www.tpp-uk.com/products/systmonline Accessed 15 Feb 2018.
- 37. emis health. EMIS web. https://www.emishealth.com/products/emis-web/?tab=primary-care. Accessed 15 Feb 2018.
- 38. MRC. Maximising the value of UK population cohorts. 2014 https://www.mrc.ac.uk/publications/browse/maximising-the-value-of-uk-population-cohorts/. Accessed 15 Feb 2018.
- 39. Brundle, C., et al., Convergent validity of the electronic frailty index. Age Ageing, 2018.
- 40. CLAHRC Yorkshire & Humber. Primary care-based management of frailty in older people. 2017 07/12/17]; Available from: http://clahrc-yh.nihr.ac.uk/our-themes/primary-care-based-management-of-frailty-in-older-people. Accessed 15 Feb 2018.

Measures

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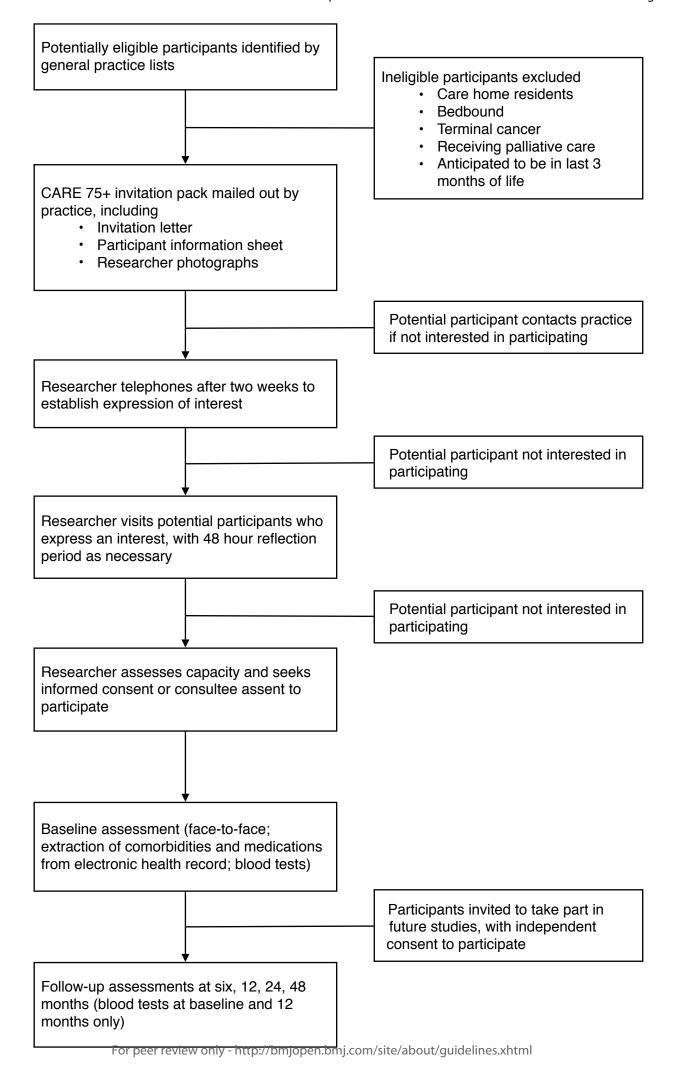
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Domain

Nottingham extended activities of daily living (NEADL)

| Domain | Measures | | | | |
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| Mobility | Timed-up-and-go test Gait speed | | | | |
| | Walking aid | | | | |
| Muscle strength | Grip strength | | | | |
| Pain | Geriatric pain measure | | | | |
| Loneliness | De Jong Gierveld Loneliness Scale | | | | |
| Depression | Geriatric depression scale | | | | |
| Resilience | Brief resilience scale | | | | |
| Self-efficacy | General self-efficacy scale | | | | |

Table 1. Domains and associated measures included in CARE75+ assessment schedule



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| | HowSafeDoYouFeelDuringDay | now sale (would) leel wal | | Very safe Fairly safe | ind this are | | 11 13 | min waik |
| | | | | A bit unsafe | | <u>h</u> , i | | |
| | | | | Very unsafe | | 0267 nclu | | |
| | | | | | | 2018-026744 on 7 light, including for | | |
| | | | 31/36/33 | IIIISSIIIg | | on 7 g fo | | |
| | HowSafeDoYouFeelDuringNight | How safe (would) feel wal | 1 | Very safe Fairly safe A bit unsafe Very unsafe missing g out & abou missing Very safe Fairly safe | NB this are | a <u>a</u> v u u asi | n 15 | min walk |
| | | sare (would) leer war | 2 | Fairly safe | | jsei jsei | . 13 | wain |
| | | | 2 | A bit unsafe | | 201s igne elate | | |
| | | | Δ | Very unsafe | | ed to | | |
| | | | 97/98/99 | missing | | own te | | |
| s value as fo | llows as adjacent question | | , , , , , , , | | | loac uper ct ar | | |
| | ConcernsGettingOutNone | What concerns, if any, sto | p you gettin | ig out & abou | ıt | ieu Hed d | | |
| | ConcernsGettingOutTraffic | 22 2, 2 2,, 300 | , , : 3 | | | ata i | | |
| | ConcernsGettingOutAntiSocialBeh | į | 97/98/99 | missing | | Min. | | |
| | ConcernsGettingOutFalling | | , , | | | ng, | | |
| | ConcernsGettingOutCrime | | | | | ₽ ğ | | |
| | ConcernsGettingOutOther | | | | | ain | | |
| | Concerns Getting Out Other Details | | Verbatim | | | ng, | | |
| | | | | | | j.co and | | |
| | | How safe feel crossing roa | 1 | Very safe | | sim | | |
| | HowSafeDoYouFeelCrossingRoads | | 2 | Fairly safe | | on June nilar tec | | |
| | HowSafeDoYouFeelCrossingRoads | | | | | - E | | |
| | HowSafeDoYouFeelCrossingRoads | | | A bit unsafe | | ne ec | | |
| | HowSafeDoYouFeelCrossingRoads | | 3 | A bit unsafe Very unsafe | | ne 9, 2 echno | | |
| | HowSafeDoYouFeelCrossingRoads | | 3 | | | ne 9, 2025 echnologi | | |
| | HowSafeDoYouFeelCrossingRoads | | 3 | Very unsafe | | 9, 2025 at hnologies. | | |
| | HowSafeDoYouFeelCrossingRoads HowWorriedAboutBeingVictimOf0 | How worried about being | 3 4 97/98/99 | Very unsafe | | | | |
| | | How worried about being | 3 4 97/98/99 | Very unsafe missing | | Agence | | |
| | | How worried about being | 3 4 97/98/99 1 2 | Very unsafe missing Very | | Agence | | |
| | | How worried about being | 3 4 97/98/99 1 2 3 | Very unsafe missing Very Fairly | | | | |

| | | | Open: first published | | | |
|---------------|----------------|---|---|----------|--------------|---------|
| Required | | | n: f | | | |
| Field (please | | | irst | N/ 1 | | |
| (X) | Variable | Variable Label | pub | Values | Value Label | comment |
| | ageEducation | how old were you when you finished full time continuous education ' | | number | | |
| | PaidWork | what was the last paid work that you did?! | ed a | numbar | | |
| | Paluvvork | what was the last paid work that you did?' | Pro | number | | |
| | Qualifications | what was the highest educational qualification you attained?' | tect | 1 | GCSE | |
| | Qualifications | what was the highest educational qualification you attained: | ed k | 2 | HNS/HND | |
| | | | oy njop | 3 | diploma | |
| | | | opyr | 4 | AS and A le | vel |
| | | | 201a ight | 5 | bachelor's | |
| | | | ; inc | 6 | postgradua | |
| | | | 674 Slud | 7 | no qualifica | |
| | | | ing i | 97/98/99 | missing | |
| | | | for c | | | |
| | | | Ens Ses | | | |
| | VoluntaryWork | do you currently do any voluntary work?' | n 20 seigi rela | 1 | yes | |
| | | | 19. I nem ated | 2 | no | |
| | | | to t | 97/98/99 | missing | |
| | | | as 10.1136/bmjopen-2018-026744 on 7 March 2019. Downloaded from http://bmjopen.bmj.com/ on June 9, 2025 at Agence Bibliographique de l Enseignement Superieur (ABES) . Protected by copyright, including for uses related to text and data mining, Al training, and similar technologies. | | | |
| | | For peer review only - http://bmjopen.bmj.com/site/about/guidelines.x | html | | | |

| eld (plea | Variable | Variable Label | Values | Value Label | commer |
|-----------|--------------------------|---------------------|----------|-------------|--------|
| | HaveBrothers | did/do you have any | number | | |
| | HaveSisters | did/do you have any | 97/98/99 | missing | |
| | HaveSons | did/do you have any | | | |
| | HaveDaughters | did/do you have any | | | |
| | HaveGrandsons | did/do you have any | | | |
| | HaveGranddaughters | did/do you have any | | | |
| | | | | | |
| | Brother First Name | did/do you have any | verbatim | | |
| | SisterFirstName | did/do you have any | | | |
| | SonFirstName | did/do you have any | | | |
| | DaughterFirstName | did/do you have any | | | |
| | GrandsonFirstName | did/do you have any | | | |
| | GraddaughterFirstName | did/do you have any | | | |
| | | | | | |
| | BrotherAliveorDead | did/do you have any | 1 | alive | |
| | SisterAliveorDead | did/do you have any | 2 | dead | |
| | SonAliveorDead | did/do you have any | 97/98/99 | missing | |
| | DaughterAliveorDead | did/do you have any | | | |
| | GrandsonAliveorDead | did/do you have any | | | |
| | GranddaughterAliveorDead | did/do you have any | | | |

| - V) - V | Verieble Lebel | Velvee | V-L | | | | | |
|---------------|--|--|---|---|--|--|--|--|
| e X) Variable | Variable Label | Values Values | Value Label comment | | | | | |
| | InformalSupportLift | If you needed a lift to somewhere urgently, could you ask someone for help?' | | Yes | | | | |
| | InformalSupportIII | If you wer ill in bed and needed help at home, could you ask someone for help?' | 2 | No | | | | |
| | | | | | | | | |
| | | | 97/98/99 | Missing | | | | |
| | | | | | | | | |
| | informal SupportCrisisNumberof PeopleforSupport | If you had a serious personal crisis, how many people could you turn to for comfort and support?' | number | | | | | |
| | | | 97/98/99 | Missing | | | | |
| | | | | | | | | |
| | informalSupporPeopleLiveClose | How many of these people live within a 15-20 minute drive, if any?' | number | | | | | |
| | | | 97/98/99 | Missing | | | | |
| | | | , = =, = = | | | | | |
| | InformalSupportBrother | Can you tellme the people to whom you could turn to for help (you can choose more than one)?' | 1 | yes | | | | |
| | InformalSupportSister | curryou termie the people to whom you could turn to for help (you can choose more than one): | | no | | | | |
| | | | | | | | | |
| | InformalSupportDaughter | | 97/98/99 | missing | | | | |
| | InformalSupportSon | | | | | | | |
| | InformalSupportGranddaughter | | | | | | | |
| | InformalSupportGrandson | | | | | | | |
| | InformalSupportFriend | | | | | | | |
| | InformalSupportNeighbour | | | | | | | |
| | InformalSupportOther | | verbatim | | | | | |
| | | | | | | | | |
| | informalSupportLastFourWeeks | approximately how many hours of informal suport have you had in the last four weeks? (unpaid) | number | | | | | |
| | | | 97/98/99 | Missing | | | | |
| | | | . , | | | | | |
| | Services Visit Warden_Services Visits Frequency | In the last 4 weeks, have you seen or had a visit from, or to, any of the following services? If so, how often?' | 1 | Several times a day | | | | |
| | ServicesVisitWarden_ServicesVisitsFrequency | in the last 4 weeks, have you seen of had a visit from, or to, any of the following services: it so, now often: | | Once a day | | | | |
| | ServicesVisitNightattendentsitter_ServicesVisitsFrequency | | | One or more times a week | | | | |
| | | | | | | | | |
| | ServicesVisitDaysitter_ServicesVisitsFrequency | | | Less than once a week | | | | |
| | Services Visit Meals Provision_Services Visits Frequency | <u> </u> | | No contact | | | | |
| | ServicesVisitCommunityNurse_ServicesVisitsFrequency | | | Don't know | | | | |
| | ServicesVisitPhysiotherapist_ServicesVisitsFrequency | <u> </u> | 7 | Not applicable | | | | |
| | Services Visit Occupational Therapist_Services Visits Frequency | <u>ub</u> | 97/98/99 | Missing | | | | |
| | ServicesVisitChiropodist_ServicesVisitsFrequency | she | | | | | | |
| | ServicesVisitSpeachTherapist_ServicesVisitsFrequency | ä. | | | | | | |
| | ServicesVisitDietician_ServicesVisitsFrequency | 7 10 | _ | | | | | |
| | ServicesVisitSocialWorker_ServicesVisitsFrequency | 0. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. | | | | | | |
| | Services visits ocial vvol kei_services visits requerity | ## 36/ ed 6/ | + | | | | | |
| | Formation would not Form March | An anning the base of the same | | | | | | |
| | FormalSupportLastFourWeeks | Approximately and weeks?' | number | | | | | |
| | | У эт ———————————————————————————————————— | 97/98/99 | Missing | | | | |
| | | ig 20 h. 18 | | | | | | |
| | GPVisit GPVisit | In the last 🛊 weeks have you been to see or had a visit from a GP?' | 1 | Yes | | | | |
| | OutpatientClinic | In the last 🛱 w🌉 ks have you attended an outpatients clinic?' | 2 | No | | | | |
| | | ling o | 97/98/99 | Missing | | | | |
| | | for 7 l | | | | | | |
| | GPVisitHowOften | number of 場 野 | number | | | | | |
| | OutpatientClinicHowOften | number of A Bis | number | | | | | |
| | - Suparient of the first of the | ann 9 | 97/98/99 | Missing | | | | |
| | | emen to | בב נסב ו ז כ | IVIISSIIIE | | | | |
| | Aid At Homo Crab Beile | <u>`</u> + < | + - | lung. | | | | |
| | AidAtHomeGrabRails | Do you us මින්ව්රි the following adi/adaptations to help you at home (>1) | | yes | | | | |
| | AidAtHomeToiletSeat | and da | | yes | | | | |
| | | 0.5 4 | 3 | yes | | | | |
| | AidAtHomeBathSeat | | 1 2 | yes | | | | |
| | | ### ### ############################## | 4 | | | | | |
| | AidAtHomeBathSeat | ta mini | | yes | | | | |
| | AidAtHomeBathSeat AidAtHomeReclinerChair | ### ### ############################## | 5 | yes yes | | | | |
| | AidAtHomeBathSeat AidAtHomeReclinerChair AidAtHomeBedRail | ta mining, Al | 5 | yes | | | | |
| | AidAtHomeBathSeat AidAtHomeReclinerChair AidAtHomeBedRail AidAtHomeBedRisers AidAtHomeHoist | ta mining, Al | 5 6 7 | yes yes | | | | |
| | AidAtHomeBathSeat AidAtHomeReclinerChair AidAtHomeBedRail AidAtHomeBedRisers AidAtHomeHoist AidAtHomeHelpingHand | ta mining, Al traini | 5 6 7 8 | yes yes yes | | | | |
| | AidAtHomeBathSeat AidAtHomeReclinerChair AidAtHomeBedRail AidAtHomeBedRisers AidAtHomeHoist AidAtHomeHelpingHand AidAtHomeKeySafe | ta mining, Al training, an | 5 6 7 8 9 | yes yes yes yes | | | | |
| | AidAtHomeBathSeat AidAtHomeReclinerChair AidAtHomeBedRail AidAtHomeBedRisers AidAtHomeHoist AidAtHomeHelpingHand AidAtHomeKeySafe AidAtHomePendantAlarm | ta mining, Al training, and | 5 6 7 8 9 | yes yes yes yes yes | | | | |
| | AidAtHomeBathSeat AidAtHomeReclinerChair AidAtHomeBedRail AidAtHomeBedRisers AidAtHomeHoist AidAtHomeHelpingHand AidAtHomeKeySafe AidAtHomePendantAlarm AidAtHomeStairLift | ta mining, Al training, and sim | 5 6 7 8 9 10 11 | yes yes yes yes yes yes yes | | | | |
| | AidAtHomeBathSeat AidAtHomeReclinerChair AidAtHomeBedRail AidAtHomeBedRisers AidAtHomeHoist AidAtHomeHelpingHand AidAtHomeKeySafe AidAtHomePendantAlarm AidAtHomeStairLift AidAtHomeOutsideStep | ta mining, Al training, and similar | 5 6 7 8 9 10 11 | yes yes yes yes yes yes yes yes | | | | |
| | AidAtHomeBathSeat AidAtHomeReclinerChair AidAtHomeBedRail AidAtHomeBedRisers AidAtHomeHoist AidAtHomeHelpingHand AidAtHomeKeySafe AidAtHomePendantAlarm AidAtHomeStairLift | om http://bmjopen.bmj.com/ on June (ABES) . ta mining, and similar tec | 5 6 7 8 9 10 11 12 13 | yes | | | | |
| | AidAtHomeBathSeat AidAtHomeReclinerChair AidAtHomeBedRail AidAtHomeBedRisers AidAtHomeHoist AidAtHomeHelpingHand AidAtHomeKeySafe AidAtHomePendantAlarm AidAtHomeStairLift AidAtHomeOutsideStep | om http://bmjopen.bmj.com/ on June 9, and similar techn | 5 6 7 8 9 10 11 12 13 | yes yes yes yes yes yes yes yes | | | | |
| | AidAtHomeBathSeat AidAtHomeReclinerChair AidAtHomeBedRail AidAtHomeBedRisers AidAtHomeHoist AidAtHomeHelpingHand AidAtHomeKeySafe AidAtHomePendantAlarm AidAtHomeStairLift AidAtHomeOutsideStep | om http://bmjopen.bmj.com/ on June 9, 2025 (ABES) . (amining, and similar technologi | 5 6 7 8 9 10 11 12 13 | yes | | | | |
| | AidAtHomeBathSeat AidAtHomeReclinerChair AidAtHomeBedRail AidAtHomeBedRisers AidAtHomeHoist AidAtHomeHelpingHand AidAtHomeKeySafe AidAtHomePendantAlarm AidAtHomeStairLift AidAtHomeOutsideStep | om http://bmjopen.bmj.com/ on June 9, 2 (ABES) ta mining, Al training, and similar techno | 5 6 7 8 9 10 11 12 13 | yes | | | | |
| | AidAtHomeBathSeat AidAtHomeReclinerChair AidAtHomeBedRail AidAtHomeBedRisers AidAtHomeHoist AidAtHomeHelpingHand AidAtHomeKeySafe AidAtHomePendantAlarm AidAtHomeStairLift AidAtHomeOutsideStep | om http://bmjopen.bmj.com/ on June 9, 2025 (ABES) . (amining, and similar technologi | 5 6 7 8 9 10 11 12 13 | yes | | | | |
| | AidAtHomeBathSeat AidAtHomeReclinerChair AidAtHomeBedRail AidAtHomeBedRisers AidAtHomeHoist AidAtHomeHelpingHand AidAtHomeKeySafe AidAtHomePendantAlarm AidAtHomeStairLift AidAtHomeOutsideStep | om http://bmjopen.bmj.com/ on June 9, 2025 (ABES) . (amining, and similar technologi | 5 6 7 8 9 10 11 12 13 | yes | | | | |
| | AidAtHomeBathSeat AidAtHomeReclinerChair AidAtHomeBedRail AidAtHomeBedRisers AidAtHomeHoist AidAtHomeHelpingHand AidAtHomeKeySafe AidAtHomePendantAlarm AidAtHomeStairLift AidAtHomeOutsideStep | om http://bmjopen.bmj.com/ on June 9, 2025 (ABES) . (amining, and similar technologi | 5 6 7 8 9 10 11 12 13 | yes | | | | |
| | AidAtHomeBathSeat AidAtHomeReclinerChair AidAtHomeBedRail AidAtHomeBedRisers AidAtHomeHoist AidAtHomeHelpingHand AidAtHomeKeySafe AidAtHomePendantAlarm AidAtHomeStairLift AidAtHomeOutsideStep | om http://bmjopen.bmj.com/ on June 9, 2025 (ABES) . (amining, and similar technologi | 5 6 7 8 9 10 11 12 13 | yes | | | | |
| | AidAtHomeBathSeat AidAtHomeReclinerChair AidAtHomeBedRail AidAtHomeBedRisers AidAtHomeHoist AidAtHomeHelpingHand AidAtHomeKeySafe AidAtHomePendantAlarm AidAtHomeStairLift AidAtHomeOutsideStep | om http://bmjopen.bmj.com/ on June 9, 2025 (ABES) . (amining, and similar technologi | 5 6 7 8 9 10 11 12 13 | yes | | | | |

| Required | | | | | | | |
|-------------|--|-----------------------------------|---------------|---------------|--------------|--|-------|
| eld (please | Variable | Variable Label | Values | Value Labe | l comment | | |
| | Smoker | Have you ever smoked (this can i | | | | or cigars)? | |
| | | , | | Yes | | | |
| | | | | No | | | |
| | | | 97/98/99 | Missing | | | |
| | | | , , , , , , , | | | | |
| | SmokeRecently | Do you smoke at all nowadays'? | | | | | |
| | , | , | 1 | Yes | | | |
| | | | 2 | No | | | |
| | | | 97/98/99 | Missing | | | |
| | | | | | | | |
| | HowManyCigarettes | How many cigarettes as day do y | number | | | | |
| | | | 97/98/99 | Missing | | | |
| | | | | | | <u> </u> | |
| | HowMnayRollUpsOrPipes | If you smoke, or have smoked, ro | number | | | ٥ | |
| | | | 97/98/99 | Missing | | Oper | |
| | | | | | | | |
| | HowManyYears | Approximately how mnay years h | number | | | rst p | |
| | | | 97/98/99 | Missing | | BMJ Open: first published as 10.1136/bmjopen- | |
| | | | | | | ishe | |
| | CALC_CigarettePackYears | Lifetime exposure | | | | d as | |
| | | | number | | | s 10.1136/bmjopen- Protected by copyr | |
| | | | 97/98/99 | Missing | | .113 | |
| | | | | | | 6/br | |
| | CALC_TobaccoPackYears | Lifetime exposure | | | | njop y co | |
| | | | number | | | en- | |
| | | | 97/98/99 | Missing | | 201: ight | |
| | | | | | | 8-02 | |
| | drinkAlcohol | Do you ever drink alcohol incudir | ng drinks yo | u brew at ho | me?' | 2018-026744 on 7 I | |
| | | | 1 | Yes | | 4 on | |
| | | | 2 | No | | for I | |
| | | | 97/98/99 | Missing | | larc Eng | |
| | | | | | | h 20 seigi | |
| | AlcoholLast12Months | how often have you had na alco | pholoic drini | k of any kind | during the | la fila mon | ths?' |
| | | | 1 | almost eve | ry day | Doy | |
| | | | 2 | five or 6 da | ys a week | Sup Sup Sup Sup Sup Sup Sup Sup Sup Sup | |
| | | | 3 | three or fo | ur days a we | en ad en de | |
| | | | 4 | once or twi | ce a week | dat (| |
| | | | 5 | once or twi | ce a month | a AB B B B | |
| | | | 6 | once every | couple of m | n æniøns | |
| | | how often have you had na alco | 7 | once or twi | ce a year | g, , | |
| | | | 8 | not at all in | the last 12 | m <u>a</u> on <mark>ta</mark> s | |
| | | | 9 | unsure | | pen.bmj.com/ aining, and si | |
| | | | 97/98/99 | Missing | | - | |
| | AL 1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 | 1 | | | | s pt | |
| | AlcoholLast7Days | how many days out of the last 7 (| | n 4: : | | <u></u> | |
| | | | 97/98/99 | Missing | | on June milar tec | |
| | smallClassOftMine | Thinking shout the last 7 days to | numba: | | | j.com/ on June 9, 2025 at and similar technologies | |
| | smallGlassOfWine | Thinking about the last 7 days, h | | Ndiasi | | 202 | |
| | standardGlassOfWine | | 97/98/99 | Missing | | 2025 at | |
| | LargeGlassOfWine | | | | | | |
| | lowerStrengthBeer | | | | | Agence | |
| | botlleOfBeer | | | | | <u>е</u> <u>В</u> | |
| | canOfBeer | | | | | Biblio | |
| | Alcopop | | | | | ographiqu | - |
| | SingleSpirit | | | | | _ Shic | |

| Required | | | | |
|---------------------|--|--|--------------------|---|
| Field (please X) | Variable | Variable Label | Values | Value Label comment |
| | HearingAid | Do you have a hearing aid?' | 1 | Yes |
| | | | 2 | No Don't know |
| | | | 97/98/99 | Missing |
| | HearingAidUsage | How often do you use a hearing aid?' | | |
| | | | | Always Regularly |
| | | | 3 | Only on special occasions |
| | | | 97/98/99 | Never Missing |
| | HearingTest | Have you had a hearing test in the last | vear?' | |
| | | | 1 | Yes |
| | | | | No Don't know |
| | | | 97/98/99 | Missing |
| | DifficultyHearing | Interviewer's assessment of participar | | hearing so far No difficulty |
| | | | 2 | Some difficulty |
| | | | 97/98/99 | Unable to hear at all Missing |
| | HearingInQuietRoom | Do you have difficultly hearing someo | 1 | Yes |
| | | , , , | 2 | No Don't know |
| | | | 97/98/99 | Missing |
| | HearingInLoudRoom | Do you find it difficult to follow a conv | 1 | Yes |
| | | | | No Don't know |
| | | | 97/98/99 | Missing |
| | WhisperTestResult | Whisper hearing test result | | Pass |
| | | | 2 97/98/99 | Fail Missing |
| | Clarrence | Do you use slees/ | | |
| | GlassesOrLenses | Do you use glasses/contact lenses?' | 2 | Yes No |
| | | | 3 97/98/99 | Don't know Missing |
| | Glassas Orlaneas Head Feat | numpers of alasses " | | |
| | GlassesOrLensesUsedFor | purpose of glasses/lenses | 2 | Distance Reading |
| | | | | Both distance & reading Don't know |
| | | | 97/98/99 | Missing |
| | EyesightTested | eyesight tested by an optician in the | | Yes |
| | | | | No Don't know |
| | | | 97/98/99 | Missing |
| | RecognisingPeople | difficulty recognisign a friend across | | Yes |
| | | | | No Don't know |
| | | | 97/98/99 | Missing |
| | ReadingNewsprint | difficulty reading ordinary newsprint | | Yes |
| | | | | No Don't know |
| | | | 97/98/99 | Missing |
| | BlindorPartiallySighted | Registered blind or partially sighted | | Yes |
| | | | | No Don't know |
| | | | 97/98/99 | Missing |
| | LeftEye | (no pinholes) is the participant able to | | Yes |
| | | | 3 | No- form vision only No- no vision |
| | | | 97/98/99 | Missing |
| | LeftEyeYesMarginLabel | logMAR margin of the last line read co | number 97/98/99 | Missing |
| | | | | TVII-35III B |
| | Left Eye Yes Num Letters Missed | total number of letters missed or inco | number 97/98/99 | |
| | RightEye | (no pinholes) is the participant able to | 1 | Yes 🖫 |
| | | , spanie able to | 2 | No- for vision only |
| | | | 97/98/99 | No- no vesion Missing |
| | Right Eye Yes Margin Label | logMAR margin of the last line read co | number | st publi |
| | | | 97/98/99 | Missing a |
| | Right Eye Yes Num Letters Missed | total number of letters missed or inco | | as 10.1. |
| | Left Eye Pinholes | (with pinholes) is the participant able | 97/98/99 1 | Protected by |
| | | | | No-dorig vision only |
| | | | 97/98/99 | Missing 201 |
| | LeftEyePinholesYesMarginLabel | logMAR margin of the last line read co | number | Misting 18-026744 |
| | | | 97/98/99 | IVIIS@IIBO |
| | Left Eye Pinholes Yes Num Letters Missed | total number of letters missed or inco | number 97/98/99 | March Ense |
| | | | צל נטע ניי | for uses related to text and sion No-xt and sion Mischell |
| | RightEyePinholes | (with pinholes) is the participant able | 2 | Yes 중 별 호 No-호텔로 vision only |
| | | | 3 97/98/99 | No-꽠ૡૻૡૻsion Missis: |
| | Dicht. and the state of the sta | Inchian in the second of the s | , 55, 55 | No-and ged from http:// |
| | RightEyePinholesYesMarginLabel | logMAR margin of the last line read co | number 97/98/99 | Missing S |
| | RightEyePinholesYesNumLettersMissed | total number of letters missed or inco | number | d raini |
| | | | 97/98/99 | Millian technologies. |
| | CALC_LogMARLeftEye | no pinhole score | number | <u>ā</u> <u>ö</u> <u>s</u> |
| | | | 97/98/99 | lar tec |
| _ | CALC_LogMARightEye | no pinhole score | number 97/98/99 | nolog |
| | CALC LANABLE SERVICE CONTRACTOR | with wint -1 · · · | | ies. Ag |
| | CALC_LogMARLeftEyePinholes | with pinholes score | number 97/98/99 | . Agence |
| | CALC_LogMARRightEyePinholes | with pinholes | number | Bibliographique de l |
| | | | 97/98/99 | ra phi |
| | _ | ham. | | ue de |
| | For peer review only - | http://bmjopen.bmj.com/site/about/guide | eiines.xhtml | _ |

CALC_AvgSF36HealthChange

| lease | Variable | Variable Label | Values | Value Labe | comme |
|-------|--|--|---------------|--|----------|
| | MoCAlternatingTrailMaking | number letter sequencing | 1 | correct | |
| | MoCAVisuoconsturctinalCube | completion of 3D cube | 2 | incorrect | |
| | MoCAVisuoconsturctinalContour | drawing of clock face outline | 97/98/99 | Missing | |
| | MoCAVisuoconsturctinalHands | placement of clock hands | 0.700,00 | | |
| | | • | | | |
| | MoCAVisuoconsturctinalNumbers | placement of clock numbers | | | |
| | MocANamingLion | | 1 | correct | |
| | | | | incorrect | |
| | MocANamingRhino | | | | |
| | MocANamingCamel | | 97/98/99 | Missing | |
| | AA CAB' U B a la sal | and the second second | 1 | | |
| | MoCADigitsBackward | repetition of digits forward | | correct . | |
| | MoCADigitsForward | repetition of digits backwards | | incorrect | |
| | | | 97/98/99 | Missing | |
| | | | _ | | |
| | MoCAVigalence | recognition of 'A' in letter sequence | | 0-1 error | |
| | | | | >1 error | |
| | | | 97/98/99 | Missing | |
| | | | | | |
| | MoCASerial | number of correct subtractions of 7 starting | 0 | correct sub | traction |
| | | | 1 | | |
| | | | 2 | | |
| | | | 3 | | |
| | | | 4 | | |
| | | | 5 | BM Missing | |
| | | | 97/98/99 | Missing | |
| | | | | pe | |
| | MoCASentenceRepetitionOne | repeat sentence | 1 | co r ect | |
| | MoCASentenceRepetitionTwo | repeat sentence | | in g rrect | |
| | in o home more pendion mo | repeat semente | 97/98/99 | Migsing | |
| | | | 31/30/33 | <u>v</u> | |
| | | | | e d | |
| | | | | as D | |
| | | | | 0 -1 | |
| | | | | 136 | |
| | MoCAVerbalFluency | tell me as many words as you can beginning | number | b b | |
| | | | 97/98/99 | Missing | |
| | | | | n -2 | |
| | | | | 018 | |
| | | | | 026 | |
| | | | 2 | 574 | |
| | MoCAAbstractionOne | what is the likeness of train and bicycle? | 1 | as 10.1136/bm bing Moreot Con Correct | |
| | MoCAAbstractionTwo | what is the likeness of ruler and watch | 25 | incorrect | |
| | | | 97/98/99 | Sing Sing | |
| | | | | h 20 Seig | |
| | | | 2 | 019. Iner | |
| | MoCADelayedRecallFace | recall of words read earlier | 15 | a Balled | |
| | MoCADelayedRecallVelvet | | Ź | recalled € | |
| | , MoCADelayedRecallChurch | | 3 | ිට්ට් මූ@orrect | |
| | MoCADelayedRecallDaisy | | 97/98/99 | Experied Experied Macrect Exing | |
| | MoCADelayedRecallRed | | , , , , , , , | <u> </u> | |
| | | | | rom http | |
| | MoCAOrientationDate | orientation to time and place | | ċo ≓ ect | |
| | MoCAOrientationMonth | onemation to time and place | | > | |
| | | | 97/98/99 | inerrect | |
| | MoCAOrientationYear | | | • | |
| | MoCAOrientationDay MoCAOrientationDlase | | 2 | | |
| | MoCAOrientationPlace | | 5 | j.com/ | |
| | MoCAOrientationCity | | | 9 | |
| | | | <u> </u> | <u></u> | |
| | MoCAOrientationEducation | years of formal education | 97/98/99 | ද<1ට් ද | |
| | | | 2 | 5 >= 1 3 | |
| | | | 97/98/99 | Missing | |
| | | | 9 | 7 | |
| | CALC_MoCA | score out of 30 >=26 'normal' | 0-30 | gen | |
| | | | 97/98/99 | Missing | |
| | | | | 3ibl | |
| | | | | ibliographique de | |
| | | | | <u> </u> | |
| | | | | 🔁 | |

| uired l (please | | | | | | | | | | | |
|--------------------|---|--|---|-------------------------|-------|--------------------------------|-------------|---------------|---------------|---------|---|
| Varia | | Variable Label Have you ever had a heart attack | Values | Value L 1 yes | abel | comment | | | | | |
| Cong | gestiveHeartFailure | Have you ever been treated for heart failure? | | 2 no | | | | | | | |
| | | Have you had an operation to unclog or bypass the art Have you had a stroke, cerebrovascular accident, bloo | | 3 not sur 99 Missing | | | | | | | |
| Hem | niplegia | Do you have difficulty moving an arm or leg as a result | | | | vascular ac | cident? | | | | |
| Asth | nma | Do you have asthma? | | | | | | | | | |
| | | | | | | | | | | | |
| Asth | nma Medicines | Do you take medications for your asthma?' | | 2 no 1 yes, on | ly wi | th flare ups | of my asth | ma | | | |
| | | | 07/00/ | 3 yes, I ta | ke n | | | when I'm n | ot having a f | lare up | |
| | | | 97/98/ | 99 Missing | 3 | | | | | | |
| emp | physema | Do you have emphysema, chronic bronchitis, or chron | | 1 yes 2 no | | | | | | | |
| | | | | 3 not sur | e | | | | | | |
| | | | 97/98/ | 99 Missing | 3 | | | | | | |
| emp | physemaMedicines | Do you take medicines for your lung disease?' | | 2 no | | | | | | | |
| | | | | | • | ith flare ups nedicine reg | | when I'm no | ot having a f | lare up | |
| | | | 97/98/ | | | | | | | | |
| Ulce | erDisease | Do you have stomach ulcers or peptic ulcer disease dia | gnosed | by endosco | ру о | r upper gi o | r barium sv | vallow study | ? | | |
| | | | | | | | | | | | |
| Has[| Diabetes | Do you have diabetes? | | 1 Yes, tre 2 No | ated | l by modifyi | ng my diet | | | | |
| | | | | | | by medicat | ions taken | by mouth | | | |
| | | | 97/98/ | | | l by insulin | | | | | |
| Diah | actos Caucad Drahlams | Has the dishetes saysed any of the following problem | | 1 Drobler | 200 | ith kidnovs | | | | | |
| Diab | oetes Caused Problems | Has the diabetes caused any of the following problem | | | | vith kidneys vith eyes, tre | | ophthalmol | ogist | | |
| | | | 97/98/9 | 3 unsure | | | | | | | |
| | | | J1/36/ | | | | | | | | |
| Prob | olems With Kidneys | Have you ever had problems with your kidneys?' | | 1 Poor ki 2 No | dney | / function (b | lood tests | show high cr | eatinine) | | |
| | | | | 3 Have u | | | | neal dialysis | | | |
| | | | 97/98/ | | | ed kidney tı | ransplantat | ion | | | |
| | | | J1/36/ | | • | | | | | | |
| Conr | nectiveTissueDisese | Do you have Rheumatoid Arthritis? | | 1 Yes 2 No | | | | | | | |
| | | | | 3 Not sur | | | | | | | |
| | | | 97/98/ | 99 Missing | 3 | | | | | | |
| Conr | nective Tissue Disease Medications | Do you take medications for it regularly?' | | 1 Yes | | | | | | | |
| | | | | 2 No 3 Not sur | ·e | | | | | | |
| | | | 97/98/ | | | | | | | | |
| Conr | nectiveTissueDiseaseType | do you have?' | | 1 Lupua | | | | | | | |
| | 7,1 | | | 2 Polymy | | rheumatica | | | | | |
| | | | | 3 neither 4 not sur | | us nor polyr | nalgia | | | | |
| | | | 97/98/ | | | | | | | | |
| Dem | nentia | Do you have any of the following conditions? | | 1 Yes | | | | | | | |
| Cirrh | hosis | | | 2 No | | | | | | | |
| | kemia phoma | | 97/98/ | 3 Not sur 99 Missing | | | | | | | |
| Aids | 5 | | | | | | | | | | |
| Cand | | Has the cancer spread or metastasized to other parts of | | 1 Yes | | | | | | | |
| Cand | cerSpread | | | 2 No | | | | | | | |
| | | | 97/98/ | 3 Not sur 99 Missing | | | | | | | |
| CALC | C_KatzCormbidity | total score plus age based on the Charlson index scori | numbo | r | | | | | | | |
| CALC | C_Kat2Cofficienty | total score plus age based on the chanson index scori | Пиппре | ı | | | | | | | |
| 1h / | Any athorosploratic disease | Does the participant's GP record identify | | 1 Yes | | | | | | | |
| | atherosclerotic disease | | | 2 No+ 611 | -^ | | | | | | |
| | aemic heart disease ebrovascular disease | | 97/98/9 | 99 Missing | 3 | | | | | | |
| Peri | pheral vascular disease | | BMJ O | | | | | | | | |
| | rt failure al fibrillation | | pen: f | | | | | | | | |
| Atria | al flutter | | first pub | | | | | | | | |
| | eoarthritis vical or lumbar spondylosis | | lishe | | | | | | | | |
| Rhei | umatoid arthritis | T | d as | | | | | | | | |
| | er arthritis (specified) nritis (type not specified) | Protected by | 10.113 | | | | | | | | |
| Joint | t replacement | ted by | .1136/bmjo | | | | | | | | |
| Cata Cata | aract aract surgery | copy | jopen- | | | | | | | | |
| Age | related macular degeneration | right. | -2018-0 | | | | | | | | |
| | ucoma Diabetic eye disease istered blind | copyright, including | -02674 | | | | | | | | |
| Regi | istered partially sighted | ding for | 14 on 7 | | | | | | | | |
| Any | cancer cancer, excluding nonmelanoma skin ca | use | ' Marc | | | | | | | | |
| | cancer <5 years since diagnosis onic obstructive pulmonary disease (COP | <u>ି</u> ଓଡ଼ | March 2019. Download Enseignement Superi | | - | | | | | | |
| Asth | nma | ted to | 9. Dov | | | | | | | | |
| | er respiratory disease petes mellitus | text a | vnload Super | | | | | | | | |
| Нурс | othyroidism | ind da | ded fro | | | | | | | | |
| | erthyroidism nentia | mi | ded from http rieur (ABES) | | - | | | | | | |
| Park | kinson's disease | ည် | ŀ <u>`</u> | | | | | | | | |
| Anxi | iety ression | Al training, | mjope | | | | | | | | |
| Anae | emia: WHO criteria for haemoglobin con | | | | | | | | | | |
| | emia: Joosten's criterion for haemoglobi | and si | .com/ | | | | | | | | |
| | eoporosis ctured hip, wrist or backbone | similar | on Ju | | | | | | | | |
| | al function using modification of diet in r | techn | une 9, | 1 Norma | l/mil | dly reduced | | | | | |
| Ment | a. Tanotion using mounication of alet in f | technologies. | 9, 2025 | 2 Modera | ately | reduced (st | tage 3††) | | | | |
| | | % | at Age | | | duced (Stage ly reduced (| | | | | + |
| | | | . W | -r∣very se | ve16 | .,, reduced (| Stage DII) | - | 1 | 1 | + |
| | | | 98/98/ | 99 Missing | 3 | | | | | | |
| Colo | culate total number of diseases | Total number of diseases from GP record (excluding o | 9 % /98/9 | | В | | | | | | |

| Variable | Variable Label | Values | Value Label | commer |
|------------------------------|---|----------|----------------------|--|
| FallsInLast12Months | in the last 12 months have you had a fall | | Yes | |
| | | 2 | no | |
| | | | not sure | |
| | | 97/98/99 | missing | |
| | | | | |
| HowManyFalls | How mnay time s have you fallen in the I | | | |
| | | 97/98/99 | missing | |
| FallsFractures | have you broken any hangs/had and fr | 1 | Yes | _ <u>₹</u> |
| ransfractures | have you broken any bones/had and fra | | no | 9 |
| | | | not sure | <u>\$</u> |
| | | 97/98/99 | missing | irst |
| | | 37/38/33 | IIIISSIIIB | publ |
| | | | | BMJ Open: first published |
| FallsBrokenBones | How many times has a fall resulted in a b | | | as P |
| | | 97/98/99 | missing | 10.1 |
| | | | | as 10.1136/bmjopen-2018-026744 or Protected by copyright, including |
| FallsAccidentEmergency | did you go to Aand E follwing a fall? | 1 | Yes | by c |
| ransaccidentEmergency | did you go to Aand E following a fair: | | no | opy |
| | | | not sure | 1-201 |
| | | 97/98/99 | missing | |
| | | | | 2674 clud |
| FallsGetAandE | How many times did you attend A&E | number | | |
| | | 97/98/99 | missing | for > |
| | | | | larch Ens |
| | | | | 2019 eigne |
| FallsStayOvernight | were you admitted to a hospital follow | 1 | Yes | 9. Do |
| | , | | no | tex tex |
| | | | not sure | oad Iper |
| | | 97/98/99 | missing | ed fr ieur d da |
| | | | | om (AB |
| FallsGetAdmited | How many times were you admitted to a | number | | ining ES) |
| | | 97/98/99 | missing ⁹ | 0 · |
| | | | | Ltra |
| FallsSeenGP | Have you (or your carer) ever seen your | | Yes | |
| | | | no 9 | o. ji |
| | | | not sure | |
| | | 97/98/99 | missing | mila |
| FallsSpecialist | Have you ever seen a falls specialist?' | 1 | Yes | June |
| | | 2 | no | 9, 2 |
| | | 3 | not sure | 025 : |
| | | 97/98/99 | missing | n 7 March 2019. Downloaded from http://bmjopen.bmj.com/ on June 9, 2025 at Agence Enseignement Superieur (ABES) for uses related to text and data mining. Al training, and similar technologies. |
| LossOfConfidence | Have your falls caused any of the follows: | 1 | Yes | jenc: |
| WorryAboutFalling | Have your falls caused any of the following | | no | е В: |
| GoingOutLessOften | | | not sure | Bibliographique de |
| IncreaseCareReceive | | 97/98/99 | missing | угар |
| - Mer ease carefrederive | | 5.,55,55 | 551116 | <u> </u> |

| Page 46 of 59 |
|---------------|
| |

| | | Open: first | | |
|-------------|---|--|------------|---------------------|
| eld (please | Variable | Variable Label | Values | Value Label comment |
| | TookPresMed | Number of prescribed medications | number | |
| | | he | 97/98/99 | Missing |
| | | a s | | |
| | Medication*_MedicationName | Name of prescribed medication 2-30- | verbatim | |
| | | 1136 ecte | 97/98/99 | Missing |
| | | 1136/bm | | |
| | Medication*_Dosage | Dosage of prescribed medicatio | number | |
| | | pyri | 97/98/99 | Missing |
| | | yright, | | |
| | Medication*_Frequency | Frequency of prescribed medica in Science | number | |
| | | luding | 97/98/99 | Missing |
| | | ng s | | |
| | TookNonPresMed | Number of non-prescribed medicines vitamin or mineral suppler segments 20091-30 Name of non-prescribed medication of to text and from the complete of the com | nen number | |
| | | ses ses | 97/98/99 | Missing |
| | | reign rela | | |
| | NonPresMedication*_NonPresMedicationName | Name of non-prescribed medica | verbatim | |
| | | to to to | 97/98/99 | Missing |
| | | ext a | | |
| | NonPresMedication*_NonPresMedicationDosage | Dosage of non-prescribed medic கூடு sverbatim | number | |
| | | dat: | 97/98/99 | Missing |
| | | 3 BB 3 | | |
| | NonPresMedication*_NonPresMedicationFrequency | Frequency of non-prescribed me Herion | number | |
| | | //bmjopen.bmj.com/ on June 9, 2025 g, Al training, and similar technologi | 97/98/99 | Missing |
| | | tr Jö | | |
| | COUNT_PrescribedMedication | training, | number | |
| | | | | |
| | COUNT_NonPrescribedMedication | mj.com | number | |

| Required | | | | | | | | | |
|---------------------|--|---|--|---|---|--|--------------------------|--------------|-------|
| Field (please X) | Variable | Variable Label | Values | Value Label | comment | | | | |
| | WalkAroundOutside_NEADLPartOne | what have you actuallydone in the l | | not at all | | | | | |
| | ClimbStairs_NEADLPartOne | | 1 | with help | | | | | |
| | GetInAndOutOfCar_NEADLPartOne | | | on your ow | | culty | | | |
| | WalkOverUnevenGround_NEADLPartOne | | | on your ow | n | | | | |
| | CossRoads_NEADLPartOne | | 97/98/99 | Missing | | | | | |
| | TravelOnPublicTransport_NEADLPartOne | | | | | | | | |
| | ManageToFeedYourself_NEADLPartOne | | | | | | | | |
| | MakeYourselfAHotDrink_NEADLPartOne | | | | | | | | |
| | TakeHotDrinksFromOneDrinksToAnother_NEADLPartOne | | | | | | | | |
| | DoTheWashingUp_NEADLPartOne | | | | | | | | |
| | MakeYourselfAHotSnack_NEADLPartOne | | | | | | | | |
| | Manage Quint Manage NEADI Days True | what have you get wall ideas in the l | | | | | | | |
| | ManageOwnMoney_NEADLPartTwo WashItemsOfClothing_NEADLPartTwo | what have you <i>actually</i> done in the l | | no with help | | | | | |
| | DoOwnHousework_NEADLPartTwo | | | on your ow | n with diffic | | | | |
| | DoOwnShopping_NEADLPartTwo | | | on your ow | | Luity | | | |
| | DoFullClothesWash_NEADLPartTwo | | 97/98/99 | Missing | · · · · · · · · · · · · · · · · · · · | | | | |
| | ReadNewspapersOrBooks_NEADLPartTwo | | 37736733 | IVIISSIIIE | | | | | |
| | UseTelephone_NEADLPartTwo | | | | | | | | |
| | WriteLetters_NEADLPartTwo | | | | | | | | |
| | GoOutSocially_NEADLPartTwo | | | | | | | | |
| | ManageGarden_NEADLPartTwo | | | | | | | | |
| | Drive_NEADLPartTwo | | | | | | | | |
| | | | | | | | | | |
| | CALC NEADL | Total NEADL. Higher score = more inde | numher 0-4 | 56 | | | | | |
| | | Total No. 1 Inglief Score - More Mu | 97/98/99 | Missing | | | | | |
| | | | 2., 33, 33 | 551118 | | | | | |
| | Feeding | Do you have any difficulty with the fol | n | uanble | | | | | |
| | | = 1,52 and any with the lot | | needs help | cutting snr | eading hutte | er or require | s modified o | liet |
| | | | | independer | | | | | |
| | | | 97/98/99 | Missing | | | | | |
| | | | 37730733 | 1411331116 | | | | | |
| | Bathing | | 0 | dependent | | | | | |
| | 244 | | | independer | nt (or in sho | wer) | | | |
| | | | 97/98/99 | Missing | 10 (01 111 3110 | | | | |
| | | | 37,33,33 | | | | | | |
| | Grooming | | 0 | needs help | with persor | nal care | | | |
| | | B | | independer | | | ng | | |
| | | BMJ Open: | | Missing | it idee/iidii/ | | 1.6 | | |
| | | Ope | 37730733 | 1411331116 | | | | | |
| | Dressing | 95. f | 0 | dependent | | | | | |
| | Dressing . | first | | needs help | hut can do | ahout half u | naided | | |
| | | published | | independer | | | | | |
| | | ilish | | Missing | it including | | 2103 | | |
| | | e C. | 37730733 | IVIISSIIIE | | | | | |
| | Bowels | | 0 | incontinent | or needs e | nemas | | | |
| | bowers | 0,111 otec | | occasional a | | lemas | | | |
| | | ; 10.1136/bmjopen-2018 Protected by copyright, | | continent | accident | | | | |
| | | by c | 97/98/99 | Missing | | | | | |
| | | - iopy | 01,700,00 | | | | | | |
| | Bladder | righ | 0 | unable (or o | catherterise | d and unabl | e to manage | alone) | |
| | | #, ir | | occasional a | | | | , | |
| | | -2018-02674 right, includ | | continent | | | | | |
| | | ding t | | Missing | | | | | |
| | | <u> </u> | , , | | | | | | |
| | ToiletUse | Mar EI us | 0 | dependent | | | | | |
| 1 | | s r | | needs some | help but c | an so somet | hings alone | | |
| | | 9ne gne | | independer | | | | | |
| | | mer t t | 97/98/99 | Missing | , , , , , , , , , | . 5/ | | | |
| | | o tex | , | | | | | | |
| | Transfers | t an | 0 | unable, no s | sitting balar | nce | | | |
| | | ied t | | major help | | | sical) can sit | up | |
| | | | | | (verbal or p | | , , | | |
| | | ata i | 2 | THITTOI HEID | r | | | | |
| | | rom htt (ABES) ata mini | | independer | nt | | | | |
| | | rom http://b · (ABES) · ata mining, | | | nt | | | | |
| | | rom http://bmjc (ABES) . ata mining, Al tr | 3 | independer | nt | | | | |
| | Mobility | Al traini | 3 97/98/99 | independer | | | | | |
| | Mobility | ng, | 3 97/98/99 0 | independer Missing | r <50 yards | | corners >50 | yards | |
| | Mobility | .bmj.co | 3 97/98/99 0 1 | independer Missing immobile o | r <50 yards independe | nt including | | | yards |
| | Mobility | .bmj.com/ ng, and si | 3 97/98/99 0 1 2 | independer Missing immobile of wheelchair | r <50 yards independe the help of | nt including one person (| verbal or ph | ysical) >50 | yards |
| | Mobility | .bmj.com/ ng, and si | 3 97/98/99 0 1 2 | independer Missing immobile of wheelchair walks with t | r <50 yards independe the help of | nt including one person (| verbal or ph | ysical) >50 | yards |
| | Mobility | .bmj.com/ on June | 3 97/98/99 0 1 2 3 | independer Missing immobile of wheelchair walks with tindepender | r <50 yards independe the help of | nt including one person (| verbal or ph | ysical) >50 | yards |
| | Mobility Stairs | .bmj.com/ on June | 3 97/98/99 0 1 2 3 97/98/99 | independer Missing immobile of wheelchair walks with tindepender | r <50 yards independe the help of | nt including one person (| verbal or ph | ysical) >50 | yards |
| | | .bmj.com/ on June | 3 97/98/99 0 1 2 3 97/98/99 | independer Missing immobile of wheelchair walks with the independer Missing | r <50 yards independe the help of nt but may u | nt including one person (use any walk | verbal or phing aide >50 | ysical) >50 | yards |
| | | .bmj.com/ on June 9, 2025 at ng, and similar technologies. | 3 97/98/99 0 1 2 3 97/98/99 0 1 | independer Missing immobile of wheelchair walks with the independer Missing unable | r <50 yards independe the help of at but may u | nt including one person (use any walk | verbal or phing aide >50 | ysical) >50 | yards |
| | | .bmj.com/ on June 9, 2025 at ng, and similar technologies. | 3 97/98/99 0 1 2 3 97/98/99 0 1 | independer Missing immobile of wheelchair walks with the independer Missing unable needs help | r <50 yards independe the help of at but may u | nt including one person (use any walk | verbal or phing aide >50 | ysical) >50 | yards |
| | | .bmj.com/ on June 9, 2025 at Agence | 3 97/98/99 0 1 2 3 97/98/99 0 1 2 97/98/99 | independer Missing immobile of wheelchair walks with to independer Missing unable needs help independer Missing | r <50 yards independe the help of at but may u | nt including one person (use any walk | verbal or phing aide >50 | ysical) >50 | yards |
| | | .bmj.com/ on June 9, 2025 at ng, and similar technologies. | 3 97/98/99 0 1 2 3 97/98/99 0 1 2 97/98/99 | independer Missing immobile of wheelchair walks with to independer Missing unable needs help independer Missing | r <50 yards independe the help of at but may u | nt including one person (use any walk | verbal or phing aide >50 | ysical) >50 | yards |
| | Stairs | .bmj.com/ on June 9, 2025 at Agence | 3 97/98/99 0 1 2 3 97/98/99 0 1 2 97/98/99 number 0-2 | independer Missing immobile of wheelchair walks with to independer Missing unable needs help independer Missing | r <50 yards independe the help of at but may u | nt including one person (use any walk | verbal or phing aide >50 | ysical) >50 | yards |

| (please | Variable | Variable Label | Values | Value Label | comment | |
|---------|---|--|--|----------------------------------|------------|-------------|
| | HeightWeighttimeofDay | time measurements are taken | hh.mm | | | |
| | Demispan | from middel of collar bone to index finger | number cm | ` | | |
| | Demispan | nom mader of conar bottle to index linger | number cm | <u> </u> | | |
| | DemispanHeight | Calculation of height from demispan | number cm | 1 | | |
| | | | | | | |
| | Height | | number cm | 1 | | |
| | Weight | | number kg | | | |
| | <u> </u> | | | | | |
| | BodyFatPercentage | | number % | | | |
| | FatMass | | number kg | | | |
| | ratividos | | number kg | | | |
| | Fat Free Mass | | number kg | | | |
| | | | | | | |
| | BodyWaterPercentage | | number % | | | |
| | MuscleMass | | number kg | | | |
| | - That circulation is a second of the circulation is a second | | HAIHDEI NE | | | |
| | BoneMass | | number kg | | | |
| | | | | | | |
| | CALC_DemiSpanHeight | | | | | |
| | CALC BMI | mass (kg) /demi span height (m)2 | number | | | |
| | <u> </u> | | | | | |
| | WeightLoss | In the last year, have you lost more than 10lb | вмчоре | yes | | |
| | | | Open | no | | |
| | | | n:filrs | not sure | | |
| | | | 97/98/99 | Missing | | |
| | SittingBloodPresssure | | yes hed | 1 | | |
| | Sittingbioourresssure | | no . | 2 | | |
| | | | 97/9 % /99 | Missing | | |
| | | | .113 | | | |
| | ReasonNoSittingBloodPressure | | 6/bm/dpen-2时8-026744 室n Z March 2019. Downloaded from http:/// m | Missing Participant Cuff the wr | | |
| | | |) cop | Participant | refused | |
| | | | n-28 yrig | Monitor ma | ong size | |
| | | | ht, in | StandingBlo | odPressure | ⊥ eTaker |
| | | | 2674. clud | | | |
| | SittingSystolic | BP reading | num 🚉 r ngr | n Hg | | |
| | Sitting Diastolic | BP reading | 97/98/997 | Missing | | |
| | SittingPulse | pulse | arch Ense ses r | | | |
| | StandingBloodPresssure | | igne elate ves | 1 | | |
| | | | no to | 2 | | |
| | | | 97/9 | Missing | | |
| | | | adec berie and | | | |
| | ReasonNoStandingBloodPressure | | verbatifn i | | | |
| | StandingSystolic | BP reading | numbe or | n Hg | | |
| | Standing Diastolic | BP reading | | Missing | | |
| | StandingPulse | pulse | Al tra | | | |
| | | | mjopen.br | | | |
| | DominantHand | Which is the dominant hand? | ng, and si | right left | | |
| | | | id si | ieit | | |
| | Dominant Hand First Attempt | grip strength in dominant hand | hj.com/ on⊘ and similær numlær | A | | |
| | Dominant Hand Second Attempt | | tech | | | |
| | DominantHandThirdAttempt | | 9, 20 mok | | | |
| | NondominantilandFintit | guin strongth in na-tive head | yune 9, 2025 ar Agence B technologiess nu | ^ | | |
| | Nondominant Hand First Attempt Nondominant Hand Second Attempt | grip strength in passive hand | unumaer k | H | | |
| | NondominantHandSecondAttempt NondominantHandThirdAttempt | | ence | | | |
| | | | Bibl | | | |
| | CALC_DominantMeanGripStrength | mean grip strength dominant hand | number 🗗 | | | |
| | CAL_NonDominantMeanGripStrength | mean grip strength passive hand | aphique de l | | | |

| quired ld (please | | <u></u> | | | |
|----------------------------|---|---|------------|-------------------------|--------|
| Variable | Variable Label | ВМЈ | Values | Value Label comment | |
| WalkTime | over a 3 metre distance | Ope | number se | conds | |
| | | ————————————————————————————————————— | 97/98/99 | Missing | |
| | | rst _ | , , | | |
| ExhaustionPartA | How often in the last week did you feel 'everything I did was a | an effort?' 💆 | C | rarely or none of the t | ime |
| | | ish | | some or a little of the | |
| | | <u>o</u> | | moderate amount of t | |
| | | s 10 Pro | | most of the time | |
| | |).11; | 97/98/99 | Missing | |
| | | 36/b | | | |
| ExhaustionPartB | How often in the last week did you feel 'I could not get going' | 10.1136/bmjopen-2018 Protected by copyright | 0 | rarely or none of the t | ime |
| Extradistrom dreb | The Workers are the last week and you reer house het get going | . öpen | | some or a little of the | |
| | | oen-2018 opyright, | | moderate amount of t | |
| | | , w | | most of the time | |
| | | -026744 or | 97/98/99 | Missing | |
| | | ding | 3,730/33 | 5 | |
| TUGTSkipped | was the TUGT missed out? | | 1 | yes | |
| ТООТЭКІРРСИ | was the root missed out: | ——rus Ma | | no | |
| | | nse es r | | 110 | |
| TUGNotDoneReaso | n reason for skipping TUGT | March 2019, Dov Enseignement or uses related to | verbatim | | |
| TOGNOLDOHEREASO | Teason for skipping root | 9. D | verbatiiii | | |
| chairUsed | | ont so | 1 | yes | |
| criaii Oseu | | iloa xta | | no | |
| | | nd ed | | . 110 | |
| ChairHaight | height of the chair used to stand up from | ownloaded from hit Superieur (ABE text and data m | number m | m | |
| <u>ChairHeight</u> | neight of the chair used to stand up from | 3.00 3 | number m | | |
| A bla To Cott In Figure 10 | Name of the state | http://t ES) . nining, | 1 | yes | |
| AbleToGetUpFrom(| Indif | | | no | |
| | | mjopen.br Al training, | 97/98/99 | | |
| | | ning, | 97/98/99 | Missing | |
| Time To Cott In | time taken to complete in seconds | mj.co | numbaraa | | |
| TimeToGetUp | time taken to complete in seconds | | number se | | |
| | | m/ on J similar | 97/98/99 | Missing | |
| Malling Atalland | walking aid used to complete the TUCT | | | Indonordent | |
| WalkingAidUsed | walking aid used to complete the TUGT | | | Independent | |
| | | 9, 2025 at | | 1x walking stick | |
| | | gies. | | 2x walking sticks | |
| | | | | Walking Zimmer frame | |
| | | ýgenc | | Wheeled Zimmer fram | ne |
| | | Ф | | 3-wheeled walker | |
| | | Biblic | | 4-wheeled walker | |
| | | liographiq | | Kitchen trolley | |
| | | p | 97/98/99 | Missing | |

| ise | | | | | | | | | | | | | | |
|------------------------------------|---|----------------|--------------------------|---|---------------|----------------|------------------|--------------|---------------------------|--------------|----------------|---------------|--------------|----------|
| Variable ClinicalFrailtyResearcher | Variable Label Researcher frailty assessment based on observa | | Value Labe | el comment bust, active, energetic, we | ell motivate | ed and fit. T | hese people | commonly | exercise regularity and | are in the m | ost fit group | for their age | 1 | |
| | | | well; withou | out active disease, but less | s fit htan pe | eople in cate | egory 1 | | | | | | | \pm |
| | | | | terated comorbid disease vulnerable; although no | | | | | | | ve disease sy | mptoms | | + |
| | | | 5 mildly frail | ; with limited dependence | e on others | s for instrum | ental activit | ies of daily | iving | | , | | | \mp |
| | | | | y frail; help is needed with ail; completely dependent | | | | | | | | | | + |
| | | | missing | | | | | | · | | | | | \perp |
| ClinicalFrailtyIsClinicianPresent | Is a registrar present to complete 2nd part of the | e a | 1 yes | | | | | | | | | | | |
| | | | 2 no | | | | | | | | | | | \perp |
| ClinicalFrailtyClinican | Clinician frailty assessment based on observatio | n i | 1 very fit; ro | bust, active, energetic, we | ell motivate | ed and fit. T | l hese people | commonly | exercise regularlry and | are in the m | ost fit group | for their age | <u> </u> | |
| | | | | out active disease, but less terated comorbid disease | | | | compared | with those in category 4 | | | | | + |
| | | | 1 apparently | vulnerable; although no | t frankly de | ependent, th | nese people | commonly | complain of beign 'slowe | | ve disease sy | mptoms | | |
| | | | | ; with limited dependence y frail; help is needed with | | | | | | | | | | + |
| | | | 7 severely fr | ail; completely dependent | | | | | | | | | | |
| | | 99 | missing | | | | | | | | | | | + |
| CALC_FriedTotalScore | Fried frailty score | | not frail | | | | | | | | | | | \perp |
| | | | pre frail pre frail | | | | | | | | | | | \pm |
| | | | mild frailty moderate | | | | | | | | | | | \perp |
| | | | severe frai | | | | | | | | | | | |
| | | 97/98/9 | missing | | | | | | | | | | | + |
| PenFromHand | Can you take this oen from my hand if I hold it h | | 1 yes | | | | | | | | | | | $^{\pm}$ |
| | | | 2 no 9 missing | | | | | | | | | | | + |
| | | | | | | | | | | | | | | # |
| BustrainTimetable | Are you able to use a bus or train timetable?' | | 1 yes 2 no | | | | | | | | | | | + |
| | | | missing | | | | | | | | | | | \perp |
| SitUprightforTwoHours | Are you able to sit upright in a chair for two hou | rsî | l yes | | | | | | | | | | | + |
| | | | 2 no | | | | | | | | | | | \perp |
| CoinFromTable | Are you able to pick up a 10p coin from a table? | | 1 yes | | | | | | | | | | | |
| | | | no missing | | | | | | | | | | | + |
| | | 37/36/3 | HIIISSIIIR | | | | | | | | | | | |
| EFSCognition | draw 10 past 11 on clock face | | no errors minor space | ring errors | | | | | | | | | | + |
| | | | other erro | | | | | | | | | | | 土 |
| | | 97/98/9 | 9 missing | | | | | | | | | | | + |
| EFSAdmitted | How many hospital admissions in the past year | | 0 0 | | | | | | | | | | | \perp |
| | | | 1 1 or 2 2 >2 | | | | | | | | | | | + |
| | | 97/98/9 | missing | | | | | | | | | | | \perp |
| EFSSocialSupport | can you count on someone? | | always | | | | | | | | | | | + |
| | m | | sometimes never | 5 | | | | | | | | | | + |
| | O S S S S S S S S S S S S S S S S S S S | | 9 missing | | | | | | | | | | | |
| EFSForgetMedication | At times do you forget to take your prescription | m |) no | | | | | | | | | | | + |
| El si olgetivicaleution | st p | | 1 yes | | | | | | | | | | | |
| | <u></u> | 97/98/9 | missing | | | | | | | | | | | + |
| EFSNutrition | Have you lost weight and clothes become loose | |) no | | | | | | | | | | | |
| | 70.113 | | yes missing | | | | | | | | | | | + |
| FFCMand | ed 6/bm | |) | | | | | | | | | | | Ŧ |
| EFSMood | Do you often feel sad or de pressed?' | | no 1 yes | | | | | | | | | | | # |
| | 2018-(| 97/98/9 | missing | | | | | | | | | | | + |
| EFSContinence | Do you have a problem loging control of urine w | |) no | | | | | | | | | | | # |
| | ing for | | yes missing | | | | | | | | | | | + |
| | March Ens | | | | | | | | | | | | | # |
| CALC_EdmontonFrailScale | total score out of 17 relate | | not frail vulnerable | | | | | | | | | | | + |
| | | 8- | mild frailty | , | | | | | | | | | | 1 |
| | ext an | | moderate severe frai | | | | | | | | | | | + |
| | ed fro d data | | missing | | | | | | | | | | | \perp |
| EFIGPScore | data extracted from GP singery records | | | | | | | | | | | | | \pm |
| | Fit (eFI score 0 - 0.12) : People who have no or wing high being-term condition | ns that are us | sually well co | ntrolled. This group would | d mainly be | e independe | nt in day to | day living a | ctivities. | | | | | + |
| Mild frailty | y (eFI score 0.13 – 0.24) : People who are slowing मुंग i है older age and ma | y need help | with persona | al activities of daily living s | such as fina | ances, shopp | ing, transpo | ortation. | | | | | | + |
| Moderate Frailty | ر (eFI score 0.25 – 0.36) : People who have difficu | ities and may | / have mobili | ity problems or require be | elp with act | tivites such a | as washing a | nd dressing | | | | | | + |
| | sim o | | | | | | | | | | | | | |
| Severe F | Frailty (eFI score > 0.36) : People who are often de ent for personal o | cares and hav | re a range of | long-term conditions/mul | ltimorbidit | y. Some of th | his group ma | ay be medic | ally stable but others ca | n be unstab | le and at risk | of dying wit | hin 6 - 12 m | mon |
| | e 9, 20 | | | | | | | | | | | | | # |
| CALC_ELSAFrailtyIndex | 0-10 very fit 9 9 25 | | | | | | | | | | | | | + |
| | 11-14 well | | | | | | | | | | | | | # |
| | 4F 34 1 | | | | | 1 | 1 | 1 | 1 | I | | | | |
| | 15-24 vulnerable | | | | | | | | | | | | | T |

| Variable | Variable La | Values | Value Labe | lcomment | |
|--------------------------------|-------------|----------|--------------|---------------------------|--|
| Sleep | Have you s | 1 | Yes | | |
| | | 2 | No | | |
| | | 3 | Not sure | | |
| | | 97/98/99 | Missing | | |
| | | | | | |
| HealthRelatedMobility | EQ5D | 1 | no problen | ns walking about | |
| | | 2 | slight prob | lems | |
| | | 3 | moderate p | oroblems | |
| | | 4 | severe prol | blems | |
| | | | unable to v | | Pro |
| | | 97/98/99 | Missing | | Protected |
| | | | | | ed |
| HealthRelatedSelfCare | | 1 | no problem | ns washing or dressing | |
| | | | slight prob | | Öþ |
| | | | moderate p | | 7igh |
| | | | severe prol | | ;÷ |
| | | | | vash or dress | n Cir |
| | | 97/98/99 | Missing | Vasir or aress | din |
| | | 31/30/33 | IVIISSIIIB | | g |
| HealthRelatedUsualActivities | | 1 | no problem | ns doing usual activities | by copyright, including for uses related |
| Treatment at Costal Activities | | | slight prob | | |
| | | 3 | | | <u>e</u> |
| | | | severe prol | | ed |
| | | 5 | | do usual activities | to text |
| | | | | do usual activities | <u> </u> |
| | | 97/98/99 | Missing | | tand |
| Handah Dalata d Dain | | 1 | | dia a sur faut | data |
| HealthRelatedPain | | | no pain or | | |
| | | | - | or discomfort | mining, |
| | | | | pain or discomfort | |
| | | | | n or discomfort | Al training, |
| | | | · | ain or discomfort | <u> </u> |
| | | 97/98/99 | Missing | | |
| | | | | | and s |
| | | | | | <u>\$</u> . |
| | | | | | t |
| HealthRelatedAnxiety | | | | s or depressed | similar technologies |
| | | 2 | slightly anx | tious or depressed | <u>_</u> |
| | | | | y anxious or depressed | ogie |
| | | 4 | severely ar | ixious or depressed | <u>.</u> |
| | | 5 | extremely | anxious or depressed | |
| | | 97/98/99 | Missing | | Protected by copyright, including for uses related to text and data mining, Al training, and similar technologies. |
| | | | | | |
| | | | | | |
| CALC_EQ5D5L | total EQ5D | score | | | |
| | | | | | |

| | | | | Value Label | |
|---------|-------------------------------|---------------------------|------------|-------------|---|
| (please | Variable | Variable Label | Values | Value Label | comn |
| | PainStoppedActivity | has pain | 0 | no | |
| | PainStoppedClimbing | | 2 | yes | |
| | PainStoppedWalkingMoreThan200 | | 97/98/99 | Missing | _ |
| | PainStoppedWalkingLessThan200 | | | | Protected by copyright, including for uses related to text and data mining, |
| | PainCutDownActivities | | | | ecte |
| | PainAccomplishingLess | | | | <u>ā</u> ,5 |
| | PainLimitedWork | | | | co |
| | PainWorkRequireExtraEffort | | | | ругі |
| | PainTroubleSleeping | | | | ght, |
| | PainPreventSocialActivities | | | | inc |
| | | | | | ludi |
| | PainToday | on a scale of 0-10 with 0 | number 0-: | 10 | ng t |
| | PainLast7Days | | 97/98/99 | Missing | 악 |
| | | | | | ses |
| | | | | | rela |
| | | | | | ited |
| | | | | | ğ |
| | CALC_GeriatricPainMeasure | Geriatric Pain Measure to | number 0-4 | 40 | ext |
| | | | 97/98/99 | Missing | and |
| | | | | | data |
| | | | | | <u></u> |
| | | | | | ning On In |
| | | | | | |
| | | | | | tra |
| | | | | | <u>n</u> |
| | | | | | <u>a</u> |
| | | | | | |
| | | | | | Al training, and similar |
| | | | | | ar te |
| | | | | | technologies |

| lease | Variable | Variable Label | Values | Value Label | comment | | |
|-------|---------------------------------------|--|-----------|--------------|-----------|----------|-------|
| | SomeoneToTalkTo_LoninessScale | the extent to which the statements apply | | yes | | | |
| | MissHavingCloseFriend_LoninessScale | | | more or les | S | | |
| | SenseOfEmptiness_LoninessScale | | | no | | | |
| | PeoplelCanLeanOn_LoninessScale | | 97/98/99 | | | | |
| | MissCompanyOfOthers_LoninessScale | | 31700700 | 1111331118 | | | |
| | CircleOfFriendsLimited_LoninessScale | | | | | | |
| | PeoplelTrustCompletely_LoninessScale | | | | | | |
| | PeoplelFeelCloseTo_LoninessScale | | | | | | |
| | MissHavingPeopleAround_LoninessScale | Φ | | | | | |
| | FeelRejected_LoninessScale | <u>B</u> | | | | | |
| | CallFriendsWheneverINeed LoninessSca | O De | | | | | |
| | cum richasvviichevernieeu_zonniessseu | , , , , , , , , , , , , , , , , , , , | | | | | |
| | CALC_emotionalLoneliness | yes or more or less on ? 2,3,5,6,9,10 | number | | | | |
| | CALC_emotionalconeimess | yes of filore of less off : 2,3,5,0,3,10 | Humber | | | | |
| | CALC_missingemotionalLoneliness | number of mising items | | | | | |
| | CAEC_INISSINGEMOTIONAL ONE INTESS | number of mising items | | | | | |
| | CALC cosial analiness | no or more or less on ?1,4,7,8,11 3 6 | | | | | 1 |
| | CALC_socialLoneliness | | | | | | |
| | CALC missein reseistanti | number of missing items number of missing items | | | | | |
| | CALC_misssingsocialLoneliness | number of missing items | | | | | |
| | | 0 0 | | <u> </u> | | | |
| | CALC_totalLonliness | De Jong Gierveld scale sum of emotional and social lone ine s | 0-2 | not lonely | | | |
| | | ight, | 3-8 | moderately | | | |
| | | including | 9-10 | severely lor | | | |
| | | Studi | | very server | ly lonely | | |
| | | - | 97/98/99 | Missing | | | |
| | | for L | | | | | |
| | CALC_LonelinessScore | loneliness category | 1 | Not lonely | | | |
| | | reig reig | 2 | Moderately | lonely | | |
| | | 2019. | 3 | Severely lo | nely | | |
| | | ± ⊕ D | 4 | Very severe | ly lonely | | |
| | | text | 97/98/99 | Missing | | | |
| | | e peri | | | | | |
| 1 | SatisfiedWithLife | basically satisfied with life | 0 | yes | | 1 | yes |
| 2 | DroppedActivities | basically satisfied with life dropped many activities and interests feel life is empty | 1 | no | | 0 | no |
| | FeelEmpty | feel life is empty | 97/98/99 | Missing | | 97/98/99 | Missi |
| 4 | GetBored | often get bored | | | | | |
| 5 | GetBored2 -?goodspirits? | in good spirits most of the time | | | | | |
| 6 | SomethingBadGoingToHappen | afraid that something bad is going to happen feel happy most of the time | | | | | |
| 7 | FeelHappy | feel happy most of the time | | | | | |
| 8 | FeelHelpless | often feel helpless | | | | | |
| 9 | PreferToStayAtHome | prefer to stay at home rather than going out and doing things | | | | | |
| | Problems With Memory | more problems with memory than most | | | | | |
| | WonderfulToBeAlive | think it's wonderful to be alive | | | | | |
| | Worthless | worthless the way you are now | | | | | |
| | FullOfEnergy | full of energy | | | | | |
| | SituationIsHopeless | situation is hopeless | | | | | |
| | BetterOffThanYou | most people better off than you | | | | | |
| 13 | - Detter of Friding | 2 | | | | | |
| | Geriatric Depression Scale | total from 15 questions reverse score for items 1,5,7,11,13 😤 5 suggests depressed | number 0- | 15 | | + | |
| | - dendine bepressions care | Total Holli 13 questions reverse score for items 1,3,7,11,13 2-3 suggests depressed | 97/98/99 | I | | | |
| | | | 3//38/39 | IMIISSILIR | | - | |

| equired | | | Open. | | | |
|--------------|---|---------------------------------|---------------------------------------|---|---------------|------------|
| ield (please | Variable | Variable Label | و Val | <u>;</u> | Value Labe | Loommon |
|) | | | Value | 25 1 | 1 | |
| | BounceBackQuickly_BriefResilienceScale | agreement with resiliance | | | strongly ag | ree |
| | HardTimeThroughStressfulEvents_BriefResilienceScale | | | ັ | agree | |
| | LongToRecoverFromStress_BriefResilienceScale | | Protected | 5 5 8/99 | neutral | |
| | SnapBackFromSomethingBad_BriefResilienceScale | | otec - | 4 | disagree | |
| | DifficultTimesLittleTrouble_BriefResilienceScale | | ted | 3 5 | strongly dis | sagree |
| | TimeToGetOverSetBacks_BriefResilienceScale | | 2)//9 | 8/99 | Missing | |
| | CALC_briefResilianceScale | sum/6 items reverse scorir | <u>Ş</u> ium | ber 1- | 6 higer=mor | e resilian |
| | | | 9 47/9 | 8/99 | Missing | |
| | SolveDifficultProblems SelfEfficacyScale | agreement with general se | nclud | 2 2 1 | not at all tr | ne |
| | WaysToGetWhatIWant_SelfEfficacyScale | agreement with general se | ling t | 2 2 | hardly true | |
| | AccomplishMyGoals_SelfEfficacyScale | | 학 - | <u>, -</u> | moderately | , true |
| | DealWithUnexpectedEvents_SelfEfficacyScale | | En | 4 | exactly true | γ ti αc |
| | HandleUnforeseenSituations_SelfEfficacyScale | | S SP/6 | ś •R/99 | Missing | |
| | SolveMostProblems_SelfEfficacyScale | | ner late | 5, 55 | 1411331118 | |
| | RemainCalm_SelfEfficacyScale | | d to | 3 | | |
| | FindSeveralSolutions_SelfEfficacyScale | | t Su | <u> </u> | | |
| | ThinkOfASolution_SelfEfficacyScale | | per t an | | | |
| | HandleWhateverComes_SelfEfficacyScale | | d di | <u> </u> | | |
| | Translet Whate Veresimes_Sentimeacy Seale | | <u>a</u> € | } | | |
| | CALC_SelfEfficacyScale | Total self efficacy score, hi | ni E | har 10 | L_40 | |
| | CALC_SellEfficacyScale | Total self-efficacy score- file | 97/6 | 8/99 | Missing | |
| | | | ا training, and similar technologies. | onen harizoad on Tuno o 2025 at Agonco Bibliographi | | |

| NB: Individual items in ELSA are pulled from | other assessm |
|---|---------------|
| | |
| WalkingOneBlock_SF-36Activities | |
| SitUprightForTwoHours | |
| AbleToGetUpFromChair ClimbingSeveralStairs SF-36Activ | ities |
| ClimbingStairs SF-36Activities | |
| BendingKneelingStooping SF-36Act: | ivities |
| PenFromHand | |
| ModerateActivities_SF-36Activities | es |
| VigorousActivities_SF-36Activitie | es |
| CoinFromTable | |
| HealthRelatedSelfCare | |
| HealthRelatedMobility | |
| Bathing Feeding | |
| Transfers | |
| ToiletUse | |
| BustrainTimetable | |
| MakeYourslefAHotSnack | |
| DoOwnShopping_NEADLPartTwo | |
| UseTelephone_NEADLPartTwo | |
| EFSForgetMedication | |
| ManageOwnMoney_NEADLPartTwo | |
| DoOwnHousework_NEADLPartTwo ExhaustionPartA | |
| Sleep | |
| GoodSpirits | |
| WonderfulToBeAlive | |
| FeelHappy | |
| ExhaustionPartB | |
| Hypertension | |
| Atherosclerotic | |
| MyocardialInfarction | |
| HeartFailure DiabetesMellitus | |
| Cerebrovascular | |
| COPD | |
| RespiratoryAsthma | |
| Osteoporosis | |
| ExcludingNonmelanoma | |
| Parkinson | |
| NeurologicalDementia | |
| eyesight 4 & 5 | |
| hearing & vision 6 & 7 FallsInLast12Months | |
| FracturedHipWristBackbone | |
| Joint | |
| geriatric pain measure 3 or | |
| MoCAOrientationDate | |
| MoCAOrientationMonth | |
| MoCAOrientationYear | |
| MoCAOrientationDay | |
| MoCANA challana an | |
| MoCAVerbalFluency delayed recall combines 5 question | ons |
| SF-36HealthSurvey' | |
| GeriatricDepressionScale >= 5 | |
| CALC_totalLonliness) >= 3 | |
| AtrialFibrillation | |
| AtrialFlutter | |
| Osteoarthritis | |
| RheumatoidArthritis | |
| OtherArthritis | |
| Arthritis Anxiety | |
| Depression | |
| RecognisingPeople | |
| ReadingNewsprint ReadingNewsprint | |
| HearingInQuietRoom | |
| HearingInLoudRoom | |
| PainStoppedWalkingMoreThan200 | |
| PainStoppedWalkingLessThan200 | |
| MoCADelayedRecallFace | |
| MoCADelayedRecallChurch | |
| MoCADelayedRecallChurch MoCADelayedRecallDaisy | |
| MoCADelayedRecallRed | |
| | |
| CALC_ELSAFrailtyIndex | |
| | |

| B: Individual items in Fried are pulled fro | m other assessmer | nt data where poss | sible to avoid overb | urdening the p | O Dwg Darticipant | |
|---|-------------------|--------------------|----------------------|----------------|--|--|
| | | | | | TSt | |
| ALC_DemiSpanHeight | | | | | pub | |
| ALC_BMI | | | | | published | |
| ValkTime | | | | | | |
| VeightLoss | | | | | as 1 | |
| xhaustionPartA | | | | | 0.11 otec | |
| xhaustionPartB | | | | | 36/I | |
| ominantHand | | | | | by by | |
| ominant Hand First Attempt | | | | | ope | |
| ominantHandSecondAttempt | | | | | n-20 yrig | |
| ominantHandThirdAttempt | | | | | <u>T</u> , 18- | |
| lonDominantHandFirstAttempt | | | | | as 10.1136/bmjopen-2018-026744 on 7 Protected by copyright, including fo | |
| lonDominantHandSecondAttempt | | | | | 744 (din | |
| lonDominantHandThirdAttempt | | | | | on 7 g fo | |
| ALC_DominantMeanGripStrength | | | | | Ma | |
| ALC_NonDominantMeanGripStrength | | | | | rch inse | |
| ALC_FriedTotalScore | | | | | eign | |
| | | | | | Downloaded from ht ent Superieur (ABEt to text and data mir | |
| | | | | | s 10.1136/bmjopen-2018-026744 on 7 March 2019. Downloaded from http://bmjopen.bmj.com/ on June 9, 2025 at Agence Bibliographique de l Enseignement Superieur (ABES) . Protected by copyright, including for uses related to text and data mining, Al training, and similar technologies. | |

Enquiries to lesley.brown@bthft.nhs.uk

Project number: [office use only]



CARE75+ DATA REQUEST FORM

This form is to be used for all data request purposes including; sampling, preparatory work and research.

The request contact will be responsible for the transfer, storage and governance of the data in line with the data sharing agreement (appendix 1).

All sections *must* be completed.

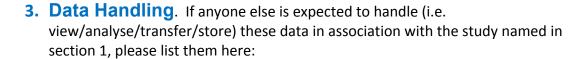
1. Office use only

| Data request number | |
|------------------------|---|
| Date of request | 6 |
| Date of review by DRRC | 4 |
| Date of DRRC query | |
| Date of query review | |
| Data sent | |

2. Request contact

| Requested by: Contact: Email Telephone Job role Organisation Date of request | Study Name: | |
|--|-----------------|---|
| Contact: Email Telephone Job role Organisation | | 7 |
| Email Telephone Job role Organisation | Requested by: | |
| Telephone Job role Organisation | Contact: | |
| Job role Organisation | Email | |
| Organisation | Telephone | |
| | Job role | |
| Date of request | Organisation | |
| Date of request | Date of request | |
| Date required | Date required | |

Project number: [office use only]



| Name | Affiliation | Title | Role in the project |
|------|-------------|-------|---------------------|
| | | | |
| | | | |
| | | | |
| | | | |
| _ | | | |

4. Purpose of request

| Sampling i.e. participant contacts | |
|---|--|
| Scoping exercise e.g feasibility/protocol | |
| development | |
| Research e.g. analysis for | |
| funded/approved projects | |

| 5 . | Research question | and b | rief | summary | of research | (350 |
|------------|-------------------|-------|------|---------|-------------|------|
| | words) | | | | | |

6. What type of data do you require?

| Individual identifiable data (contains | |
|--|--|
| personal details) | |
| Pseudo-anonymised (contains unique id | |
| for data linkage) | |
| Anonymised (contains no identifiable | |
| details) | |

Enquiries to lesley.brown@bthft.nhs.uk

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7. What stage do you require (NB: full data will not be available for all participants)

| Baseline | |
|---------------------|--|
| Six month follow-up | |
| 12 month follow-up | |
| 24 month follow-up | |
| 48 month follow-up | |
| Latest time-point | |

8. Selection criteria

| Included if: | |
|------------------|--|
| | |
| But excluded if: | |
| | |

9. Specific data items required

| | · · |
|--------------|---|
| Date of | |
| Assessment | |
| required? | |
| Data | Variable name (please cut and paste from data dictionary) |
| dictionary | |
| sheet title | |
| Contact | `\ |
| information | |
| Personal | |
| details | |
| Housing, | |
| Living | |
| Circumstance | |
| Education, | |
| Occupation | |
| Family Data | |
| Formal and | |
| Informal | |
| Support | |
| Smoking, | |
| Alcohol | |
| Hearing, | |
| Eyesight | |
| SF-36 | |

| MoCA | |
|-----------------|--|
| Co- | |
| morbidities | |
| Falls | |
| Medications | |
| Activities of | |
| Daily Living | |
| Height, | |
| Weight, BP, | |
| Grip | |
| Timed Up | |
| and Go, | |
| Walking | |
| Frailty | |
| Quality of Life | |
| and Sleep | |
| Pain | |
| Loneliness, | |
| Depression | |
| Resilience, | |
| Self-Efficacy | |
| | |
| | |

10. Please can you provide details of your intended output (for example, publication

| or repoπ) | | |
|-----------|--|--|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
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