National Centre for Social Research

NCDS technical report

Age 62 Survey

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1. Introduction

1.1 Study background and history

The National Child Development Study (NCDS) is one of Britain's world famous national longitudinal birth cohort studies run by the Centre for Longitudinal Studies (CLS) at the UCL Social Research Institute.

Britain has a unique tradition of carrying out national birth cohort studies, following the same group of people from birth into and through adulthood, and providing a picture of whole generations. There are four such surveys, of which the NCDS is the second:

- National Survey of Health and Development (NSHD) - 1946
- National Child Development Study (NCDS) – 1958
- British Cohort Study (BCS70) – 1970
- Millennium Cohort Study (MCS) – 2000

In addition, Next Steps, also run by CLS, follows those born in 1990 but started in 2004 when participants were 13-14.

Each follows a large number of individuals born at a particular time through the course of their lives, charting the effects of events and circumstances in early life on outcomes and achievements later on. The questions on health, education, family, employment and so on are put together by academic researchers and policy makers to understand and improve life in Britain today and in the future.

NCDS began through the collection of data about the births and families from 17,415 babies born in the UK during one week in 1958. The study originated as a study of perinatal mortality to identify social and obstetric links to stillbirth and neonatal death,

Surveys have taken place across childhood, adolescence, and adulthood , gathering information from respondents living in England, Scotland and Wales. With each successive attempt, the scope of enquiry has broadened from a strictly medical focus at birth, to encompass physical and educational development at ages seven (1965), eleven (1969) and sixteen (1974), and then to include economic development and other wider factors at ages 23 (1981), 33 (1991), 42 (2000), 44 (2002), 46 (2004), 50 (2008) and 55 (2013). In addition to these core sweeps, a series of three web surveys were conducted between 2020 and 2021 which explored the impact of the COVID-19 pandemic on participants.

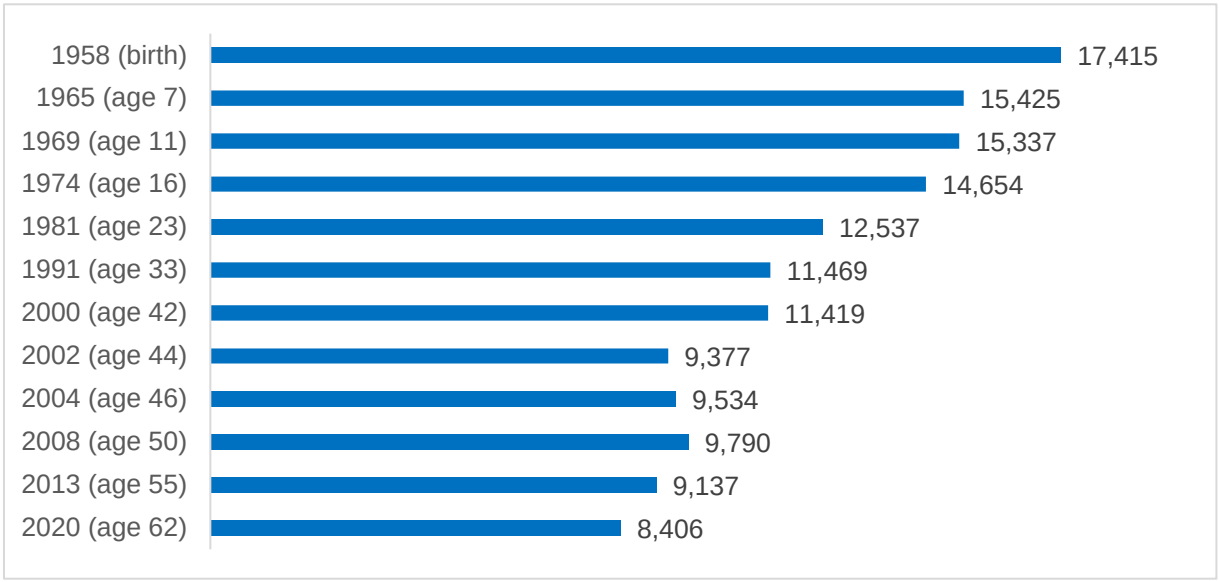
The Centre for Longitudinal Studies (CLS) at the Social Research Institute, University College London, (and formerly the Social Statistics Research Unit at City University), has been responsible for the study since 1991. The study is core-funded by the ESRC (the Economic and Social Research Council). The Age 62 Survey was additionally co-funded by the Department for Work and Pensions (DWP), the Medical Research Council (MRC) and the U.S. National Institutes of Health (NIH).

1.1.1. Participation by sweep

The chart below shows the number of interviews achieved at each sweep of NCDS. The majority of sweeps were conducted in-person with the exception of the Age 46 sweep (telephone survey) and the Age 55 sweep,

which was a mixed mode survey using both web and telephone. The Age 44 sweep was a biomedical sweep, conducted in-person with a nurse.

Figure 1:1 Number of interviews per sweep of NCDS



1.2 Introduction to the Age 62 Survey

This report provides an account of the design, development and conduct of the Age 62 Survey which took place between 2020 – 2024 when cohort members were aged 61-65 years[1]. Fieldwork originally began in January 2020 and was paused in March 2020 due to the COVID-19 pandemic and was restarted in spring 2021.

The National Centre for Social Research (NatCen) were the lead contractor for the Age 62 survey and were responsible for survey development, fieldwork and initial data preparation. Half of the survey fieldwork was conducted by Verian (then known as Kantar).

The broad aim of the Age 62 survey was to collect information which would aid the understanding of the lifelong factors affecting retirement and ageing. This survey also had a biomedical focus, as physical measurements and assessments were conducted for the first time since the Age 44 biomedical sweep. The data collection built on the extensive data collected previously from birth and across the lifetime of study members and will facilitate comparisons with other generations as they reach the same life stage, allowing for study of social change.

[1] The pilot and DRH phases took part in 2019 when some study members were aged 60.

2. Survey design

2.1 Introduction and scope

CLS contracted NatCen to conduct the development, fieldwork, and initial data preparation for the Age 62 Survey. NatCen worked in collaboration with Verian (previously Kantar) on the interviewer fieldwork.

The Age 62 Survey involved the following elements:

- 95-minute interview which included a self-completion section, cognitive assessments and collection of data linkage consents
- Two paper self-completion questionnaires
- 55-minute health visit during which biomeasures were collected
- Online dietary questionnaire

2.2 Face to face interviewing (Pre-COVID Waves 1 and 2)

The Age 62 Survey was designed to be an in-person sweep, with fieldwork starting in January 2020. However, due to the COVID-19 pandemic fieldwork had to be paused in March 2020. The first two waves of fieldwork were launched during this time and were conducted in-person.

2.3 Video-interviewing (Post COVID Waves 1 and 2, and Wave 3)

When fieldwork had to be paused due to COVID, the interview and study procedures were amended so the survey could be conducted by video call – also known as Computer Assisted Video Interviewing (CAVI). A successful small-scale video call pilot was first carried out on the British Birth Cohort Study 1970 (BCS70) and then a larger pilot was conducted as part of the National Child Development Study (NCDS), using cases who were originally allocated to Wave 3. Further information on this development work can be found in Chapter 7.

Following on from these pilots, the Wave 1 and 2 cases which had been issued to the field but had not been interviewed before fieldwork was paused due to COVID were reviewed to identify which cases could be issued to a video interview. Cases were excluded if they had an ineligible outcome (e.g. died), gave a firm refusal or if they had no telephone number or email address. Those deemed suitable for video-interview were allocated to Wave 2.5 – the first of the video-only waves. Wave 3 was also conducted by video call only. Again, respondents with no telephone number or email address were delayed to a later wave.

The video call interviews contained all survey elements; two paper questionnaires, a Computer Assisted Interview (CAI) including a self-completion section, cognitive assessments, data linkage consents but included the following key adaptations:

- Interviewers were trained fully on how to conduct a video interview and accredited by an experienced video interviewer before starting work. The NCDS project briefing was also adapted to explain the processes the interviewer would need to follow when administering the video interview.
- The questionnaire was administered using MS Teams. Interviewers used their CAI laptops to conduct the interviewing and so only had one screen. They used the ‘show screen’ function in Microsoft Teams to share show cards and leaflets with the cohort member (these had been on paper for in-person

interviews). At a small number of questions during the interview they also shared their interviewer screen with the cohort member.

- The sensitive questions, which were delivered in CASI format for in-person interviews, were programmed into a CAWI (Computer Assisted Web Interview). The link was sent to the respondent via the chat function in Microsoft Teams to allow them to complete these questions in private during the interview.
- All documentation required for the interview was sent in advance (including the 'letter cancellation document' which was required during the cognitive tests and the two paper self-completion questionnaires) along with a reply-paid envelope provided for the study member to return the completed survey documents.
- All contact and tracing conducted in this phase was conducted remotely (by telephone, emails or letter).
- Permission for linkage to government data was asked verbally and recorded in the CAI (or CAWI for partners), rather than having to sign consent forms as was used in the in-person interviews before COVID. This approach was used for the rest of fieldwork for both interviewing modes.

2.4 In-Person first design (Waves 4-6)

From April 2022 onwards it was considered feasible to return to in-person interviewing. Where possible, all cases in Waves 4-6 were contacted by an in-person interviewer but a cohort member could request a video interview if they preferred. In some areas it was not possible to find an in-person interviewer to undertake the work, so cohort members in these areas were allocated to a video interviewer. The main differences between the in-person interview waves and the video only wave were as follows:

- The project briefing was adapted to train interviewers on how to administer the interview in-person.
- A mix of telephone and in-person recruitment was used when trying to make contact with a case. Some cases were classified as being 'difficult cases', where making contact and recruitment to interview was likely to be more difficult. In these cases, the interviewer had to make their first contact attempt in-person.
- The sensitive questions were programmed into the interviewer programme (Computer Assisted Self Interviewing (CASI)). The laptop was handed over to the respondent at this point in the interview so they could complete this section in private.
- The two paper self-completion surveys were given or sent to the cohort member to complete before the interview. The interviewer could then collect the questionnaires during the interview and send these back to head office.
- Other documentation required for the interview was taken along by the interviewer, including the 'cognitive booklet' containing the 'letter cancellation sheet'. It was administered as part of the cognitive assessments. This was collected by the interviewer during the interview.
- All forms of contact and tracing could be conducted in these waves including in-person visits to the cohort member or their stable contacts and visiting the last interviewed address.

2.5 Health Visit

On completion of the interview, respondents were asked if they were happy to be contacted by a healthcare professional about taking part in a follow-up health visit. If they consented, a biomedical fieldworker made contact with the cohort member. Initially this contact was intended to be within a few weeks of the interview, but due to pandemic restrictions on in-person interviewing, for many cases there was a long gap between the interview and health visit.

Once biomedical fieldworkers had made contact, they arranged a visit with those who agreed to take part in this stage. During health visits, key biomeasures were collected including the collection and centrifugation of blood samples (from those who consented to this). Consent was collected for each measure and included consent to send results from initial blood tests to cohort members and their GPs. The biomedical fieldworkers also collected names of prescribed medications and completed a drug coding module. During this visit, cohort members were asked to complete an online dietary questionnaire (on two specifically allocated days). More information is provided in Section 5.12.

2.6 Mop-up Survey

Following completion of mainstage fieldwork, a web survey was conducted from March to April 2024. Cohort members who had not responded to the main interview, including emigrants (who were not part of the main survey) were invited to participate. Those who did take part in the main survey but did so before COVID i.e. those cases interviewed before March 2020 were also invited to take part in this survey. These cases were invited to participate in order to collect information on key changes in their circumstances since the pandemic as well as responses to new COVID related questions which were added to the questionnaire when it relaunched.

Outcome codes and interviewer memos from the main interview were reviewed to remove cases deemed unsuitable for contact. Cohort members were invited to take part in the survey by email. A letter invite was also sent to those cases living in Great Britain.

The survey lasted approximately 20 minutes and included:

- The household grid.
- Condensed versions of the housing, employment, income, health, COVID-19 modules as well as some key questions about life-satisfaction and wellbeing.
- The contact information module.

The survey did not include any cognitive assessments or the section on data linkage consents. Cohort members were also not asked to complete the paper self- completion questionnaires or have a health visit. Full details of the Mop-Up-Survey are provided in Chapter 11.

3. Sample design

3.1 Introduction

In the first sweep of NCDS, all babies born in the UK during one week in 1958 were selected. During the surveys at ages 7, 11 and 16, the cohort was augmented by additional children who were born outside Great Britain, but within the target week in 1958, and subsequently moved to and were educated within Britain.

3.2 Issued sample for Life in Early 60s Survey

The issued sample for the Age 62 survey consisted of 11,493 cohort members in total. Participants were issued to the survey unless they were either: known to be deceased; had permanently withdrawn from the study; lived outside of Great Britain; were long-term untraced; or in prison.

The majority of those issued had been interviewed in the Age 55 survey (76% in 2013), with a further 9% last interviewed in 2008 in the Age 50 Survey. Around 3% of the sample had not been interviewed since childhood.

Table 3:1 Sweep when last interviewed of all cases issued to Age 62 Survey

	N	*%*
1958 (birth)	4	*<1*
1965 (Age 7)	16	*<1*
1969 (Age 11)	58	*1*
1974 (Age 16)	261	*2*
1981 (Age 23)	350	*3*
1991 (Age 33)	260	*2*
2000 (Age 42)	*301*	*3*
2002 (Age 44)	*111*	*1*
2004 (Age 46)	360	*3*
2008 (Age 50)	*1,083*	*9*
2013 (Age 55)	*8,689*	*76*
Total	*11,493*	*100*
		Base: all issued sample

3.3 Availability of remote contact details

The table below shows the availability of telephone and email addresses for the cohort members in the issued sample. The majority of cases had provided at least one email or telephone number on which to contact them (91%) and almost three quarters of cases had provided both (73%). This made video interviewing a feasible mode for interviewing. Those contacts who had no telephone or email address were not issued to the video interview only waves (1,071 cohort members) but were issued to later waves when in-person interviewing had resumed.

Table 3:2 Availability of telephone and email details		
	N	*%*
Telephone number available (mobile or home or work)	10,274	*90*
Email address available	8,565	*75*
Cases with both an email and telephone number (mobile or home or work)	8,417	*73*
Cases with at least one form or remote contact	10,422	*91*
Cases with no telephone or email address	1,071	*9*
Total	*11,493*	*100*
		Base: all issued sample

3.4 Availability of stable contact details

The majority of cohort members in the sample had provided contact details for at least one stable contact which the interviewer could use to trace the cohort member (77%).

Table 3:3 Availability of stable contact details		
	N	*%*
Contact details provided for one or more stable contacts (with address, telephone number or email address)	8,876	*77*
No stable contact details	2,617	*23*
Total	*11,493*	*100*
		Base: all issued sample.

3.5 Allocation to waves (based on difficult cases above and clustering)

The mainstage sample was examined to identify cases which were likely to be difficult to convert to interview, where it was believed it would take longer to make contact with the cohort member or be harder to recruit them to interview. A case was considered difficult if they were unproductive at the last survey. At the sample design stage fewer difficult cases were allocated to the first and last waves of fieldwork. However, due to COVID and the need to implement a video call-first mode in wave 3, this meant that more of the difficult cases were moved to later waves.

Table 3:4 Difficult cases in the final allocated waves					
	Non-difficult		*Difficult*		*Total*
	N	*%*	*N*	*%*	*N*
Wave 1 (In-person/video call)*	1,197	78	331	22	1,528
Wave 2 (In-person/video call)*	1,480	74	529	26	2,009

Table 3:4 Difficult cases in the final allocated waves					
Wave 3 (Video call first)	1,309	83	277	17	1,586
Wave 4 (In-person first)	1,603	73	585	27	2,188
Wave 5 (In-person first)	1,459	69	644	31	2,103
Wave 6 (In-person first)	1,127	78	310	22	1,437
					Base: all issued mainstage sample, 11,493 cases.

*The figures for Waves 1 and 2 include the cases covered before COVID which were in-person, cases which could not be covered before COVID and were issued again after COVID as video-first, and a small number of cases which could not be issued to a video interviewer but had to be reissued to an in-person interviewer.

Table 3:5 Mode case first allocated to in the final waves[2]					
	Allocated first to Video Mode		***Allocated first to In-person Mode***		***Total***
	N	*%*	*N*	*%*	*N*
Pilot (In-person mode only)	*0*	0	*89*	100	89
Dress rehearsal (In-person mode only)	*0*	0	*242*	100	242
Video Pilot (Video first)	*311*	100	*0*	0	311
Wave 1 (In-person first)	*0*	0	*1,316*	100	1,316
Wave 2 (In-person first)	*0*	0	*578*	100	578
Wave 2.5 (Video first)	*1,643*	100	*0*	0	1,643
Wave 3 (Video first)	*1,586*	100	*0*	0	1,586
Wave 4 (In-person first)	*284*	13	*1,904*	87	2,188
Wave 5 (In-person first)	*516*	25	*1,587*	75	2,103
Wave 6 (In-person first)	*220*	15	*1,217*	85	1,437
Total	*4,560*	*40*	*6,933*	*60*	*11,493*
					Base: all issued pilot, dress rehearsal, video pilot and mainstage sample

3.6 Allocation to Health Visit

Cohort members who were interviewed either in-person or by video (not including proxy cases) were asked at the end of their interview if they would be willing to have a health visit. If they agreed, then they were allocated to a biomedical fieldworker, who were trained health professionals such as nurses, midwifes, phlebotomists or emergency medical technicians.

[2] Some unproductive pilot and dress rehearsal cases were issued again to mainstage and these are shown in the specific mainstage wave they were issued to.
Some of the cases in the video pilot were reissued to in-person interview later but are still shown as video pilot cases.
The cases ascribed as Wave 1 or 2 are those cases which were issued before COVID and were either productive then or put into a reissue wave later.
The cases ascribed in Wave 2.5 were originally issued before COVID but could not be worked (fully) before the pause or were unproductive and were considered to be able to be issued again. These cases were issued to video interview and have been coded as being allocated to video interview first.

3.7 Cases traced through the NHS

The mainstage sample file contained 1,116 unconfirmed addresses that had been traced using the NHS central register shortly before fieldwork began. Of these a=ddresses, 165 (15%) resulted in a productive interview.

3.8 Sample management

3.8.1.Serial Number Allocation

Each NCDS cohort member has a unique CLS serial number that was allocated at the beginning of the study. In order to facilitate fieldwork management and data processing, and to increase confidentiality, each cohort member was allocated a unique NatCen serial number, specific to this sweep of fieldwork. The NatCen serial number was used on all letters (advance letters, tracing letters, thank you letters) as well as paper self-completion questionnaires, consent forms, and other documents.

3.8.2.Sample files from CLS

CLS was responsible for providing sample information for the cohort members who were to be issued. The original sample that was sent through to NatCen contained all sample members to be issued and included the following information:

- Serial number
- Survey status (based on participation eligibility and address status)
- Name
- Sex
- Date of birth
- Address
- Date address first recorded and date address last confirmed
- Telephone numbers and email address
- Partner name and telephone number
- Stable contact details
- Delicate/useful memos
- Outcomes from previous surveys
- Reasons for refusals
- Sweep of last interview
- Address at last interview
- Whether cohort member had known vision, hearing or literacy problems
- Whether last interview was conducted by proxy

Other sample information

“Feed-forward” data files were also delivered to NatCen before the start of fieldwork. These contained the answers cohort members had given to key questions in previous interviews.

Feed forward data included:

- Country living in at previous interview
- Whether interviewed in last 3 sweeps of NCDS
- Date of last interview
- Cohort member’s date of birth

- Cohort member's sex at birth and after gender reassignment and whether known to have undergone gender reassignment
- Marital status at last interview
- Whether in an unfinished union at last interview – e.g. still married but no longer living with spouse
- Current partnership status at last interview
- Whether cohort member's mother/father was alive at the last interview
- Date moved into address at last interview
- Housing tenure at last interview and if rented accommodation – who rented from
- Economic activity at last interview and if working, job title at previous interview
- Whether took part in Age 50 or Biomedical Surveys
- Whether cohort member had an oophorectomy or hysterectomy by age 50 survey
- Date of last interview which asked about surgery
- Whether cohort member was having HRT at Age 50 survey or had ever done so before
- Whether cohort member had permanently stopped menstruating by age 50 survey
- Word list used in previous cognitive survey
- Household grid numbers of partner/children
- Whether cohort member and their partner consented to link their data to NHS, HMRC and DWP records at a previous survey
- Household composition at previous interview – name, sex, DOB of person living in household at the last interview
- Nurse measured height taken at Age 44 bio-medical survey

The feed forward data was provided in two files. One file which included information about the cohort member only, and one hierarchical file with details of all individuals that had lived with each cohort member about whom information had been collected at previous sweeps of the study.

The answers contained in the file were loaded or "fed-forward" into the CAII questionnaire. For example, the cohort member's partner's name and other details were fed forward and the respondent was asked if this was still their partner.

Feed-forward data was also used in question routing. For example, a question such as, "Is your mother still alive" would be routed past if the cohort member had said at a previous interview that their mother had died.

Sample updates

CLS continued to trace cohort members during fieldwork and also received updated contact details from cohort members during the course of fieldwork. Newly obtained information was sent to NatCen in weekly sample update files. CLS started sending updates through to NatCen on 17th December 2019, during the soft-launch, and these were then sent on a weekly basis until 9th November 2023. The following information was included in the sample update files:

- Serial numbers
- Survey status
- Cohort member details (Name, DOB, gender)
- Contact details for the cohort member (address, up to 3 telephone numbers, email)
- Name and mobile number of the cohort member's partner

- Contact details of up to two stable contacts (family members or friends who could be used to trace cohort members if required).
- Memos which included useful information recorded by interviewers or by CLS
- Address at the last interview

In advance of the Mop-up survey, CLS conducted a tracing exercise using AFD, a contact details validation service. This exercise sought to obtain new address information for all participants not contacted by interviewers during fieldwork. Any new addresses obtained through this exercise were provided in the final update file and used for the Mop-Up Survey.

3.9 Return of sample to CLS at the end of fieldwork

NatCen was responsible for updating contact information for cohort members who were interviewed at this sweep of fieldwork and transferring this updated information to CLS at various key points during the course of fieldwork (with a final file delivered after fieldwork had finished). Updated contact information was also supplied, where possible, for cases who were not interviewed at this sweep – this was provided after fieldwork had finished.

4. Main Interview - Questionnaire design and implementation

4.1 Overview

The Age 62 survey consisted of an in-person or video interview lasting for an average of approximately 95 minutes. This contained various components including cognitive testing, a self-completion section including sensitive questions, and consent to data linkage. The in-person and video call interviews used the same Blaise 4 programme with slight adaptions for video interviews mainly in the form of interviewer instructions. Larger adaptions were made for the section of the survey asking sensitive questions, which for the video interview, was programmed as a web survey. Adaptions also had to be made to include the letter cancellation cognitive assessment which required a paper sheet to be completed by the respondent during the interview. Full details of the interview content and adaptions made for the video interview are provided in this section.

4.2 The Computer Assisted Interview (CAI)

The table below shows the different modules included in the in-person/video call interviews.

Table 4:1 Questionnaire Modules

Questionnaire Module	**Content**
Household grid	Confirmed basic contact details and collected details about cohabiting partnerships, children (including those not in the household) and any other household members.
Family	Asked about non-cohabiting relationships, children, grandchildren, parents, and level of contact with family members.
Housing	Collected information on cohort member's housing history and current accommodation.
Employment	Collected information on cohort member's current and previous economic activity (including employment, education or training, unemployment, retirement, sickness or disability, and looking after the home or family). Those in work were asked about their hours and pay and any changes in working practices due to the pandemic. Cohabiting partner's current economic activity and income from employment were also recorded and any changes to working practices due to the pandemic.
Income	Collected details on benefits, tax credits/allowances, pensions, investments and savings, inheritances and gifts received and debt for both the cohort member and their cohabiting partner.
Cognitive Experiments	Four short memory, concentration and knowledge tasks detailed in full in section 4.4.
Lifelong Learning	Asked questions about any new academic or vocational qualifications gained by the cohort member since the last interview (or 1st Jan 2008). For the cohabiting partner, the age they left full-time education and their highest qualification was recorded.

Table 4:1 Questionnaire Modules	
Health	Asked questions about physical and mental health, falls and broken bones, and problems with eyesight. It also included questions around lifestyle choices in terms of exercise, drinking, smoking; and collected self-reported height and weight measurements. It recorded if the cohort member has private health insurance.
COVID-19	Collected details about whether the cohort member had experienced symptoms of COVID-19 and long COVID, if they had had a positive test, and if they had been vaccinated.
Sensitive questions	For those taking part in-person this was administered by Computer Assisted Self-Interview (CASI), for those taking part by video, this was completed as a web interview – contained questions about political attitudes and voting, voluntary work, financial literacy, mental health, relationships with partner, relatives and friends, partner's health, gynaecological problems, menstruation, symptoms of the menopause and life satisfaction.
Data linkage consent	Consent was sought to link survey data to government health and economic records where not obtained at the Age 50 survey. Permission from both the cohort member and their cohabiting partner was sought.
Contact Information	Updating contact details for the cohort member, partner and stable contacts. New contact details were also collected if the cohort member was planning to move. If the interview was carried out by an interpreter, the contact details of the person who acted as an interpreter were collected. If the interview was carried out by proxy, the contact details of the person who acted as proxy were collected.

4.3 Event Histories

There were three event histories included in the CAI interview: a relationship history, a housing history, and an economic activity history.

- Cohort members that had been interviewed in the last three sweeps (at either the age 46, 50 or 55 sweeps) were asked to update their cohabiting relationship history from the date of their last interview. Cohort members that had not been interviewed in the last three sweeps were asked to update their situation from 1st January 2004.
- Cohort members that had been interviewed in the last two sweeps (at either the age 50 or age 55 sweeps) were asked to update their housing or economic situation from the date of their last interview. Cohort members that had not been interviewed in the last two sweeps were asked to update their situation from 1st January 2008.

4.4 Cognitive function tasks

During the CAI interview, all cohort members were asked to undertake four different cognitive assessments. The tasks were designed to measure different aspects of cognition and have been included in various other studies such as the British Birth Cohort Study (BCS70) and the English Longitudinal Study of Ageing (ELSA).

Word-list recall: This tested verbal learning and recall. Cohort members were asked to listen to a list of 10 words. They were then asked to recall the words immediately. In most cases, the list was presented by the computer using a recorded voice. In some cases, where the cohort member could not hear the recorded voice, the interviewer read out the list.

Animal naming: This tested how quickly cohort members could think of words from a particular category. Cohort members were asked to name as many different animals as they could think of in one minute. The timing was controlled by the computer. Interviewers entered the number of animals the cohort member said into CAI, not counting any repetitions.

Letter cancellation: This tested attention, mental speed and visual scanning. Cohort members were given a page of random letters of the alphabet arranged in a grid and were asked to cross out as many “P’s and “W’s as possible in one minute. They were then scored on both how accurately they completed the task, and how far along the grid they managed to get within one minute.

Delayed word-list recall: This tested short term memory. Cohort members were asked to recall as many words as they could remember from the list they heard during the first word recall test. They were not permitted to listen to the list again.

Interviewers were required to gain verbal consent for each of the cognitive assessments. Cohort members could choose which assessments they took part in. Interviewers were asked to make sure that the tests took place in conditions that allowed optimal performance of the cohort member, such as making sure they had their glasses if needed. Where possible, the tests should have been conducted in private, preferably at a table, and in settings that were as free as possible from interruption or disturbance.

The cognitive function assessments were originally designed to be administered in an in-person interview, but the majority of these tests were easily adapted to be administered via video interview. The letter cancellation assessment required the largest adaptation:

The following adaptions were made to the cognitive assessments for video interviews:

- **Word-list recall:** the interviewer shared their screen with sound over Microsoft Teams so the cohort member could hear the recording of the 10 words they needed to recall. The interviewer read out the list if the recording could not be heard.
- **Animal naming**: the interviewer did not share their screen at this point in the interview so the cohort member could not hear the one-minute timer on the programme. The interviewer therefore told the cohort member when to start and stop the test.
- **Letter cancellation**: The letter cancellation sheet was placed in a sealed envelope and posted out before the interview. On the envelope were clear instructions not to open the envelope before being asked to by the interviewer during the interview. The interviewer timed the test for one minute and at the end asked the cohort member to show them the sheet so they could see the last underlined letter (although they did not record this). The cohort member then posted back the sheet.

4.5 Sensitive Questions

Towards the end of the interview, the cohort member was asked to complete a self-completion section which lasted for approximately 10 to 15 minutes and covered more sensitive questions.

4.5.1 In-person interviews

During in-person interviews the interviewer would pass their laptop over to the respondent so that they could answer the sensitive questions themselves and this was the preferred method of completion. This is called Computer-Assisted Self-Interview (CASI). The interviewer could read out the questions to the cohort member if they were not able to do so. At the end of this section, the cohort member was asked to confirm they had

completed the section and then “lock” the section so that the answers could not be looked at by the interviewer, before handing the laptop back to the interviewer.

Most questions in the self-completion section did not have a don’t know or prefer not to say answer option available at first. It was made clear at the start of the CASI section that the cohort member could skip questions they did not want to answer by leaving them blank. On doing so the options of don’t know and prefer not to say would then appear on their screen.

4.5.2 Video interviews

The self-completion questions were programmed in a Computer Assisted Web Survey (CAWI) and each cohort member had their own unique link to this survey (we refer to this as the CASI CAWI). At this point in the survey, the interviewer pasted the cohort member’s unique link to the web survey in the chat function on Microsoft Teams[3]. The interviewer stayed on the video call while the cohort member completed the CASI CAWI and was available to give advice if there were any technical difficulties. If the cohort member could not access or complete the CASI CAWI themselves, the interviewer had the self-completion section on their interview programme and could show or read out the questions to them. It was preferable for the cohort member to complete the sensitive questions during the interview to ensure this data was collected but the link to the CASI CAWI could also be emailed out following the survey if necessary.

The CASI CAWI was programmed to be as similar to the self-completion section on the CAI survey as possible to reduce any mode effects, for example batteries of questions with the same answer codes were not put into grids to match the layout in the CAI survey and the options of don’t know and prefer not to say were shown if a question was left blank.

4.6 Data linkage consents

NCDS aims to collect consent from cohort members and their cohabiting partners to link data collected in the study over the years with records held by the National Health Service (NHS), His Majesty’s Revenue and Customs (HMRC), and the Department for Work and Pensions (DWP). The information contained in the health records focus on details of hospital visits, any long-lasting health conditions, treatments received, and medications prescribed. The economic records from DWP and HMRC include details of benefits being received, national insurance and tax payments, and a full employment history.

Consent to data linkage was first asked about in the Age 50 survey. In the Age 62 Survey cohort members were asked to give consent if they had not taken part in the Age 50 survey or if they had taken part but refused one or more of the Health/Economic consents. If they had consented to link their data to some but not all of the Health/Economic records previously they were only asked about those records they had refused previously.

The cohort member’s partner was asked for consent if the cohort member had not taken part in the Age 50 Survey, they were a new partner or they were the same partner but they had refused consent to link to one or more of the Health/Economic records before.

Consent to data linkage was asked towards the end of the interview and a lot of information was provided to ensure the cohort member was fully informed about what they were consenting to. Information was provided

[3] Each cohort member was provided with a direct link to the survey. If they needed to type the survey address into a browser, a shorter survey link with a unique id was also made available for the cohort member to use.

about why adding this information to their survey data was important, the information the records held, how the data would be linked and used (including compliance with the General Data Protection Regulation (GDPR)), the length of time their data would be linked and their right to change their minds. As part of this process, the cohort member was provided with a leaflet, “Adding information about you,’ explaining the data-linkage process in full. This leaflet was handed to the respondent in an in-person interview and shared on screen in the video interview.

In the pilot, dress rehearsal and mainstage prior to the COVID 19 pandemic, respondents and the interviewer were asked to sign a paper form to collect data linkage consents (if applicable). The consent forms were returned to the office and logged.

In the video pilot, this method changed, and consent was only recorded in the interview programme itself. Collecting consent in the interview programme was adopted for mainstage fieldwork post COVID. Following the interview, all cohort members who were asked for consent to the data linkages were sent an email or a letter which detailed what consents they had agreed to (even if they had agreed to none) and the process to follow if they changed their minds.

If during the interview the partner was available, the interviewer would ask permission to speak to them directly and record their economic/health consents in the interview programme. The script followed the same procedure as for the cohort member, detailing the permissions sought and how the data would be used and safe-guarded. A copy of the information leaflet was also shown or given to the partner. If the partner was not available, then:

- Before COVID, the interviewer left consent forms (and the information leaflet) with the cohort member to give to the partner to sign and return by post.
- After COVID, the interviewer asked the cohort member if they would forward an email regarding ‘adding other information’ to their partner (a paper letter could also be sent if preferred). The email included information on data linkage, including the information leaflet, and gave the partner a unique weblink to a survey. The web survey took the partner through a similar process to the interviewer script and asked them to record their economic and health consents. After COVID, following the interview or web survey, an email (or letter if requested) was sent to the partner to confirm the data linkage consents they had agreed to (even if they had agreed to none).

4.7 Collection of contact information

At the beginning of the interview, cohort members were asked to confirm, update or provide their name, address and their home and mobile telephone numbers and email address. The final module of the CAI interview confirmed and updated further contact details: work telephone number; partner’s name, mobile telephone number and email address (if applicable); and up to two stable contacts, who could be contacted in the future to help trace the cohort member if they had moved.

4.8 Proxy Interviews

In cases where the cohort member was unable to understand survey questions (even through an interpreter) or communicate the answers for themselves, a proxy interview could be conducted with a carer such as a close family member. This took them through a shorter route of the questionnaire lasting approximately 45 minutes. The survey was tailored to account for someone else participating on behalf of the cohort member, and did not include the modules on sensitive questions, cognitive testing and data linkage. The self-completion paper questionnaires were also not placed.

4.9 Partial interviews - definition

Both partial and fully completed interviews were included in the final data. An interview was classed as partial if the respondent answered the last question in the family module (SCFAM). There were 26 partial interviews.

4.10 Questionnaire length section timings

Video interviews were slightly longer on average overall, with a mean of 1 hour 39 minutes, compared to a mean of 1 hour 34 minutes for in-person interviews.

The longest module was the income module, with a mean of 16 minutes. This module was longer for video interviews at 16 minutes and 32 seconds compared to in-person interviews at 15 minutes and 52 seconds.

The timings data were capped at the higher end of the distribution, to take into account interviewers who may have left screens open for a long time (e.g. if they paused the interview and came back to it later). The timings were also capped at the lower end of the distribution, based on a conservative estimate on the minimum time it would take to move through the interview with all items refused.

Table 4.2 Interview module timings

	Mean length (hours: minutes: seconds)		
Questionnaire module	*All interviews*	*In-person interviews*	*Video call interviews*
Household grid	0:07:13	0:06:51	0:08:06
Family	0:12:43	0:12:28	0:13:20
Housing	0:02:26	0:02:25	0:02:29
Employment	0:09:27	0:09:12	0:10:04
Income	0:16:03	0:15:52	0:16:32
Cognitive function	0:08:59	0:08:42	0:09:40
Lifelong learning	0:01:56	0:01:53	0:02:03
Health	0:08:47	0:08:48	0:08:45
COVID and CAWI[1]	0:16:37	0:17:21	0:14:50
Data linkage	0:03:28	0:03:06	0:04:21
Contact	0:07:13	0:07:00	0:07:46
Total interview time	1:35:53	1:34:24	1:39:27

[1]The data does not contain a populated timestamp variable for the end of the COVID module or start of the CAWI module, so the length of these two modules has been combined.

4.11 Script quality control

The route the cohort member took through the questionnaire was controlled by all the CAI scripts, so respondents were asked all relevant questions and interviewers had to enter an answer before moving on to the next question. There were also consistency checks included in the scripts. This enabled interviewers to clarify and query data discrepancies directly with the respondent during the interview. Consistency checks are either “soft” or “hard”. Hard checks must be resolved by the interviewer or cohort member at the time of the interview before they can move to the next question, whereas soft checks can be suppressed during the survey. The use of hard checks was limited in self-completion sections such as the CASI/CAWI. These checks kept editing of the CAI data to a minimum.

5. Health Visit – Biomeasures Collection

5.1 Overview

The health visit component of the survey involved an in-person visit from a biomedical fieldworker which lasted approximately one hour. The fieldworkers used a Blaise 4 CAI programme.

During the visit, a number a biomeasures were collected including:

- drug coding of prescribed medications
- blood pressure
- grip strength
- waist and hip circumference
- weight and body fat percentage
- blood sampling
- timed walk
- balance measurements

Cohort members could take part in as many or as few biomeasures as they wished. During visits where cohort members agreed to have a blood sample taken, the biomedical fieldworkers centrifuged samples in the respondents' homes.

On some occasions, biomedical fieldworkers collected data linkage consent for partners. This happened in circumstances where the partner had been unavailable during the cohort member's interview, and had not recorded their consent via and online questionnaire between the interview and health visit.

5.2 Refer to Protocols in appendix

Protocols for each measure can be found in appendix B.

5.3 Anthropometry

The anthropometry module included the following measurements:

- Weight
- Body fat percentage
- Waist and hip circumference

These measurements were given to cohort members on their measurement record card if they wished.

5.4 Blood pressure

Three measurements of blood pressure were collected; two seated measurements follow by one standing measurement. Systolic and diastolic blood pressure and pulse readings were taken. If they wished, cohort member's results were given to them on their measurement record card along with an indication as to whether their blood pressure was normal or raised, and advice on appropriate action they should take. Cohort members were also asked for their consent for their blood pressure results to be sent to their GP.

5.5 Grip strength

A measure of upper body strength was taken using a digital dynamometer. The respondent was asked to squeeze the gauge twice with each hand. The results were recorded on the cohort member's measurement record card if they wished.

5.6 Leg raise

Eligible cohort members were asked to raise one leg off the floor with their eyes open. The biomedical fieldworker then noted the length of time they could hold this position, up to 30 seconds. If the cohort member held this position for 30 seconds, they were asked to raise their leg off the floor with their eyes closed for 30 seconds. These measures are important indications of functions of locomotion.

5.7 Blood sample

Respondents were eligible to have a blood sample taken if they did not meet any of the following exclusion criteria: (1) had a clotting or bleeding disorder, (2) had had a fit or convulsion in the last five years, (3) were taking anticoagulant drugs or (4) were pregnant.

If cohort members consented to all blood sample measurements, a maximum of five tubes of blood were taken. Two tubes were then centrifuged in the respondent's home. Two tubes were sent to the Newcastle RVI lab for analysis of cholesterol (total and HDL), glycated haemoglobin, triglycerides and c-reactive protein (CRP). The remaining tubes were sent to University of Bristol lab to be stored for future analyses including DNA extraction (where consent provided).

Once the blood samples were collected, biomedical fieldworkers were advised to post the samples as soon as possible using Royal Mail 48-hour tracked labels.

5.7.1 Collection process

Before collecting blood, biomedical fieldworkers sought five written consents from cohort members:

- consent to take a blood sample
- consent for analysis (of cholesterol, glycated haemoglobin, triglycerides and CRP)
- consent to inform their GP of the results of cholesterol and glycated haemoglobin ONLY
- consent to blood being stored for future analysis
- consent to a sample of blood being taken for DNA extraction, analysis and storage for research purposes

Table 5:1 summarises the blood samples collected.

Table 5:1 Collection of blood samples					
Tube order	**Blood quantity and type of tube**	**Number of inversions[4]**	**Centrifuged?**	**Lab**	**Analytes**
1	5 ml / Rapid Serum tube (RST)	6	Yes	Bristol – then sent onto other laboratories for analysis	aliquoting and storage for future use
2	2.5 ml / SST tube	6	No	RVI	total/HDL cholesterol/Triglycerides, C-Reactive-Protein
3	3 ml / K2 EDTA tube	10	No	RVI	HbA1c
4	6 ml / K2 EDTA tube	10	No	Bristol – then sent onto other laboratories for analysis	DNA, other analytes
5	5 ml / PPT EDTA tube	10	Yes	Bristol	aliquoting and storage for future use

5.7.2 Centrifugation

Centrifuges were set up by biomedical fieldworkers in respondents' homes. The centrifuge needed to be equally balanced, so tubes were only able to be spun if they were at least three-quarters filled (although underfilled tubes were sent to labs nonetheless). Tubes were placed in equally weighted pairs in opposite tube holders. If only one of the two tubes requiring centrifugation was filled, balancing tubes ensured that the weight was equal.

Blood was spun for 10 minutes and was then left to rest and clot before packaging up for dispatch.

5.7.3 Receipt of blood at labs

Table 5:2 shows a summary of the number of days it took for the Bristol lab to receive the blood samples.

Table 5:2 Number of days from interview to sample being received at the Bristol Lab		
Days	*N*	*%*
1	613	12
2	1,400	28
3	1,342	27
4	908	18
5	458	9
6	158	3
7	73	1
Over 7 days	113	2
No data available	6	0

[4] Inversions refers to the biomedical fieldworker turning the tube upside down and back upright to mix the contents of the tube.

Total samples sent to Bristol lab	*5,071*	*100*

Table 5:3 shows a summary of the number of days it took for the RVI lab to receive the blood samples.

Table 5:3 Number of days from interview to sample being received at the RVI Lab		
Days	*N*	*%*
0	4	1
1	521	10
2	1,378	27
3	1,435	28
4	953	19
5	485	9
6	197	4
7	73	1
Over 7 days	78	2
No data available	1	0
Total samples sent to RVI lab	*5,125*	*100*

[1]The four samples where *N*=0 is likely due to a recording error.

University of Bristol were responsible for the aliquoting and storage of blood for future use.

5.8 Data linkage consents

During health visits, partners of cohort members were given the opportunity to provide consent to link government records containing information about them to survey data. Partners were only asked if they were eligible to provide consent at this sweep and had not been available to consent during cohort member's interview.

If the partner was unavailable during the health visit, the biomedical fieldworker would ask the cohort member if they were willing to pass on a data linkage leaflet and either a letter or an email inviting the partner to record their consents to data linkage via an online CAWI. Before handing the letter to the cohort member, the biomedical fieldworker filled in a unique access code to the online questionnaire.

5.9 Partial health visits – definition

It was agreed that a health visit would be classed as partial if the respondent answered a question near the start of the blood pressure section (BPMod) – but there were no partial health visits.

5.10 Questionnaire length section timings

The mean overall length of the health visit was 54 minutes and eight seconds. This time reflects the length of time the biomedical fieldworkers were in the interview program, rather than the total time that they were in respondents' homes. Additional time was spent setting up equipment.

The longest module was the blood sampling module, with a mean of 16 minutes and 28 seconds. The shortest module was the collecting documents module with a mean of one minute and 36 seconds.

The timings data were capped at the higher end of the distribution, to exclude cases where biomedical fieldworkers may have left screens open for a long time (e.g. if they paused the health visit and came back to it later). The timings were also capped at the lower end of the distribution, based on a conservative estimate on the minimum time it would take to move through the health visit with all items refused (times below this were likely due to technical issues).

Table 5:4 Health visit module timings

Questionnaire module	*Mean length (hours: minutes: seconds)*
Introduction	00:01:15
Medicines	00:02:23
Blood pressure	00:12:00
Grip strength	00:04:32
Blood sample	00:16:32
Anthropometry	00:04:58
Timed walk	00:02:43
Leg raise	00:02:37
Online Dietary Questionnaire	00:02:38
Collecting Documents	00:01:37
Labelling spun blood	00:02:53
Total time	*00:54:08*

5.11 Script quality control

The route the cohort member took through the health visit questionnaire was controlled by the CAI script. If feed forward data (including data fed into the script form the interview stage) meant that a respondent was not eligible for a particular bio measure, the respondent would not be routed to the module. The drug coding module was a ‘floating block’, which meant it could be accessed by the biomedical fieldworker at any point during the visit. As in the interviewer programme, there were consistency checks in the form of either “soft” or “hard” checks included in the script which allowed biomedical fieldworkers to clarify and query data discrepancies directly with the respondent during the health visit.

5.12 Online Dietary Questionnaire

Biomedical fieldworkers introduced the Online Dietary Questionnaire (ODQ) to respondents during health visits. The questionnaire placement took place at the end of visits. The programme would randomly select two days in the week following a visit. Respondents were asked to complete a questionnaire about everything they had to eat and drink during a 24-hour period on the two selected days. The questionnaire took approximately 10-20 minutes to complete each day. Respondents had to complete the questionnaire on the selected days, even if they were not typical.

Biomedical fieldworkers provided respondents with an ODQ leaflet with a label containing the log in code to the questionnaire stuck on the front. They also filled in the randomly selected days on the leaflet.

6. Paper Self Completion questionnaires

6.1 Overview – eligibility and how the questionnaire was provided and collected

All cohort members who were interviewed in person or by video (excluding proxy cases) were asked to complete both self-completion questionnaires. This was the case for each fieldwork stage, except for the dress rehearsal, when two-thirds of cohort members were randomly selected to be eligible to complete the Childhood questionnaire before they were issued.

Cohort members were asked to complete two paper self-completion questionnaires entitled 'Your Life Now' and the 'Childhood' questionnaire. The 'Your Life Now' questionnaire was always given in advance of the main interview either by post or given to the respondent in person by the interviewer when arranging an appointment.

In the pilot, dress rehearsal and pre-COVID mainstage, the cohort members were given the Childhood questionnaire at the end of the interview. During the video pilot, a small-scale experiment took place whereby some Childhood questionnaires were sent to the respondent after the main interview and some were sent prior to the interview (along with the 'Your Life Now' questionnaires). The experiment found placement of the questionnaire before the interview led to higher return rates, so this was the procedure used for the mainstage relaunch, post-COVID for both video and in-person interviews.

In the pilot, dress rehearsal and pre-COVID mainstage, the 'Childhood Questionnaires' were either posted back after the interview or collected by the biomedical fieldworker (if they agreed to a visit). The 'Your Life Now' questionnaires were mainly collected by the interviewer at the end of the interview but, if not completed, then they could be collected by the biomedical fieldworker (or posted back – depending on whether a visit took place).

Following the relaunch of the survey after COVID, the interviewer would collect the completed questionnaires when they interviewed the respondent (if it was an in-person interview). If the questionnaires were not ready to be collected during the interview, the biomedical fieldworker could collect them at their visit. The cohort member could also post the questionnaires back directly to the NatCen office if they were not having a health visit (this was the only way to return them in the video-interview-only waves before the health visits re-started).

6.2 Your Life Now

The 'Your Life Now' questionnaire was estimated to take around 20 minutes to complete and included questions on:

- Time spent doing various leisure activities.
- Attitudes regarding politics, the law, the environment, and other issues.
- Health including pain experienced recently, hearing, eyesight, sleep and teeth.
- Mood emotions, and loneliness.
- Feelings about their neighbourhood.
- Participation in religion, organisations and activism.
- Alcohol consumption.
- Preferences for risk.

- Expectations for their future including retirement.

6.3 Childhood

The ‘Childhood’ questionnaire asked cohort members to think back to their childhood and answer questions about their health, education, and family life as a child. It is the intention to review how study members remember circumstances in early life and how these recollections compare with the information that they, their parents, and their teachers provided when they were children. The questionnaire asked about when cohort members were aged 7, 11, and 16, which is when the NCDS childhood surveys took place; as well as collecting a general overview of their childhood. It was estimated that the questionnaire would take around 30 minutes to complete.

7. Development Work

7.1 Overview

Initially, there were three stages of development for the Age 62 Survey to fully test the proposed design before the launch. Firstly, there was a pre-pilot study, which only included the biomedical data collection in September-October 2018. This was conducted with participants from the NCDS pilot sample and new sample members who are not part of the NCDS sample. A pilot study then followed in February-March 2019, before a dress rehearsal took place in June-September 2019. Both the pilot and the dress rehearsal were conducted with NCDS sample members and contained all elements of the survey including the interview and biomedical data collection. The data from the pilot and dress rehearsal have been merged with the data from the mainstage fieldwork.

Mainstage fieldwork started in January 2020, but the unexpected difficulties brought by the COVID-19 pandemic made it impossible to conduct in-person interviews and fieldwork was halted on 17th March 2020. A pilot was conducted to assess the feasibility of conducting the interviews via video and to test changes required for the questionnaire due to COVID.

7.2 Pre-pilot (Biomedical data collection only)

Objectives

The main objectives of the pre-pilot stage were to evaluate the feasibility and process for specific elements of the study which NatCen or CLS had not tried before. More specifically, the main focus was on dynamic blood pressure (measuring blood pressure after exercise and then again after rest) and centrifugation of blood within the home. New protocols for collection of grip strength and balance were also evaluated. The pre-pilot did not take place with NCDS study members.

- The measurement of dynamic blood pressure had not previously been administered in a non-clinical setting. It was therefore necessary to evaluate the potential risks to participants in the stepping process and consider the practical aspects of the protocols.
- There were a number of concerns about home centrifugation in terms of the time required between collection and centrifugation and the nature of the blood tubes to be used for collection to ensure successful analysis.
- Because elements of the grip strength and balance protocols differed from previous NatCen approaches, these new protocols were assessed.

In addition, the pre-pilot aimed to assess the timing and flow of the health visit as well as the overall feasibility of the tasks to be carried out by biomedical fieldworkers, including carrying and setting up all the equipment required. This was to enable CLS to make informed decisions about the inclusion of the individual measures and key details such as the order of these measures.

Elements Included

This stage of development started with biomedical fieldworkers contacting participants, first by email and then by phone/text. The visit itself consisted of an introduction module, bio measure collection, and a final block. The introduction module involved checking respondent's contact details, gaining consent for participation, and basic demographic questions, such as housing tenure and household income. This module was necessary for the pre-pilot due to the absence of a prior interview with the participants, but it was not part of the health visit in the

mainstage. The Final Block covered gathering contact details of the respondent, of a stable contact, and of potential other contacts who may be interested in participating in the pre-pilot. This was also specific to the pre-pilot study and was not part of the health visit in the mainstage.

The CAI questionnaire administered by biomedical fieldworkers covered the following topics:

- Respondent demographics
- Drug coding
- Seated blood pressure
- Standing blood pressure
- Grip strength
- Blood sample
- Anthropometry – height, weight, waist and hip circumference
- Timed walk
- Leg raise (balance)
- Stepping blood pressure - respondents did a stepping exercise for 3 minutes then had their BP measured. Then the respondent remained standing for 3 minutes before a final BP measurement.
- Respondent incentive, collecting contact details, & participant feedback

This includes all the measures collected in the mainstage health visit, except for the Online Dietary Questionnaire (ODQ).

Sample and Response

The aim was to achieve a minimum of 30 health visits, with participants being sourced in three different ways:

- 50 participants were issued from the NCDS pilot sample. This sample comprised of members of the public who took part in the NCDS Age 55 Survey Pilot in 2012 and agreed to be re-contacted. None of these respondents were part of the main NCDS cohort. Of these 50 cases, 25 were productive.
- Prior to the start of fieldwork, it was established that biomedical fieldworkers should attempt to recruit respondents using a snowball method, asking existing participants if they knew anyone who would be interested in taking part in the study. This method resulted in six extra cases being recruited for the study.
- The NatCen Panel (a nationally representative panel formed from the British Social Attitudes survey) was used to further recruit 5 cases.

There was a total of 36 productive cases, only 8 of which were male. All were aged between 57 and 67 to align with the NCDS pilot sample. Participants were offered a £20 conditional incentive upon taking part.

Fieldwork and Timings

The pre-pilot fieldwork took place from 12th September to 9th October 2018. Seven biomedical fieldworkers worked on the project, with each biomedical fieldworker being issued 4-8 cases from the sample.

Key changes

The key finding of the pre-pilot was that the length of the health visit was much longer than targeted, lasting 72.5 minutes on average instead of the target of 48 minutes. The biomedical fieldworkers also felt that there was a lot of equipment for them to carry. It was decided to remove the stepping blood pressure measure from the survey to address both these issues. Some small changes were also made to the protocols and documents.

7.3 Pilot

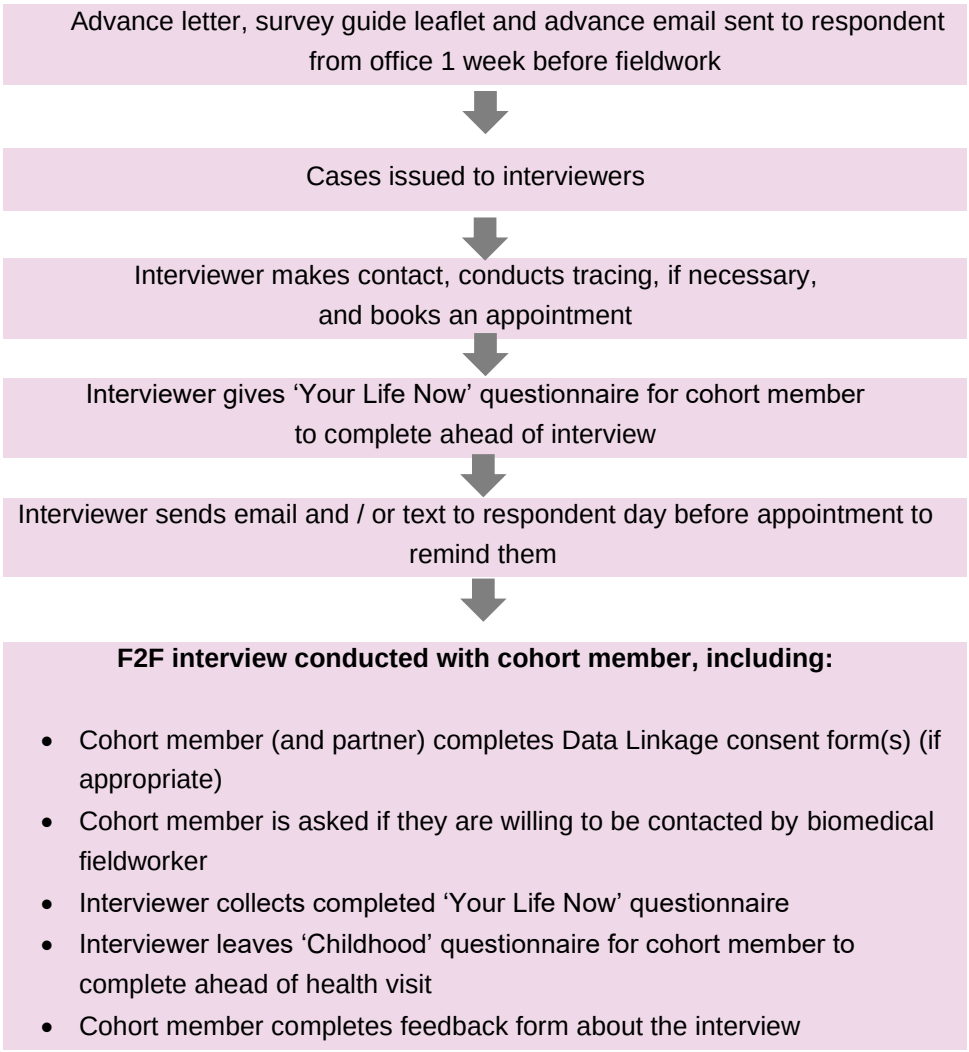
Objectives

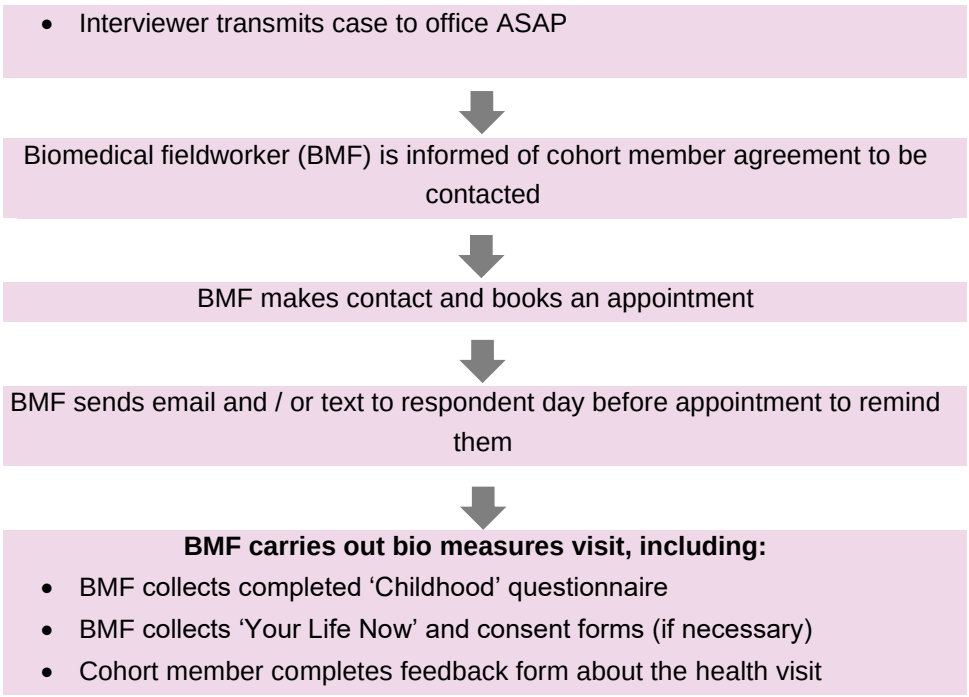
The purpose of the pilot was to fully test the whole survey before the next phase and identify areas of improvement for the dress rehearsal and mainstage. As such, the pilot resembled the design of the mainstage as close as possible in terms of procedures, CAI and self-completion questionnaires, health measures and training provided to interviewers and biomedical fieldworkers. This process provided evidence regarding likely response rates to both the overall survey and individual elements, such as exclusions and refusals for particular bio measures.

Elements Included

An advance letter and survey guide leaflet were sent to respondents one week before interviewers were due to start establishing contact. Once an interview time was arranged, cohort members were posted/given the "Your Life Now" questionnaire to complete ahead of their appointment. Then, interviewers were asked to carry out a full interview including administering the self-completion questionnaire (CASI) and data linkage consent forms if appropriate. Respondents were also given a "Childhood" questionnaire to complete after their interview. After both the interviewer and health visits, cohort members were asked to complete a feedback form.

The following diagram provides an overview of order of events for a fully productive cohort member:





Sample and Response

In this pilot, 105 cases were issued from the main NCDS sample. Interviewers achieved a response rate of 78%. Of these 78% productive cases, 95% of cohort members agreed to a health visit, which was productive in 87% of cases.

Fieldwork Design and Timings

This study took place in February-March 2019. The sample was split into 8 points, half of which were worked by Verian interviewers and the other half by NatCen interviewers. All 8 points were covered by NatCen biomedical fieldworkers.

Key changes

The changes made after the pilot included:

- One of the seated blood pressure readings was dropped to reduce interview length
- One of the waist and hip measurements were dropped to reduce interview length
- A few amendments were made to help reduce time waiting for blood clotting
- A number of small changes were made to the CAI and documents based on feedback from interviewers, biomedical fieldworkers and respondents.

7.4 Dress Rehearsal

Objectives

The Dress Rehearsal was the last stage of development work before the start of mainstage. The intention was therefore to be as comprehensive as possible in testing all the main survey components, including training and procedures, the questionnaire, health measures, and resulting data.

Elements included

The main aim of the dress rehearsal being to test all main elements of the survey, this included all respondent materials, the full CAI questionnaire, and all bio measures. The same order of events for a fully productive cohort member as in the diagram for the pilot above was followed.

Sample and Response

For the dress rehearsal, 299 cases were selected from the main NCDS sample. However, a sampling error meant that 12 of these cases had already been issued at the pilot: 11 were dropped, resulting in 288 cases issued.

The survey response was 72% and of those who were interviewed, 97% consented to being contacted by a biomedical fieldworker, with the final response rate to the health visit being 92%.

Fieldwork Design and Timings

The dress rehearsal took place in June-September 2019. The sample was split into 15 points, with 7 points covered by NatCen interviewers and 8 covered by Verian interviewers, with all 15 points then covered by NatCen biomedical fieldworkers.

Key changes

There were only a number of small changes made after the dress rehearsal including:

- Amendments to particular CAI questions in order to reduce timing and improve clarity on wording.
- Adding more information to the interviewer briefing on variation in interview length, how to encourage respondents to take part and the importance of tracing.
- Amending the biomedical fieldworker briefing to clarify the process for requesting data linkage consent and to explain the purpose of the measures particularly the blood sample.

7.5 Video Interview Pilot

Objectives

In-person interviewing was not possible during the lockdown periods of the COVID-19 pandemic, so a video pilot was conducted to assess the feasibility of using video call interviewing via MS Teams as an alternative mode of interview. While this had previously been trialled on the BCS70 video pilot study, the NCDS video pilot was done on a much larger, representative sample.

The main aims of this study were to:

- Give an indication of the response rate which could be achieved for video interviews.
- Test that the technology was suitable for large-scale fieldwork and identify any technical issues experienced by respondents and interviewers.
- Test the modifications required to the interview and approach, including the interview length, enabling self-completion sections, and sharing materials.
- Assess if cognitive assessments could be successfully conducted via video call.
- Assess whether the video call training delivered is adequate and effective in teaching interviewers everything they need to know about carrying out interviews via video call.

Elements Included

The video pilot involved the full interview content including sensitive questions (normally completed in CASI) and the 2 self-completion questionnaires. Respondents were offered a health visit, but this was not carried out until later in the fieldwork period.

The following changes were made to the survey:

- MS Teams was used as the platform to administer the video pilot as it was in the BCS70 small scale pilot which took part prior to the NCDS pilot (for more information see: https://cls.ucl.ac.uk/cls-studies/1970-british-cohort-study/bcs70-age-51-sweep/).
- The development of a PDF version of the show cards which could be shared on screen with the respondent when required.
- Leaflets providing further information on the Health Visit and Data Linkage which were previously provided by the interviewer were formatted to enable them to be shown on screen to participants.
- Addition of new questions on COVID-19 and amendments to existing questions to take furloughing into account.
- Revised procedures for contacting respondents remotely.
- Development of a Computer Assisted Web Interview (CAWI) for asking the sensitive questions (which would normally be completed via CASI, Computer Assisted Self-Interviewing)
- New procedures for collecting data linkage consents verbally rather than collecting written consent
- Amendment of the process of conducting the cognitive tests, in particular the letter cancellation test, which was sent within a sealed envelope in advance of the interview (with instructions not to open until advised by the interviewer).
- The video pilot included a randomised trial where half the sample were given the Childhood questionnaire before the interview and the other half were sent the questionnaire afterwards to post back.
- Paper self-completion questionnaires sent in advance of the interview were sent as part of an 'interview-pack' which also contained the letter cancellation document and further instructions on how to take part by video call. This 'interview pack' was sent once an interview date and time and been agreed.

Sample and Response

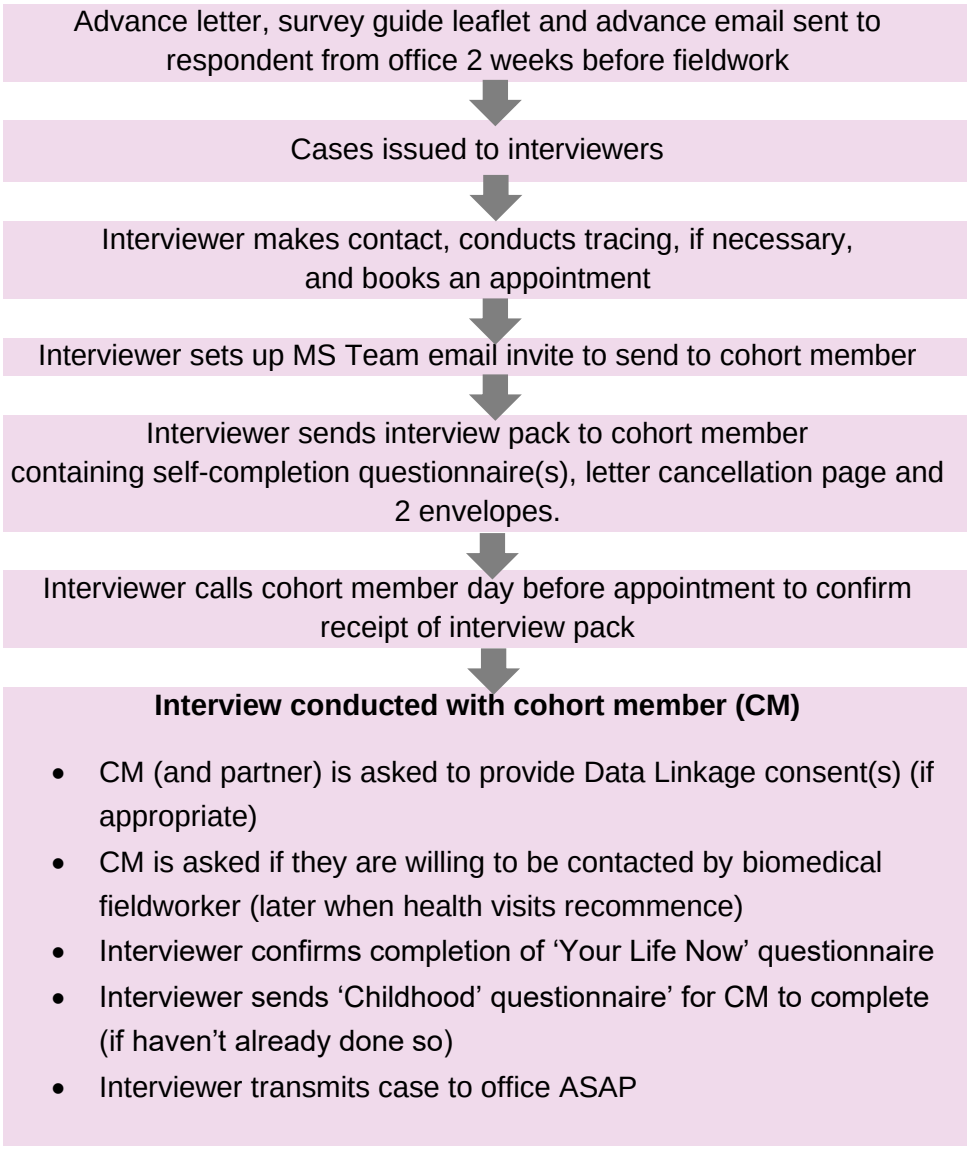
For the video pilot, 310 cases were selected from the main NCDS sample so that all survey procedures could be tested with actual NCDS cohort members. The sample was selected from participants who were originally allocated to Wave 3 of mainstage fieldwork. Cohort members who did not have an email address nor a telephone number were excluded.

The response rate for this pilot was 46%.

Fieldwork Design and Timings

The video interview pilot fieldwork period started on 28th April 2021 and ended on 6th July 2021. The sample was stratified by field area and then randomly allocated into groups of 16 points each. The 16 points were split equally between NatCen and Verian and allocated to 15 interviewers (7 from NatCen and 8 from Verian).

The following diagram shows the order of events for a fully productive cohort member:



Key changes

A small number of changes were made after the video pilot in order to help address respondents' technical issues e.g. improving the instructions to respondents about how to join an MS Teams call, instructing interviewers to tell respondents to check their spam folder if they cannot find their invite, and improving training for interviewers on how to see respondents on screen during the interview. A small number of changes to the questionnaire were also identified.

The experiment on how respondents were given the childhood questionnaire found that placement of the questionnaire before the interview led to higher return rates, so this was the procedure used for the mainstage relaunch post-COVID for both video and in-person interviews.

8. Interviewer Fieldwork

8.1 Fieldwork stages and fieldwork progress

8.1.1. Mainstage fieldwork

Mainstage fieldwork began in January 2020 but then was paused due to the pandemic in March 2020, just after the second wave was launched. Mainstage fieldwork then restarted again in November 2021, when cases who had not been completed in waves 1 and 2 were issued again. These cases along with wave 3 were conducted by video. In mid-April 2022 in-person interviewing began again. For the next three waves of fieldwork (4 to 6), respondents were offered an in-person interview first, but video interviews were still offered if a cohort member preferred this or if an in-person interviewer was not available to work a point. Mainstage interviewer fieldwork was extended, finishing in November 2023, due to slow rates of coverage caused by the impact of the pandemic on interviewer retention and recruitment. Health visit fieldwork finished in December 2023.

8.1.2. Reissue Waves

Reissue waves ran alongside waves 4 to 6 and continued until the end of fieldwork (from 17th August 2022 to November 2023). Reissues were split into 2 batches of cases. The purpose of these waves was two-fold, firstly to boost response rates by converting unproductive cases at mainstage to interviews and secondly to reallocate cases to in-person mode where this had been requested (or for other reasons). Reissued cases comprised of:

- Cases who had not been approached by an in-person interviewer. This included cohort members first allocated to a video interviewer and had requested an in-person interview, those who were unable to complete a video interview for technical reasons or who had requested to delay their interview to a later wave (but not specified they wanted an in-person interview).
- Cases where no contact had been made with a cohort member or they had declined to take part previously. The outcome code or/and comments from the last interviewer were reviewed to remove cases deemed unsuitable for another contact at the reissue wave.

A total of 2,496 cases (22%) were reissued (or reallocated). For further information see Section 8.6.

8.2 Fieldwork dates

The dates for each wave of fieldwork are given below.

Table 8:1 All stages and fieldwork dates for first issue and reissue cases

	Start Date	*End Date*
Wave 1 (In-person only)	07/01/2020	17/03/2020*
Wave 2 (In-person only)	03/03/2020	17/03/2020*
Wave 2.5 (Video first) – cases from waves 1 and 2 issued again after COVID	01/11/2021	07/11/2023
Wave 3 (Video first)	17/02/2022	07/11/2023
Wave 4 (In-person first)	12/04/2022	07/11/2023
Wave 5 (In-person first)	12/10/2022	07/11/2023
Wave 6 (In-person first)	09/12/2022	07/11/2023
Reissue / Reallocation Batch 1 (mainly in-person)	17/08/2022	07/11/2023

Table 8:1 All stages and fieldwork dates for first issue and reissue cases		
Reissue / Reallocation Batch 2 (mainly in-person)	27/04/2023	07/11/2023

*Waves 1 and 2 were halted due to COVID.

8.3 Interviewers

All interviews were conducted by interviewers working for NatCen or Verian. The fieldwork points were split evenly between agencies[5].

Cases assigned to in-person interviewers were allocated to interviewers based on their geographical closeness to an assignment and their availability during the fieldwork period. For video cases, sample was allocated to interviewers who had been trained and accredited in video interviewing based on their availability. Interviewers were then sent their document packs and sample information before the beginning of each fieldwork wave.

The organisation of video interviewing varied between agencies. Verian trained all their in-person interviewers working on NCDS to conduct the video interviews whereas NatCen used a specialised team of video interviewers, based within their Telephone Interviewing Unit.

Sample information was provided to interviewers in the Electronic Address Record Form (e-ARF). Interviewers were asked to review their assignment as soon as they had received the sample information to ensure it included no one they knew. The sample information showed if there were any cases that were classed as 'difficult' cases, who were not productive at the previous wave or were known to have moved from the issued address. Interviewers were advised to contact these cases first when they received their assignments as it was likely they would require further tracing or more encouragement to participate. In general, interviewers were asked to start work on their assignment early in fieldwork to allow plenty of time for contacting and interviewing cohort members.

8.4 Interviewer Training

The following section details the training given to NCDS interviewers, including the NCDS project training and the specific technical training provided to video interviewers.

8.4.1. Video call training

Video interviewing was a new mode for both NatCen and Verian, so a new training program was established. The mainstage training schedule was developed following the research team's experience of training interviewers for the NCDS and BCS70 video pilots and from the interviewers' feedback.[6] The training programme followed a three-step process, a training briefing, a practice interview with a buddy and an accreditation process.

[5] Verian was assigned all Scottish cases.

[6] A small pilot of video interviewing was conducted on BCS70 in September-October 2020. A larger pilot of video interviewing was conducted on NCDS in April-July 2021.

8.4.1.1. The Video Interviewing Training Course

The training course was developed and conducted by the NatCen BCS70 and NCDS[7] Research Team. Once the training was established, NatCen and Verian's own fieldwork training teams conducted the sessions. Amongst the interviewers being trained, there was a variation in IT skills and experience of using MS Teams. Therefore, the initial training course covered a general introduction to MS Teams and taught some IT skills that were needed to conduct the NCDS interview. As the course provided a lot of new information for some interviewers the training was split into two courses, each one lasting less than half a day.

Training Session 1 – Foundation technical skills and introduction to MS Teams for Interviewing

This course covered:

- **Foundation technical skills** – such as opening applications, switching between different open applications, saving documents to a specific file location and how to copy and paste text. These were all skills interviewers would need to conduct the interview i.e. when saving survey showcards on their laptop that were sent to them by email, when copying an email address or invite wording into MS Teams or when copying a survey weblink into the chat box.
- **An introduction to key features of MS Teams** – teaching functions such as sharing sound and video, how to set up an MS Teams call and how to send an invitation.
- **How to prepare for and start the interview** – this covered best practice in conducting a video interview, i.e. dressing smartly, maintaining privacy (use of headphones), making sure there was an appropriate background behind the interviewer, and having all documents ready before beginning the meeting. It also covered how to join the MS Teams interview, how to introduce the interview and make sure there were no technical problems.

Training Session 2 – Interviewing using MS Teams

Training session 2 covered the technical skills needed to conduct the NCDS interview via video call in more detail. This covered:

- **Technical information about how to record contact attempts on a case and access the video interview through NatCen systems** (i.e. using the e-ARF).
- **Specific technical skills needed to conduct the NCDS interview,** particularly focused on:
    - **Sharing screen content** – interviewers were taught how to interview using a one-screen device by sharing their showcards with the cohort member while they worked on the interview programme. They learned how to move swiftly between them using the 'Alt' and 'Tab' keys.
    - **Sharing sound** – interviewers were taught how to share sound from their interviewing programme with the cohort member for one of the cognitive assessments.
    - **Pasting a web link into MS Teams** - interviewers also needed to know how to copy and paste the web link to the self-completion survey (CASI CAWI) into the chat box of the cohort member on MS Teams.

[7] The research team's for NCDS and BCS70 (1970 British Cohort Study) worked closely together on video interviewing and on other aspects of the project.

- **Guidance on how to solve technical problems** – this was provided so interviewers could help the participant with any technical issues that might occur. Details of where to get further help and support were also provided for situations where interviewers could not resolve the technical issues themselves.

8.4.1.2. Practice Interview

Following the training, interviewers were paired up with another trainee as buddies so they could practice video interviewing each other and further consolidate the techniques they had learnt on the course. This part of the training was a recommendation made by interviewers following the video pilot training. Video interview trainees were also provided with written instructions and could reach out to their peers via an MS Teams chat and the Field Management team if they needed further help. They could also contact IT Support if technical issues occurred.

8.4.1.3. Accreditation

In the final stage of training, a virtual accreditation process was carried out by pairing up experienced video interviewers (accreditors) with new interviewers. New interviewers had to carry out a series of video interview tasks set for them which mirrored what they would be required to do in the video interview. This was to establish how comfortable interviewers were with the video interview process before they went out to work as some of the processes were quite difficult. If an interviewer struggled with the tasks set, then they could attend further practice and accreditation sessions until they felt confident and were well prepared to carry out a video interview.

8.4.2.Interviewer Project Briefings

All interviewers that worked on the Age 62 Survey were briefed by members of the research team at NatCen or Verian. Researchers from CLS also attended many of the briefings. The briefings for the pilot, dress rehearsal and mainstage fieldwork prior to COVID-19 were conducted in-person but, due to the pandemic, all subsequent briefings were held online. Once mainstage fieldwork resumed in November 2021 project briefings were held right through to the reissue waves, with the last briefing in September 2023. Briefings were usually clustered at the start of each new wave of fieldwork, but some were also conducted during the wave. Due to a higher-than-normal demand for interviewers and interviewer turn-over during the pandemic and its aftermath, points were allocated through the wave rather than all at the start. The organisation of the briefings reflected this, and they were conducted when they were required.

Interviewer project briefings lasted for one day and covered the following topics:

- Introduction and overview of the project, including sample, fieldwork and the interviewer tasks.
- Contacting participants, booking appointments, and starting an interview. This covered COVID-19 protocols to keep both the interviewer and respondent safe.
- Documents to send to the respondent after making an appointment.
- How to trace respondents.
- How to maximise response rates.
- Overview of the CAI modules.
- Cognitive assessments, data linkage and the self-completion sections (CASI and CASI CAWI) and paper self-completion placement and collection.
- Use of proxies and interpreters in the interview.
- Contact details, final administration information and outcome codes.

- Introducing the health visit.
- Support and key contacts following the briefing.

Briefings which took place during video only waves included specific instructions for conducting the interview via this mode such as the contact and tracing procedures and specific procedures to follow when administering the video interview such as the sharing of showcards, the adaptions made to the cognitive assessments and administration of the self-completion questionnaire (CASI CAWI and CASI).
Following the briefings, interviewers were provided with full written interviewer instructions about the project that they could refer to during fieldwork and were also issued with some test cases to go through a practice interview.

Reissue Waves
These briefings explained the purpose of the reissue waves and covered how to view outcomes and comments from the previous interviewer, the contact and tracing requirements (including the reissue letter and good practice to follow when making contact) and tips on maximising response rates.

8.5 Contact procedures

At the start of each in-person and video wave, before interviewers commenced work, advance letters and emails were sent from NatCen head office to every cohort member included in the forthcoming fieldwork wave.

8.5.1.In-person
For the majority (approximately 80%) of cases, interviewers were asked to attempt their first contact with respondents by telephone. This was partly based on previous feedback from cohort members that this was their preferred method of contact, as well as to make fieldwork more efficient for interviewers.

Cohort members were allocated to initial telephone contact if a telephone number was available and if they had taken part in the Age 55 survey or Age 50 survey and not refused at the Age 55 survey. If interviewers were unable to contact these cohort members by telephone, they then tried making personal visits.

For the remaining 20% of the sample that did not fulfil the criteria for initial telephone contact, interviewers were instructed to attempt initial contact with cohort members by making personal visits. Interviewers could, however, attempt to contact these cohort members by telephone (if a telephone number was available) if they were unable to contact them through making personal visits.

Interviewers were supplied with calling cards to leave behind if no one was at home when they visited an address – these let household members know that they had called and would call back another time. They also included a Freephone number so cohort members could call to arrange an appointment or opt out of the survey. If interviewers were unable to contact cohort members by telephone or by making personal visits, then they were expected to follow the tracing procedures outlined in the next section.

Interviewers were asked to record all their contact attempts in the e-ARF. Over a three-week period they were required to make six phone calls (at least two calls to each telephone number and three calls on a weekend or weekday evening), and six personal visits (with at least three visits on a weekend or a weekday evening), and contact the cohort member's email address at least once, before signing the case off as a non-contact. All possible tracing attempts needed to be completed too (See section 8.7).

8.5.2.Video

Following the advance mailing, interviewers then called the cohort member to invite them to take part in a video interview. They were instructed to call all available telephone numbers at least once and to call at different times of the day including evenings and weekends. After they had tried to call three times, they could also send a text message. Where telephone numbers were unproductive or not available, interviewers were then to make contact by email.

Before recording a case as a non-contact, the video interviewer was required to make six phone calls, with at least two calls to each working number, spread over a three-week period and to make at least three calls on a weekday evening or weekend. They also needed to email the cohort member at least once (if an email was provided). All tracing which could be carried out remotely also needed to have been tried before signing off the case as a non-contact.

8.6 Reissue Waves

At the start of the reissue waves, the office did not send any new advance letters or emails to the reissued cases. This was partly because cases were being allocated gradually to interviewers throughout the wave and also due to interviewers having a 'generic' (i.e. non-personalised) letter they could provide or show when making contact. Part-way through the reissue waves (spring 2023) interviewers were issued with advance letters to send out themselves to cohort members before they started work. This was due to a small number of cohort member's complaining when they were visited without advance notice and following feedback from some interviewers during briefings that having a further advance letter for these cases would be useful.

The rules around method of first contact depended on whether cases were reallocation or reissue cases:

Reallocation cases (those that requested to take part in a different mode) were to be contacted by telephone first. If interviewers could not make contact with respondents in this way (after at least three phone calls) they could then make a personal visit.

Reissue cases (those who did not take part initially but not specifically due to mode) were to be contacted in-person first. However, interviewers could telephone the case first if, based on reviewing the previous interviewer's comments, they felt this would be preferred by the cohort member.

The minimum call requirements before coding a case off as a non-contact also varied between a reissue and a reallocation case as follows:

- The minimum call requirements for reallocation cases were the same as for first issue cases with a requirement for 6 in-person interviewer visits and 6 phone calls to be made before signing a case off as a non-contact. At least 3 visits and 3 phone calls needed to be made on a weekday evening or weekend.
- The minimum call requirements for reissue cases were slightly reduced with 4 in-person interviewer visits and 6 phone calls being required. At least 3 visits and 3 phone calls needed to be made on a weekday evening or weekend.
- Phone calls and visits were to be spread over a three-week period (with no more than 2 in one week unless they made contact).
- All possible tracing activities were to be carried out on both reissue and reallocation cases before signing them off as a non-contact.

Interviewers were given specific written guidance on how to approach reissue cases, particularly around preparing themselves before visiting a case by reading the last interviewer comments and approaching cases with sensitivity, especially those which mention illness, bereavement or stress.

Table 8.2 below shows the number of cases who were reallocated to a different mode in each wave. The changes in mode were due to respondents asking to be interviewed in a different mode and also availability of in-person interviewers.

Table 8:2 Changes in mode for each wave[8]

	In-person only		*In-person -> Video*		*Video only*		*Video -> In-person*		*Video -> In-person -> Video*		*Total*	
	N	*%*	*N*	*%*	*N*	*%*	*N*	*%*	*N*	*%*	*N*	*%*
Pilot	89	100	-	-	-	-	-	-	-	-	89	100
Dress rehearsal	242	100	-	-	-	-	-	-	-	-	242	100
Video Pilot	-	-	-	-	253	81	58	19	-	-	311	100
Wave 1 (2020)	1,273	97	43	3	-	-	-	-	-	-	1,316	100
Wave 2 (2020)	528	91	50	9	-	-	-	-	-	-	578	100
Wave 2.5 (Video)	-	-	-	-	983	60	659	40	1	0	1,643	100
Wave 3	-	-	-	-	1,061	67	524	33	1	0	1,586	100
Wave 4	1,887	86	17	1	183	8	101	5	-	-	2,188	100
Wave 5	1,569	75	18	1	368	17	148	7	-	-	2,103	100
Wave 6	1,212	84	5	0	162	11	58	4	-	-	1,437	
Total	6,800	59	133	1	3,010	26	1,548	13	2	0	11,493	100

8.7 Tracing cohort members

8.7.1.In-person

If interviewers found that the cohort member no longer lived at the issued address, or they could not confirm that the cohort member lived at the issued address, there were several steps they were expected to undertake to try to trace the cohort member, before returning the case for further tracing by CLS. These were:

- Trying all available telephone numbers for the cohort member, particularly mobile and work numbers (for mobile numbers this included sending texts), and also sending an email.

[8] Some unproductive pilot and dress rehearsal cases were issued again to mainstage and these are shown in the specific mainstage wave they were issued to.
Some of the cases in the video pilot were reissued to in-person interview later but are still shown as video pilot cases.
The cases ascribed as Wave 1 or 2 are those cases which were issued before COVID and were either productive then or put into a reissue wave later.
The cases ascribed in Wave 2.5 were originally issued before COVID but could not be worked (fully) before the pause or were unproductive and were considered to be able to be issued again. These cases were issued to video interview and have been coded as being allocated to video interview first.

- Asking current occupiers for a new address or other contact information for the cohort member or leaving an occupier letter for the current occupier in cases where no contact was made.
- Asking neighbours for a new address or other contact information for the cohort member.
- Calling the cohort member's partner's mobile telephone number to ask them for up-to-date contact details for the cohort member (if applicable).
- Contacting stable contacts by telephone, personal visit, email or post to ask them for a new address or other contact information for the cohort member (if applicable).
- Attempting to visit the last interview address if different from the issued address.

The tracing section in the e-ARF listed which activities were possible for each case. If any of these steps led to a new address being provided for the cohort member, interviewers would enter this new information into the e-ARF. They also recorded whether the address was in their area or not. If the new address was in the interviewer's area, they would send the cohort member a generic advance letter, survey guide and COVID-19 safety leaflet before visiting. If the new address was outside their area, the case was returned to head office for reallocation to a local interviewer.

If these tracing attempts were unsuccessful, the case would be returned to CLS for further tracing. Cases for tracing were sent to CLS throughout fieldwork in 'mover' files. This file included details of all the tracing attempts already undertaken by NatCen/Verian.

8.7.2.Video

Despite working remotely, video interviewers were also expected to carry out tracing to find cohort member's they could not contact by phone or email. The following forms of remote tracing were possible:

- Calling the cohort member's partner's mobile telephone number to ask them for up-to-date contact details for the cohort member. They could also send an email if one was available.
- Contacting stable contacts (if available) by telephone, email or post to ask them for a new address or other contact information for the cohort member.
- Posting a letter to the cohort member's address (an occupier letter - listed below).

The e-ARF listed the possible tracing activities available for each case. If any of these steps led to a new address being provided for the cohort member, interviewers would enter this address into the e-ARF. If the cohort member was living in Great Britain (including Islands) they could then try to schedule a video interview with them. Cohort members living outside Great Britain were not contacted as they were not included in this sweep of main fieldwork (only the Mop-up phase). Unsuccessful tracing attempts were returned to CLS for tracing as detailed above.

8.7.3.Tracing documents

Interviewers had three letters they could use to assist them with the tracing process. Copies of these tracing letters are included in Appendix A.

Tracing letter

These letters were used if interviewers spoke to someone (such as a neighbour) who knew the new address of the cohort member but were not happy to pass this information to the interviewer. The tracing letter was addressed to the cohort member. It explained that we were trying to contact them to take part in the study and

asked them to contact NatCen with their new contact details. Interviewers would put this letter in a sealed postage paid envelope and ask the person who knew their address to post or give it to the cohort member.

Stable contact letter

There was also a tracing letter which was designed to be sent to the stable contact. It explained that we were trying to contact the cohort member, and that the cohort member had nominated them as someone who may be able to help find them. The letter asked the stable contact to get in touch with NatCen to provide the cohort member's new details, or to pass the letter on to the cohort member so they could contact NatCen with their new details.

Interviewers used the stable contact tracing letter if they could not contact the stable contact by telephone and their address was too far away to visit/ or the interviewer was working remotely (video interviews). Interviewers could also use this letter if they had spoken to the stable contact, but they were reluctant to provide a new address for the cohort member.

Occupier letter

If an interviewer had made several attempts to contact an address but had not managed to contact anyone there and had not been able to confirm with neighbours whether the cohort member still lived there, they could use the occupier letter. The letter could also be posted by a video interviewer who had not managed to contact the cohort member by phone or email. The occupier letter was addressed to the resident of the address. It explained that we were trying to contact the cohort member at that address and asked them to either call NatCen or return a slip from the bottom of the letter to confirm whether the cohort member lived at the address, and to provide a new address for the cohort member if possible.

8.8 Interviewer appointments and the returning of paper documents

8.8.1. In-person Interviews

Once interviewers made contact with a cohort member, they generally tried to make an appointment for an interview rather than trying to interview them straight away, but walk-in appointments were possible. During the first few waves of in-person interviewing fieldwork after COVID-19, interviewers were required to follow protocols to minimise the transmission of COVID-19, for example by taking a COVID-19 test before the interview, ensuring the room chosen for interview was well ventilated, and sitting a safe distance apart from the respondent.

When interviewers had agreed an appointment time with cohort members, they would send them an appointment letter (or give it to them if they were making an appointment in-person). This letter included a space for the interviewer to write in the appointment date and time. The letter also asked the cohort member to complete the paper self-completion questionnaires in advance of their interview, and this was sent (or given) to the cohort member along with a blank envelope to seal for privacy (see Section 6.1 for more detail). They were also given a leaflet about keeping safe from COVID-19. Once an appointment was made, an automatic reminder email and text were sent to the cohort member the day before their appointment.

During the interview, the interviewer collected the self-completion questionnaires from the respondent and sent these back to head office. They also posted back the cognitive assessment booklet with notes they had made when administering the cognitive tests. In cases where the self-completion was not completed before the interview, the respondent was asked to post this back to the office in a pre-paid envelope.

A copy of the in-person appointment letter and the other documents sent alongside it are included in Appendix A.

8.8.2. Video Interviews

When making an appointment to conduct the video interview, the interviewer had to leave enough time to post an 'interview pack' including the appointment letter, letter cancellation task and the paper self-completion questionnaire(s) to reach the respondent before the interview. It was particularly important that the cohort member received the letter cancellation task before the interview as they needed to open and complete this during their interview. Once an appointment was made, an automatic reminder email and text were sent to the cohort member the day before their appointment. The interviewer also called the respondent the day before to make sure the cohort member had received the letter cancellation task and was able to access the MS Teams link to the interview.

At the end of the interview, the interviewer encouraged the respondent to return their letter cancellation sheet and self-completion questionnaires to NatCen for processing. A postage paid envelope was provided.

A copy of the video appointment letter is included in Appendix A.

8.9 Electronic Address Record Form (e-ARF)

NatCen's e-ARF was used by the interviewers and biomedical fieldworkers on NCDS to access sample information; record all contact attempts with the cohort member and others (including appointments made); monitor tracing activities; and to record the final outcome for each case. It was also used by interviewers and biomedical fieldworkers to access the CAI interview.

The sample information and tracking information provided for the interviewer and biomedical fieldworker in the e-ARF contained:

- Latest contact details, including the address currently held for the cohort member, whether this address has been confirmed as correct (by CLS before fieldwork started) and any telephone numbers and email addresses held for the cohort member.
- Cohort member personal details, including name, date of birth and sex, and any known difficulties with language and communication.
- History of all previous calls and visits to the cohort member at this sweep.
- Details of any appointments made with the cohort member.
- History of participation in previous sweeps.
- The tracing activities which were possible at the current sweep and which had been attempted.
- Stable contact and partner details, including name, address, phone number, email and relationship to cohort member.
- Address at last interview – to use for tracing.
- For reissue/reallocation waves the interviewers could view all contact attempts made by the previous interviewer. They could also access the Contact Information Sheet (CIS) through the e-ARF to see what outcome code was given to the case at the previous issue and the previous interviewer's comments.

Interviewers and biomedical fieldworkers were also provided with sample information electronically in the e-ARF which contained the following details:

- Serial number

- Date of birth
- Gender
- Address
- Whether initial contact was to be in-person or telephone.

The interviewers and biomedical fieldworkers were asked to record all contact attempts with the cohort member and tracing activities. Interviewers were required to log all in-person calls, telephone calls, text messages, emails and letters. There was also a place to enter new contact details and record any appointments made. If new contact details were obtained these were updated on the 'participant details' screens of the e-ARF.

The final section of the e-ARF provided a section where the interviewer and biomedical fieldworker would record a final outcome code and leave any comments on the case. The section had checks in place to stop interviewers signing off a case with too few contact attempts or without completing the tracing activities.

All interviewers and NatCen biomedical fieldworkers working on the project who had not used an e-ARF on a longitudinal study previously were trained on using the e-ARF before starting fieldwork.

8.10 Fieldwork progress

Two fieldwork reports were sent to CLS on a fortnightly basis during mainstage fieldwork. The first report showed the overall status of the allocated and covered cases and the number of interviews achieved by mode. These tables were produced for first issue cases and for the reissue/reallocation waves. The tables also provided a breakdown of status by fieldwork agency and mode. An overall response rate for all issued cases was also calculated.

The second report contained the following tables:

- Current interview outcome by fieldwork wave
- Current interview outcome by NHS tracing
- Current interview outcome by area
- Current interview outcome by 2013 outcome
- Current outcome by sweep of last interview
- Agreement to be contacted by a biomedical fieldworker
- Response to the 4 cognitive assessments by wave
- Response to self-completion questionnaire by wave (CASI / CASI CAWI)
- Completion and return of paper self-completion questionnaires by wave
- Cohort member and partner consent to link data to health, DWP and HMRC records by wave
- Device used for video interview and whether respondent is willing to do a video call in the future by wave

From March 2023, in the reissue waves, NatCen also sent a weekly target report to CLS which showed the number of cases that week which had been allocated and covered and the number of interviews achieved against weekly targets.

8.11 Fieldwork quality control

All interviewers were required to attend a one-day briefing. The briefing covered all elements of the survey, including how to use the e-ARF and the admin module at the end of the interview (See 8.4 on Interviewer Training). Interviewers were given 'test cases' as part of their assignment and were instructed to use these to practise going through the interview script with a mock respondent before starting their assignment.

Interviewers' work was checked to ensure that sufficient tracing was undertaken where necessary, that outcome codes were assigned correctly, and that all necessary paperwork, such as letter cancellation tasks, cognitive booklets and paper self-completion questionnaires, were returned. If it was felt that an interviewer had not tried hard enough to trace respondents that had moved or had not completed the required call patterns, then the case was reissued for further work.

Interviewers were also monitored by the overall response rates achieved. Other checks were carried out during fieldwork sporadically. For example, in the early waves, checks were carried out to identify interviewers who did not complete the CASI CAWI element of the video interview during the interview and they were contacted for further help and training.

All new interviewers were supervised on their first interview. NatCen and Verian back-check at least ten percent of interviews on all projects. This involves respondents being re-contacted by phone to confirm key pieces of information about the interview process.

The interviewer's route through the Computer Assisted Interview (CAI) questionnaire was programmed so that all relevant questions came on route according to the cohort member's earlier answers. This was also true of the self-completion web survey (CASI CAWI). Consistency checks of values and measurements were built into the CAI and CAWI. The "hard" checks did not allow entries outside a given range, and the "soft" checks asked the interviewer to confirm what he or she had entered. Soft checks were usually triggered where values were implausible but not impossible.

8.12 Safety, consent and confidentiality issues

As part of their general initial training, all interviewers were briefed on health and safety when working. During the pandemic, in-person interviewers were given protocols to follow to keep themselves and cohort members as safe as possible, e.g. by testing themselves for COVID-19 before an appointment, keeping a safe distance from the cohort member and cleaning laminated showcards between interviews. Cohort members could also access showcards online should they have a preference to do so (the link to the online version was provided in the reminder email received prior to the interview).

Interviewers carry an ID badge and are instructed to always show this to respondents on the doorstep. Interviewers were also briefed to be mindful of respondent confidentiality. This included avoiding mentioning the name of the study to anyone but the cohort member or their immediate family. As mentioned in the advance letter, the cohort member's answers were treated in strict confidence in accordance with the Data Protection Act. In addition, interviewers were not permitted to interview anyone known to them personally, such as a friend, neighbour or colleague. Such cases were re-assigned to other interviewers.

8.13 Ethics

The Age 62 Survey was approved by the Health Research Authority's London, Fulham Research Ethics Committee.

8.14 Translations

Cohort members living in Wales received the advance letter in English and Welsh. This was the only document that was translated and, because all cohort members were educated in the British school system, language interpreters were not necessary for the CAI interview.

There was an option in the CAI to code that an interview had been conducted via an ‘interpreter’. This was only to be used if the cohort member could not communicate their answers to the interviewer due to a temporary or permanent speech or hearing disability. In this instance a suitable ‘interpreter’ could be used to assist the interviewer in understanding the cohort members responses. Six respondents used an interpreter in the Age 62 Survey.

9. Health Visit Fieldwork

9.1 Biomedical fieldworkers

Initially, all biomedical fieldworkers working on NCDS were part of NatCen's panel of biomedical fieldworkers. During the COVID-19 pandemic the size of NatCen's panel reduced due to pandemic-related demand for biomedical fieldworkers. Therefore, following the restart of mainstage fieldwork, NatCen partnered with INUVI, another organisation with an experienced biomedical fieldworker panel with expertise in conducting health visits. NatCen also diversified its biomedical fieldworker panel by recruiting other fully qualified healthcare professionals as well as nurses, such as midwifes, phlebotomists and emergency medical technicians.

9.2 Training

All biomedical fieldworkers that worked on the Age 62 Survey were briefed by members of the research team at NatCen. Researchers from CLS attended many of the briefings. Initially, briefings were in-person, but following the COVID-19 pandemic, they were conducted by MS Teams with the exception of the INUVI biomedical fieldworker briefings which were done in-person to introduce biomedical fieldworkers to NatCen's systems and equipment. All biomedical fieldworkers were accredited in-person to carry out the key biomeasures, either as part of the project briefing or in a separate session.

The health visit briefings covered the following:

- Overview of the project, sample and fieldwork
- Contacting participants and making appointments
- How to trace respondents
- Recording contact attempts and tracing in the e-ARF, and how to use the admin module
- Documents to send to participants after making appointments
- Introduction to the CAI and coding of medications
- Blood Pressure (seated and standing)
- Blood sample consent, collection, centrifugation and dispatch
- Grip strength
- Height, weight and body fat percentage
- Timed Walk
- Balance
- Online Dietary Questionnaire placement
- Collecting documents to return to the office and data linkage
- Tips to maximise response

9.3 Contact procedures

Prior to the pandemic, biomedical fieldworkers contacted all respondents initially by telephone as soon as possible once the case was allocated to them.

When fieldwork restarted, the contact procedures varied depending on how much time had passed since the respondent was interviewed. Cases that had been interviewed in wave 1 or wave 2 before fieldwork was paused, and cases that were interviewed in the video call pilot were sent an advance letter prior to the

biomedical fieldworker making contact. Advance letters were sent to these cases as they had not been contacted for many months. The letters were sent by the biomedical fieldworkers around five days before they attempted to contact the respondent by telephone. The cases interviewed when mainstage fieldwork restarted after COVID-19 were contacted initially by telephone, as was done pre-pandemic.

Biomedical fieldworkers were asked to record all their contact attempts in the Electronic Address Record Form (e-ARF). They were required to make six phone calls (at least two calls to each telephone number and three calls on a weekend or weekday evening), one personal visit, send one text message to the cohort member's mobile number and contact the cohort member's email address at least once, before signing the case off as a non-contact. All possible tracing attempts needed to be completed too (see next section).

9.4 Tracing

Tracing was rarely required of biomedical fieldworkers as the interviewers had already made contact, however, due to the pause in fieldwork, some wave 1 and 2 respondents' contact details had changed since their interview. If biomedical fieldworkers found that the cohort member no longer lived at the issued address, or they could not confirm that the cohort member lived at the issued address, there were several steps they were expected to undertake to try to trace the cohort member. These were:

- Speaking to neighbours adjacent to the address to see if they knew where the participant had moved to
- Calling the cohort member's partner's mobile telephone number to ask them for up-to-date contact details for the cohort member (if applicable)
- Contacting stable contacts by telephone, personal visit, email or post to ask them for a new address or other contact information for the cohort member (if applicable)

If biomedical fieldworkers obtained a new telephone number for the participant, they would attempt to make contact using the new number. If they made contact, their aim was to establish if the participant was still living local to their previous address. If the new address was in the biomedical fieldworker's area, they would follow it up. If the participant had moved the outside of the area where the biomedical fieldworkers was working in, the case would be reallocated to another biomedical fieldworker.

9.5 Making appointments

Once biomedical fieldworkers made contact with a cohort member, they generally tried to make an appointment for a health visit, but walk-in appointments were possible. Once fieldwork restarted after the COVID-19 pause, biomedical fieldworkers were required to conduct participant and household health screening in advance of making an appointment, as well as on the day of the pre-arranged appointment before entering any participants' home. Biomedical fieldworkers also reminded participants that they could wear a face covering for the health visit if they wish to.

Cases that were interviewed by video call from November 2021 onward were sent an appointment letter in order to provide the respondent with their health visit leaflet before their visit. This letter included a space for the biomedical fieldworker to write in the appointment date and time. In all cases, once an appointment was made, an automatic reminder email and text were sent to the cohort member the day before their appointment (where the information was available). See a copy of the health visit appointment letter in Appendix A.

9.6 Providing and returning documents

At the end of the health visit, biomedical fieldworkers collected any completed 'Your Life Now' or 'Childhood' self-completion questionnaires from participants who had not returned them previously. When fieldwork restarted, cases that were interviewed in waves 1 or 2 before fieldwork was paused were sent blank copies of the two self-completion questionnaires with their advance letter if the office had not already received them.

During health visits, biomedical fieldworkers provided participants with a consent booklet, a measurement record card, and an Online Dietary Questionnaire leaflet. The consent booklet was used to collect consents for the respondent to have their blood taken, stored, as well as permission to extract DNA. It also collected consent for blood pressure and blood sample results to go to their GP. The booklet contained the blood dispatch forms containing information needed for the office and labs, which were sent with the blood samples. The measurement record card was used to record the measurements taken during the visit if the respondent wished to know them. There was space to record the blood pressure, grip strength, weight, body fat, and waist and hip measurements. The Online Dietary Questionnaire leaflet provided an overview of the Online Dietary Questionnaire and instructions on how to log in to it. Biomedical fieldworkers added a log in code label to the front of the leaflet.

9.7 Electronic Address Record Form (e-ARF)

NatCen's e-ARF was used by the NatCen biomedical fieldworkers on NCDS in a very similar way to the interviewers, as covered in Section 8.9.

The INUVI biomedical fieldworkers used the e-ARF differently. For most the INUVI biomedical fieldworkers, their appointments were made by the INUVI office staff and so they did not record their calls in e-ARF. The INUVI biomedical fieldworkers were still able to see the sample information about the respondents and were asked to record their outcomes in the e-ARF.

9.8 Fieldwork progress

The fieldwork reports described in section 8.10 which were sent to CLS on a fortnightly basis during mainstage fieldwork contained information regarding the health visit as well as interviewer progress. The first report provided an overview of current coverage compared to target.

The second report contained the following tables:

- Current health visit outcome by fieldwork wave
- Response to biomeasures by wave
- Consent to blood sample, analysis, storage and DNA extraction by wave
- Whether blood sample was obtained
- Agreement to complete the online dietary questionnaire (QDQ) by wave

9.9 Fieldwork quality control

The information in section 8.10 and 8.11 applies to both NatCen and INUVI biomedical fieldworkers. Additional quality control procedures specific to biomedical fieldworkers are outlined below:

- Biomedical fieldworkers were instructed to familiarise themselves with the equipment.

- Further checks were carried out to assess potential quality concerns in the health visits. For example, checks were conducted to identify biomedical fieldworkers who had cases with abnormally low scores on the eyes-open leg raise measurement or had a high proportion of cases where the anthropometry measurements were not obtained.

9.10 Safety, consent and confidentiality issues

The information in section 8.12 applies to both NatCen and INUVI biomedical fieldworkers.

10. Respondent communication

10.1 Respondent communication

10.1.1. Participant website

Most respondent communications, such as the advance letters and various information leaflets, provided the address for the NCDS survey website (ncds.info). This online resource was provided for the cohort member to be able to find out more about the survey, learn about previous sweeps of the study and the findings, as well as more general information about NCDS.

10.1.2. Birthday mailing

A birthday card and booklet detailing the recent findings of the survey is sent to the cohort member every year. Four birthday mailings were sent during the fieldwork period between 2020 and 2023.

In 2018, CLS produced a book to celebrate NCDS study members' 60th birthday *'The story of your lives – Celebrating the first 60 years of the National Child Development Study'*. This booklet was sent to all study members as part of their 61st birthday but interviewers working on the survey were provided with some spare copies which they could hand to any study members requesting a further copy of the book.

10.1.3. Survey helpline

During the course of the survey, study members were provided with an email address and a freephone contact telephone number that they could call if they had any questions about the survey or wanted to opt out of the research.

10.2 Advance materials

10.2.1. Advance letter

Every cohort member was sent an advance letter before an interviewer tried to contact them. These letters were posted from the office around a week before interviewers began contacting respondents. The wording of the advance letter varied slightly depending on whether the cohort member had taken part in the previous sweep of the survey or prior to 2008.

There were also some adaptions made to the letters depending on which wave study members were allocated to, due to the fieldwork mode available at the time. The advance letter for the video pilot and wave 3 offered a video interview but also mentioned they could take part in-person at a later date if preferred. This approach was also used with cohort members who had originally been contacted between January and March 2020 but did not take part so were recontacted after the pandemic (also known as wave 2.5) The letters used in Waves 4 to 6 outlined that the interview could take part in-person or by video interview.

All the advance letters introduced the study and its importance, emphasising the value of cohort member's continued participation over the years. It then explained the process of the interview, letting the cohort member know they would soon be contacted by an interviewer from NatCen or Verian to discuss their participation and potentially arrange a time for the interview. The letter also included FAQs about video interviewing including how secure and easy it is and made clear that interviews would not be recorded. A Welsh translated letter was sent to cohort members who lived in Wales.

These letters were also similar to the 'generic' advance letters which were also provided to interviewers to use during fieldwork as and when required e.g. to show on the doorstep as a prompt to remind cohort members of the 'advance' letter or to provide a copy should this be requested. A copy of the generic advance letter can be found in Appendix A.

10.2.2. Advance email

In addition to the letter, an advance email was also sent to cohort members whose email address was on file. The email was sent usually a day after the letters went out and contained the same invitation and information as the advance letter, excluding the video call FAQ section.

10.2.3. Survey booklet

A twelve-page long leaflet containing more detailed information about the study was also sent along with the advance letter. It highlighted some valuable findings from previous sweeps of the survey and how these were used to shape policy as well as inform researchers and health professionals in various areas. The leaflet also outlined in more detail the components of the survey, detailing the interview process, health visit and the completion of the paper questionnaire that would be sent in the post. Finally, the leaflet addressed some of the concerns that cohort members may have, especially regarding data confidentiality and other relevant ethical considerations. A copy of the survey booklet can be found in Appendix A.

10.3 Reissue letter

For reissues, interviewers were provided with a slightly modified version of the advance letter to mail out to cohort members a few days before making any contact attempt. This letter was provided part-way through the reissue waves. The content of this letter was very similar to that of the one sent at first issue but mentioned that an interviewer had already tried to reach the respondent without success. A copy of the reissue letter can be found in Appendix A.

10.4 Interview appointment letter

Once an interview had been arranged, interviewers were asked to send or provide an 'appointment letter', along with a copy of the paper self-completion questionnaire(s). This letter included details of the interview appointment (date, time and interviewer contact details) as well as instructions on completing the paper self-completion questionnaire(s).

For video interviews this letter was sent as part of the 'interview pack' and also included details on taking part by video call, including step by step instructions on 'joining the video call' and where to get further help and support. It also included information on the letter cancellation cognitive test sheet which was provided in a sealed envelope with bold instructions not to open until instructed to do so in the interview. The letter outlined how to return the documents using the pre-paid envelope included in the pack. A copy of the interview appointment letter is in Appendix A.

In addition to this paper appointment letter an appointment reminder was also sent the day before the interview by email and text (depending on contact information available).

10.5 COVID-19 specific documents

Once in-person interviewing became possible again, additional documents were produced to reassure potential participants about the sanitary measures taken by the interviewers to guarantee a safe interview. To begin with, interviewers were equipped with a health screener document used to explain to the cohort member that they did

not have any symptoms themselves and in turn assess whether it was appropriate for them to go ahead with the interview in the cohort member's home. This was determined by 5 questions including checking that no one in the household had the virus and evaluating the household members' health risks that could make them especially vulnerable. It also instructed interviewers to offer to wear a mask during the interview.

Interviewers were also equipped with a specific COVID-19 booklet (separate versions for NatCen and Verian) to hand out on the doorstep. This document explained the COVID-19 safety measures taken on the project. A copy of the COVID-19 booklet can be found in Appendix A.

10.6 Data Linkage booklet

In-person interviewers were instructed to give a leaflet about data linkage consents, "Adding Other Information About You", to cohort members and their partners who had not previously agreed to these consents.

The leaflet detailed the type of administrative data to be linked (health and economic records) and explicitly described the data linkage process step by step. The 8-page leaflet also went over some key questions respondents may have, addressing, among other things, who will have access to the data, how to withdraw consent if needed and contact details for the NatCen Office.

For video interviews, the content of the leaflet was amended to be a showcard to be shown to the respondent during the interview. If the cohort member consented to data linkage, they were sent an electronic copy of the leaflet via email afterwards, or a paper copy in the post if they preferred. A copy of the data linkage booklet can be found in Appendix A.

10.7 Health visit documents

10.7.1. Health visit advance letter

Cohort members who were due to have a health visit before COVID, but were not able to, were sent a special advance letter about the health visit when health fieldwork restarted. This was sent by the health care professional at least 5 days before they attempted contact. The health visit leaflet (described below) and COVID-19 booklet were enclosed. Respondents who had not completed the self-completion questionnaire(s) were also sent a new copy of them with their letter and asked to complete them. The letter explained what the health visit involved and the COVID safety procedures. A copy of the health visit advance letter can be found in Appendix A.

10.7.2. Health visit leaflet

Cohort members who were willing to have a health visit were provided with a twelve-page long leaflet containing more detailed information about the visit. If respondents had an interview in-person, the interviewer gave them the leaflet at the end of their interview. For respondents interviewed by video, they were sent the health visit leaflet by the biomedical fieldworker with an appointment letter giving the time and date of their appointment. The leaflet outlined all the measures that would be taken including how they would be measured, whether respondents would be told their measurements, what assays would be assessed in their blood, and why they were being asked to have their blood stored and their DNA collected. Finally, the leaflet addressed some of the concerns that cohort members may have, especially regarding data confidentiality, how the results related to their insurance cover and other relevant ethical considerations. A copy of the Health Visit booklet can be found in Appendix A.

10.7.3. Online Dietary Questionnaire booklet

An extra booklet was provided by the biomedical fieldworker to cohort members who agreed to complete the Online Dietary Questionnaire to explain more about this aspect of the study. Addressing some of the most common queries respondents might have, it provided information about the time required to complete the questionnaire, other specific instructions, and contact details to direct any queries to. A copy of the online dietary questionnaire booklet can be found in Appendix A.

10.8 Post interview notifications and reminders

After both the interview and health visit, a series of notifications and reminders were sent to participants (as required) at various stages as text messages, emails and occasionally by letter.

Table 10.1 Communications post interview

• **Communication**	• **Timing**	• **Channel**
• CASI CAWI completion invite	• One day post-interview	• Email and Text
• Partner data linkage CAWI completion invite – for cohort members	• Email one day post interview, letters sent in weekly batches	• Email or Letter
• Partner data linkage CAWI completion reminder – for partners	• Email and text both sent 7 days post interview, then again 14 days post interview	• Email and Text
• Thank-you and confirmation of data linkage permissions – for cohort members (if applicable)	• Email 3 Days Post interview, • letters sent in weekly batches	• Email or Letter
• Confirmation of data linkage permissions – for partners (if applicable)	• Email 3 Days Post interview, • letters sent in weekly batches	• Email or Letter
• Online Dietary Questionnaire completion	• At 10:00 and 5:00 on Day 1 and 2 when due to complete	• Email and Text
• General (Any outstanding items e.g. return of paper self-completion questionnaires and letter cancellation sheet/ completion of CASI CAWI, data linkage CAWI for partner	• Both email and text sent on day 10 and 20 post interview. Additional email sent on day 30 post interview (if health visit not arranged yet) and day 14 after health visit.	• Email and Text

10.9 Health visit results and thank you letters

Thank you letters were sent to all cohort members who took part in the survey. As well as thanking the cohort member for taking part, cohort members who gave a blood sample were also sent a breakdown of their blood sample results for total cholesterol, HDL cholesterol and glycated haemoglobin (if they consented to this). The letters also contained an explanation of each result and a desirable range. The results letter let the cohort member know that their GP had also been sent their results (if they had consented to this).

If written consent was provided, results letters were also sent to the cohort member's GP. These contained the cohort member's blood sample results (if measured) along with their blood pressure and pulse readings (again if the respondent consented). The letters also included an explanation of the study and desirable ranges for the results. The survey doctor's contact details were included should the GP have any questions regarding the results.

A copy of a respondent letter with blood results and a GP letter can be found in Appendix A.

11. Mop-up Survey

11.1 Survey Design Overview

For the first time on NCDS, a shorter web interview (CAWI) was included in the survey design to follow on from mainstage fieldwork. The purpose of this survey was three-fold: firstly, to try to capture some key information from cohort members who had not participated in the main survey, secondly to collect information from emigrants (who were not part of the main survey) and thirdly to collect updated information from cohort members who had participated in the survey before COVID-19 (particularly about their experience of living through the COIVD-19 pandemic). The role of the Mop-up Survey became particularly important due to the lower response rates achieved in the main survey fieldwork during and after the pandemic. A very similar Mop-up Survey was completed around the same time for the 1970 Birth Cohort Study (BCS70).

11.2 Sample

The sample and feedforward files followed the same structure as provided for the main survey. CLS was responsible for providing sample and feed forward information for the emigrants who were to be issued as these cases were not included in the main survey. For the respondents who took part pre-COVID, CLS provided updated feed-forward information (using data collected when they participated in the survey between January and March 2020) and NatCen provided the sample information.

For the unproductive cases, NatCen used the sample and feed forward files which were produced by CLS for the main survey. The unproductive cases from the main survey were reviewed before being issued in the following ways:

- Comments in the survey freephone log were reviewed and cohort members were removed from the Mop-up Survey if it was felt further contact at this time would be inappropriate or may lead to a permanent withdrawal from the study.
- Interviewer comments were reviewed for outcome codes 430 (refusal before interview), 590 (other reason for no interview), 690 (unknown eligibility), and 790 (other ineligible) and some cases were removed for the same reason as outlined above.
- A list of other unproductive outcome codes to remove was also agreed with CLS. These are shown in the table below.

Table 11:1 Unproductive Outcome codes which were removed from the Mop-up sample

Unproductive Outcome Code	Description
410	Office refusal
440	Refusal during the interview (unproductive partial)
441	Data deleted at the request of respondent
530	Physically or mentally unable /incompetent
550	Lost interview

There was also a small number of cohort members who had refused to participate in the main survey but said they would like to take part online and so they were issued to the Mop-up Survey as well.

To create the sample for the Mop-up Survey, the emigrant, non-responder and pre-COVID sample files were combined, giving 2,484 non-responders, 327 emigrants[9] and 1,603 pre-COVID responders (total sample = 4,414).

CLS conducted an exercise using 'AFD' software to check outstanding 'mover' cases so that any address updates could then be applied to these unproductive cases.

11.3 Questionnaire

The questionnaire for the Mop-up Survey was a shortened version of the main survey and was designed to take approximately 20 minutes to complete. The table below shows the modules included and not included in the online survey. In general, the content of the Household Grid and the Contact Module were very similar to that included in the mainstage survey, whereas other sections were much shorter or were excluded altogether. The wording of survey questions was kept largely the same, but interviewer instructions were replaced by guidance for the cohort member. Most of the routing and sense checks in the questionnaire were also kept but were 'soft' rather than 'hard' checks which allowed the cohort member to move past them without amending their answer if they wished. This avoided a cohort member becoming stuck in the survey and thus dropping out. Some checks, particularly on sensitive questions, were removed completely. For most questions, if a cohort member left a question blank, the option of "don't know" or "prefer not to say" would then appear on the screen. This approach mirrored the CAI approach where these options were not read out or shown to the respondent but available for the interviewer to code as necessary.

The questionnaire was programmed in Blaise 5, which meant the complex household grid and contact modules could be copied over from the main survey which was programmed in Blaise 4.

The average total length of the Mop-up Survey was 26 minutes and 20 seconds.

Table 11:2 Questionnaire Modules

Questionnaire Module	**Content**
Household grid	Collected details about co-habiting partnerships, children (including those not in the household) and any other household members. This section was largely the same as the main but included a small section for emigrants about when and why they left Great Britain.
Family	*Not included.*
Housing	A short section collecting information on cohort member's current accommodation (housing history was not collected).
Employment	Collected information on cohort member's current economic activity (including employment, education or training, unemployment, retirement, sickness or disability, and looking after the home or family). Cohabiting partner's current economic activity was also recorded. (Previous economic activity was not collected.)
Income	Collected details on total income of the household from earnings, benefits, and any other form of earnings. One question replaced the detailed financial questions asked in the main stage.

[9] There were 24 cohort members who were issued to mainstage who were identified to be emigrants (and therefore were not eligible to take part in the mainstage).There were another 2 cohort members who were productive at mainstage before COVID and then emigrated. So, in total there were 353 emigrant cases issued to the Mop-up survey.

Table 11:2 Questionnaire Modules	
Cognitive Assessments	*Not included.*
Lifelong Learning	*Not included.*
Health	Asked general questions around physical and mental health and wellbeing and collected a self-reported weight measurement.
COVID-19	Collected details about whether the cohort member had experienced symptoms of COVID-19 and long COVID, if they had had a positive test, and if they had been vaccinated.
Sensitive questions (included in main CASI/CAWI/PAPI)	Included questions on mental health and life satisfaction only.
Data linkage consent	*Not included.*
Online Dietary Questionnaire (ODQ)	*Not included.*
Contact Information	Updated contact details for the cohort member, partner and stable contacts New contact details were also collected if the cohort member was planning to move. This section was largely the same as the section included in the main survey.

The respondents were not asked to complete any other elements of the main survey (i.e. the two paper self-completion questionnaires and health visit).

11.4 Fieldwork

The web survey, hosted by NatCen was opened on 18th March 2024 and finished on 11th April 2024.

11.5 Respondent communication and engagement

Cohort members were sent a letter and/or an email invitation to the survey. To avoid postage costs and delays, emigrants were sent an email invitation only. Cohort members who did not respond to the main survey and those who had taken part pre-COVID were sent a letter as well as an email, where an email address was available.

The introduction in the email invitation was tailored for different respondent types reflecting that the emigrants had not been invited to the main interview before and that the pre-COVID respondents had already taken part. The email explained the importance of the study and the cohort member's contribution. It provided an electronic link to the survey guide and a link to a video from the Study Director, George Ploubidis, explaining more about the study. It also contained a link to a video covering the history of NCDS and its most notable findings.

The email contained both a direct link to the survey and a short URL with an access code which could be typed into a browser if needed. It also gave reassurance about data confidentiality and NatCen's contact details.

The invitation letter contained very similar information to the email. A paper copy of the survey leaflet was included with the letter. This was an amended version of the mainstage survey leaflet and included an introduction to the study, key findings from previous sweeps, and explained NatCen's role in the survey.

Two reminder emails and texts were sent to cohort members. The reminder emails provided similar information to the email invitation but were shorter and the last reminder email gave the end date of the study. The texts contained the link to the survey and study contact details. Timings are shown in the table below.

Cohort members who had already completed the Mop-up Survey or had opted out were removed from the reminder sample[10].

Table 11:3 Communication timetable	
Communication	**Date Sent**
Invitation Email	18/03/2024
Invitation Letter	22/03/2024
Reminder Letter	27/03/2024
1st Email and text reminder	28/03/2024
2nd Email and text reminder	04/04/2024

Following completion, a thank you email (or letter if they had no email address) was sent to all participants. This thanked the participant and gave them contact details at CLS should they require any further information following the research.

A copy of the invite, reminder and thank-you letters can be found in Appendix A.

[10] As it took a few days for sample to be drawn, checked and the email or letter to be sent, some cohort members received a reminder after completion.

12. Survey Response

12.1 Overview of response

In total, 8,406 interviews were achieved during the Life in Your Early 60s Survey, a response of 73%.[11] This includes interviews conducted as part of the pilots, dress rehearsal, mainstage and Mop-up Survey. It also includes partial completions, proxy completions and cases living outside of Great Britain, who were only invited to take part in the Mop-up phase.

For completeness, the response rates detailed in the tables of this chapter show both the response rate (base excludes confirmed ineligibles only) and the co-operation rate (base excludes both confirmed and uncertain ineligibles). For reasons of clarity, the text accompanying the tables generally quotes figures for response rate only.

Table 12:1 provides an overview of response. This table includes cases which were part of the main, dress rehearsal and pilot surveys as well as cases living in Great Britain who did not take part in the mainstage but were invited to take part in the Mop-up Survey. Cases living outside of Great Britain (also known as 'emigrant' cases) who were not known to be emigrants before the main survey are not included in this table as these cases were not eligible for the main survey and only invited to the 'Mop-up' stage.

Further information on emigrant cases is included in section 12.1.5.

Table 12:1 Overview of response rates from pilots, mainstage survey and Mop-up Survey (excluding emigrants[12])

	N	*%*
Productive	8,216	71
by video interview	*2,281*	*20*
by in-person interview	*5,529*	*48*
by web in Mop-up	*406*	4
Non-contact	417	4
Refusal	1,828	16
Other unproductive	348	3
Unknown eligibility (no contact)[13]	399	3
Ineligible	285	2
Total	*11,493*	*100*
Co-operation rate[14]	***76%***	

[11] Response rate base is 11,535 cases (11,493 mainstage cases plus 327 additional emigrant cases (not issued to main survey) with 285 confirmed ineligibles removed).
[12] The figures for web Mop-up include 24 cases who were ineligible in the mainstage survey because they lived abroad and were included in the Mop-up because they were non-responders.
[13] Unknown eligibility covers cases where the address on file could not be found or was inaccessible, as well as respondents who had moved and could not be traced. The non-contact group were not known to have moved.
[14] The co-operation rate is the percentage of productive interviews from the sample of confirmed eligible cohort members that is excluding confirmed and uncertain ineligibles. Base is 10,809.

Response rate[15]	***73%***	
	All issued sample (excluding emigrants), 11,493	

12.1.1. Sample eligibility

Of the 11,493 cohort members issued in the main sample (excluding cases known to be emigrants before mainstage fieldwork started), 94% (n=10,809) were successfully traced and eligible (following the pilots, dress rehearsal, mainstage and Mop-up Survey). The remaining 4% were made up of sample members who were confirmed to be ineligible (2%) or movers whose eligibility was uncertain as they could not be traced (3%). Where ineligibility was confirmed, it was found that 235 cohort members had died, 48 had emigrated, and 2 were in prison. The "uncertain eligibility" category was made up of cohort members who had moved and could not be traced by either NatCen/Verian or CLS. See Table 12.2.

Table 12:2 Summary of sample eligibility after the Mop-up including pilots, dress rehearsal, mainstage survey and Mop-up cases (excluding emigrant cases known before mainstage)

	N	*% issued sample*
Confirmed eligible	10,809	94
Confirmed ineligible	285	2
Died (781)	235	2
Moved abroad (780)	48	0
In prison (789)	2	0
Uncertain eligibility (untraced movers) (652, 653, 674)[16]	399	3
All issued sample (excluding emigrants)	*11,493*	100

During the main part of the survey, those living outside of Great Britian were classed as 'ineligible'. Cases known to be 'emigrants' at the start of mainstage fieldwork are therefore not included in Table 12:2.

12.1.2. Response rate from mainstage fieldwork, dress rehearsal and pilots

A total of 7,322 cohort members were interviewed during mainstage fieldwork between January 2020 and November 2023. This gave a response rate of 69%, and a co-operation rate of 72%. When the productive cases in the dress rehearsal, pilot and video pilot are added in this gives a total of 7,810 productive CAI cases overall (7,773 fully productive, 26 partially productive and 11 interviewed by proxy[17]). When including the pilots, this gave a response rate of 70%, and a co-operation rate of 73%.

12.1.3. Response rate with the Mop-Up Survey included

A further 406 cohort members were surveyed in the web-based Mop-up Survey (excluding emigrants) running from March 2024 to April 2024, giving a total of 8,216 interviews. This sample included cases who had been invited but not participated in the main survey. The Mop-up Survey increased the response rate to 73% and the

[15] The response rate is the percentage of productive interviews from the sample with known/possible eligibility, that is excluding those confirmed ineligible cohort members. Base is 11,208.
[16] Outcome codes: 652 – address inaccessible, 653 – unable to locate address, 671 certain respondent moved – new address not obtained, 674 - new address found in my area but could not be reallocated.
[17] Six people were interviewed through an interpreter.

co-operation rate to 76%. The table below shows the total number of interviews achieved and the response and co-operation rate at each stage of fieldwork.

Table 12:3 Survey response at each stage of fieldwork				
		Mainstage	*Mainstage with pilots*	*Mainstage with pilots and Mop-up cases*
Number of completed interviews	*N*	7,322	7,810	8,216
Co-operation rate	*%*	72%	73%	76%
Response rate	*%*	69%	70%	73%
				Base: All issued sample (excluding emigrants), 11,493

12.1.4. Study members not resident in Great Britain

The Mop-up Survey also invited cohort members who were not living in Great Britian at the time of the survey to participate. These cases (also known as 'emigrants') were not eligible for the main survey. A further 190 interviews with these emigrant cases were achieved bringing the total number of interviews to 8,406. A survey response rate of 73% was achieved from 11,820 sample members[18].

12.1.5. Mop-up overall response

A total of 1,642 cohort members took part in the Mop-up Survey giving an overall 'Mop-up' response rate of 37%. The response rate was particularly high amongst those who had taken part in the mainstage survey pre-COVID (65%) and amongst emigrants (58%). The response rate was lower for non-responders to the main survey with 16% taking part. Figures are shown in Table 12:4[19].

Table 12:4 Mop-up Survey response							
	Sample size	*Productive completes*		*Productive partials*		*All productives*	
		N	%	N	%	N	%
Non-responders to main survey	2,484	377	15	29	1	406	16
Emigrants[20]	327	188	57	2	1	190	58
Pre-COVID responders	1,603	1,017	63	29	2	1,046	65
Total	4,414	1,582	36	60	1	1,642	37
							Base: All cases issued to Mop-up survey (4,414)

[18] Response rate base is 11,535 cases (11,493 cases issued to the pilots, dress rehearsal and mainstage fieldwork plus 327 emigrant cases with 285 confirmed ineligibles removed).

[19] The base for the response rates for the Mop-up survey does not exclude ineligibles as we did not collect information about ineligibles during the Mop-up Survey.

[20] There were 24 cohort members who were issued to mainstage who were identified to be emigrants (and therefore were not eligible to take part in the mainstage). There were another 2 cohort members who were productive at mainstage before COVID and then emigrated. Therefore, in total there were 353 emigrant cases issued to the Mop-up survey.

12.1.6. Pilot, video pilot and mainstage survey response by mode of completion

Of the total number of interviews included in the pilots, dress rehearsal and mainstage survey (before the Mop-up Survey), 71% were completed in-person and 29% were completed by video. Before COVID, 1,377 in-person interviews were carried out in Waves 1 and 2, 25% of all the in-person interviews. After COVID, Waves 1 and 2 continued but interviews were conducted by video, with Wave 3 also being done via video. In Waves 4-6 the majority of cases were allocated to an in-person interviewer but the cohort member could request a video interview if preferred. A small number of cases were allocated to a video interview where an in-person interviewer was not available.

Table 12:5 Mode of Interview – pilots, dress rehearsal and mainstage interviews

	In-person		*Video*		*Total*	
	N	*%*	*N*	*%*	*N*	*%*
Productive interviews	5,529	71	2,281	29	7,810	100
Total number of interviews pilot, video call pilot and mainstage, 7,810						

The table below shows the mode of interview following the Mop-up Survey. An additional 406 web interviews were carried out with cases who had been invited but not participated in the main survey which was five percent of all interviews.

Table 12:6 Mode of Interview – all interviews (including Mop-up)

	In-person		*Video*		*Web*		*Total*	
	N	*%*	*N*	*%*	*N*	*%*	*N*	*%*
Productive interviews	5,529	67	2,281	28	406	5	8,216	100
Total number of interviews pilot, video call pilot, mainstage and Mop-up (excluding emigrants), 8,216								

12.2 The achieved response

12.2.1. Response by mode of issue (mainstage not including Mop-up)

Table 12:7 below shows the response rates for cases by the mode they were first allocated to for the mainstage (before the Mop-up Survey). It shows that there was a higher response among cases first issued to a video interview (65%) compared to those first issued to an in-person interviewer (58%)[21]. A lot of the difference is explained by the proportion of unknown eligibility cases: 8% for in-person interview cases but only 1% of video interview cases. 98% of these were untraced movers. This is likely because untraced movers are less likely to have a telephone number or email address and so wouldn't have been issued to have a video interview. As expected, the proportion of non-contacts with video-first cases (7%) is slightly higher than for those first issued to

[21]Please note that there were significant differences in the profile of participants who were first invited to take part via video and those first invited to take part face-to-face. Participants who had not previously provided a telephone number or email addresses were not issued to the video-first waves (and this group have a lower response propensity) In addition, some of those allocated to in-person first were actually invited to take part via video due to lack of availability of an in-person interviewer. This means that the higher response rate achieved amongst those first invited to take part via video should not be regarded as evidence that this approach was more successful than first inviting participants to take part face-to-face. The impact of mode of issue will be the focus of further research.

an in-person interview (5%). The level of refusals was higher for those first allocated to an in-person visit (26%) rather than video (23%).

Table 12:7 Final response for cases by first mode allocated to (mainstage only, excludes Mop-up)

	Allocated to video interview first		*Allocated to in-person interviewer first*		*Total*	
	N	*%*	*N*	*%*	*N*	*%*
Productive	2,935	64	4,875	70	7,810	68
by video interview	2,251	77	30	1	2,281	29
by in-person interview	684	23	4,845	99	5,529	71
Non-contact	345	8	134	2	479	4
Refusal	918	20	1,160	17	2,078	18
Other unproductive	201	4	200	3	401	3
Unknown eligibility (no contact)	45	1	371	5	416	4
Ineligible	116	3	193	3	309	3
Total	4,560	*100*	6,933	*100*	11,493	*100*
Co-operation rate[22]	***67%***		***77%***		***73%***	
Response rate[23]	***66%***		***72%***		***70%***	
Base: pilot, video pilot and mainstage call sample, 11,493						

12.3 Reissues / reallocations in the mainstage survey

A higher proportion of cases were reissued (22%) in the mainstage survey (before the Mop-up Survey) compared to what was expected. This is partly because of the multi-mode approach and because of the poor response experienced with first issue cases. Some cases were also not fully worked at first issue because of the pandemic or interviewer capacity constraints. This figure does not include cases which were issued but did not take part before COVID and were then issued to have a video interview when fieldwork restarted.

The table below shows the unproductive cases at first issue by outcome and the proportion who were reissued. There were 2,496 unproductive cases at first issue which were selected for reissue. These resulted in 842 productive interviews.

[22] The co-operation rate calculation is based on mainstage outcome before the Mop-up Survey.
[23] The response rate calculation is based on mainstage outcome before the Mop-up Survey.

Table 12:8 Outcome of reissue cases by first issue outcome						
First issue outcome	*Total*	*Number reissued*	*% of cases reissued*	*Number of productive reissues*	*% of productive reissues, out of total reissues*	*% of productive reissues, out of total un-productive cases*
Unproductive - non-contact	589	507	86	133	26	23
Unproductive – refusal	1,546	382	25	115	30	7
Unproductive – other	524	314	60	99	32	19
Unknown eligibility	962	163	17	27	17	3
Wanted to be interviewed later or in another mode	962	962	100	445	46	46
Not worked (some due to COVID)	169	168	99	23	14	14
Ineligible	261	-	0	0	0	0
Total	4,471	2,496	56	842	34	19
Base: all unproductive cases at first issue, 4,471 (excludes 5 cases who requested their interview or contact data be deleted).						

The table below shows the response rates for cases which were reissued broken down by the mode they were first allocated to. It shows that there was a higher response among cases first issued to a video interview (39%) compared to those first issued to an in-person interviewer (21%).

Table 12:9 Final response for cases which were reissued						
	Allocated to Video interview first		*Allocated to In-person interview first*		*Total*	
	N	*%*	*N*	*%*	*N*	*%*
Productive	708	38	134	21	842	34
Non-contact	302	16	91	14	393	16
Refusal	644	35	238	37	882	35
Other unproductive	133	7	56	9	189	8
Unknown eligibility (no contact)	39	2	109	17	148	6
Ineligible	25	1	17	3	42	2
Total	1,851	100	645	100	2,496	100
Co-operation rate[24]	**40%**		**26%**		**37%**	
Response rate[25]	**39%**		**21%**		**34%**	
Base: all unproductive cases at first issue which were reissued, 2,496 (excludes 5 cases who requested their interview or contact data be deleted)						

[24] The co-operation rate calculation is based on mainstage outcome before the Mop-up Survey.

[25] The response rate calculation is based on the mainstage outcome before the Mop-up Survey.

12.4 Response by country of issue

Survey response (including the Mop-up Survey but excluding emigrants) was highest in Scotland (75%), lowest in Wales (71%) with England (73%) in the middle. The proportion of non-contacts was similar across the three countries, but the refusal rate was higher in Wales (19%) compared to Scotland (13%), again with England in between (16%). See Table 11.10.

Table 12:10 Response by country (including pilot, mainstage and Mop-up but excluding emigrant cases)

	England		*Scotland*		*Wales*		*Jersey/ Guernsey/ Isle of Man*		*Total*	
	N	*%*	*N*	*%*	*N*	*%*	*N*	*%*	*N*	*%*
Total issued	9,756	100	1,020	100	664	100	48	100	11,488	100
Productive	6,973	71	747	73	454	68	42	88	8,216	72
Non-contact	339	3	50	5	28	4	0	0	417	4
Refusal	1,563	16	133	13	123	19	4	8	1,823	16
Other unproductive	297	3	29	3	21	3	1	2	348	3
Unknown Eligibility (no-contact)	344	4	40	4	14	2	1	2	399	3
Ineligible	240	2	21	2	24	4	0	0	285	2
Co-operation rate	*76%*		*78%*		*73%*		*89%*		*76%*	
Response rate	*73%*		*75%*		*71%*		*88%*		*73%*	

Base: all productive interviews in pilot, video pilot, mainstage and the Mop-up survey (excluding emigrants and 5 cases who requested their interview or contact data be deleted), 11,488

12.5 Response by sweep of last interview (including Mop-up Survey but excluding emigrants)

The table below shows a clear pattern that response increased the more recently the cohort member was last interviewed. Those last interviewed in 2013 had an 86% survey response, compared to 53% amongst those last interviewed in 2008. 1,250 interviews were achieved amongst cohort members that had last taken part before the year 2002.

Table 12:11 Response in mainstage by sweep of last interview (including pilot, mainstage and Mop-up but excluding emigrant cases)

	Pre-2002		*2002*		*2004*		*2008*		*2013*		*Total*	
	N	*%*	*N*	*%*	*N*	*%*	*N*	*%*	*N*	*%*	*N*	*%*
Total issued	1,250	100	111	100	360	100	1,082	100	8,685	100	11,488	100
Productive	226	18	43	39	117	33	524	48	7,306	84	8,216	72
Non-contact	148	12	9	8	38	11	91	8	131	2	417	4
Refusal	454	36	40	36	133	37	306	28	890	10	1,823	16

Table 12:11 Response in mainstage by sweep of last interview (including pilot, mainstage and Mop-up but excluding emigrant cases)												
Other unproductive	91	7	7	6	27	8	61	6	162	2	348	3
Unknown Eligibility (no-contact)	267	21	11	10	31	9	53	5	37	0	399	3
Ineligible	64	5	1	1	14	4	47	4	159	2	285	2
Co-operation rate	25%		43%		37%		53%		86%		76%	
Response rate	19%		39%		34%		51%		86%		73%	
Base: all productive interviews in pilot, video pilot, mainstage and the Mop-up survey (excluding emigrants and 5 cases who requested their interview or contact data be deleted), 11,488												

12.6 Response in comparison with survey targets

The Age 62 Survey aimed to achieve around 8,910 interviews with a response rate of 74%. This response would be lower than that achieved in the Age 55 Survey which took place in 2013 (c. 9,000 interviews and overall response rate of 78%). It was expected to be lower because of the longer interview and the collection of biomeasures and also because the response rates for many social surveys has been falling in recent years.

12.7 What was achieved in comparison with target (impact of pandemic on response rate)

An overall response of 73% (including the Mop-up Survey) was achieved which was close to the target response rate of 74%. However, the response to the main survey was lower (70%).

This survey faced a number of challenges following the COVID-19 pandemic, all of which are likely to have impacted on overall response rates:

- The COVID-19 pandemic occurred just after the second wave of fieldwork was launched. This meant some interviews had to be cancelled and all work had to be stopped for over a year.
- When fieldwork restarted after COVID, interviews could only be conducted by video call. This mode limits the tracing activities which can be conducted (e.g. contacting of neighbours).
- Fieldwork capacity issues – shortages of interviewers in particular areas and a generally higher turnaround of interviewers with some joining new to the industry and the loss of those who had more experience.

12.8 Response rates for each element

12.8.1. Your Life Now Paper self-completion

Cohort members in the mainstage survey, dress rehearsal and pilots were sent or given the Your Life Now paper self-completion questionnaire in advance of the interview[26]. They were asked to complete this prior to their interview appointment. If the interview was in-person, the interviewer would then try to collect the completed questionnaire when they interviewed the respondent. Alternatively, the cohort member could post the

[26] Paper questionnaires were not included as part of the Mop-up survey.

questionnaire back directly to the NatCen office (this was the way to return it for the video interview) or give it to the biomedical fieldworker during the health visit. Of the 7,799[27] full and partial interviews conducted with cohort members in-person and by video, 7,042 paper questionnaires were completed and returned to the office (90%)[28].

The rate of return varied by mode of interview, with 94% of questionnaires being returned from video interviews and 84% being returned from in-person interviews. Of respondents interviewed in-person, only a minority of questionnaires were collected by interviewers or biomedical fieldworkers and not returned (5% and 1% respectively). The table below shows whether questionnaires were collected by interviewers or biomedical fieldworkers or left with respondents to post back, broken down by whether a completed questionnaire was received or not.

Table 12:12 Completion of paper self-completion questionnaire by mode of pilots, dress rehearsal and mainstage interview

	In-person		*Video*		*Total*	
	N	*%*	*N*	*%*	*N*	*%*
Returned						
Completed before or during visit, collected by interviewer (in-person)	3,438	62	-	-	3,438	44
Collected at health visit	228	4	50	2	278	4
Cohort Member reported sending back before the interview (video)	-	-	917	40	917	12
Cohort Member reported sending back before the health visit	886	16	851	37	1,737	22
Cohort member said they would post back after the interview or health visit, requested a replacement	327	6	293	13	620	8
Refused in interview but later completed	9	0	18	1	27	0
Cohort member said they would give to biomedical fieldworker but did not have health visit – posted back	5	0	-	-	5	0
Intention not known (partial interview)	17	0	3	0	20	0
Total Returned	**4,910**	**89**	**2,132**	**94**	**7,042**	**90**
Not Returned						
Completed before or during visit, collected by interviewer (in-person) - Not received	86	2	-	-	86	1
Collected at health visit - Not received	6	0	1	0	7	0
Cohort Member reported sending back before the interview (video) – Not received	-	-	11	0	11	0

[27] This figure excludes proxy interviews as they were not asked to complete the paper questionnaire.

Table 12:12 Completion of paper self-completion questionnaire by mode of pilots, dress rehearsal and mainstage interview						
Cohort Member reported sending back before the health visit – Not received	104	2	39	2	143	2
Cohort member said they would post back after the interview or health visit, requested a replacement – Not received	281	5	84	4	365	5
Refused to complete	101	2	9	0	110	1
Cohort member said they would give to biomedical fieldworker but did not have health visit	23	0	-	-	23	0
Intention not known (partial interview)	9	0	3	0	12	0
Total Not Returned	**610**	**11**	**147**	**6**	**757**	**10**
Unweighted base	5,520	100	2,279	100	7,799	100
Base: all fully productive cases and partially productive cases from pilots, dress rehearsal and mainstage, 7,799[29]						

12.8.2. Childhood Paper self-completion

Out of the 7,799[30] full and partial interviews conducted with cohort members in-person and by video, 6,713 Childhood paper questionnaires were completed and returned to the office (87%). The rate of return for the Childhood paper self-completion questionnaire varied by mode of interview, with 93% of questionnaires being returned from video interviews and 84% being returned from in-person interviews. See the table below.

Table 12:13 Completion of Childhood paper self-completion questionnaire by mode of pilots, dress rehearsal and mainstage interview						
	In-person		*Video*		*Total*	
	N	*%*	*N*	*%*	*N*	*%*
Returned	4,596	84	2,117	93	6,713	87
Not returned	846	16	162	7	1,008	13
Total	5,442	100	2,279	100	7,721	100
Base: all fully productive cases and partially productive cases asked to complete the self-completion from pilots, dress rehearsal, and mainstages, 7,721[31]						

After COVID, in the mainstage the childhood questionnaire was placed with the cohort member before the interview[32]. The table below shows whether questionnaires were collected by interviewers or biomedical fieldworkers or left with respondents to post back, broken down by whether a completed questionnaire was received or not in post-COVID mainstage. Of respondents interviewed in-person, only a minority of

[29] Proxy and Mop-up cases are excluded from this table as they are not asked to complete the self-completion questionnaire.
[30] This figure excludes proxy and Mop-up interviews as they were not asked to complete the paper questionnaire.
[31] Proxy cases are excluded from this table as they were not asked to complete the childhood questionnaire. It also excludes 69 cohort members in the dress rehearsal who were randomly selected not to be asked to complete the Childhood questionnaire. Furthermore, 9 partial cases from the dress rehearsal and pre-COVID mainstage have been excluded as they stopped the interview before they were asked to do the childhood questionnaire.
[32] This method was adopted after different placements of the questionnaire had been implemented in the pilots, dress rehearsal and pre-COVID mainstage.

questionnaires were collected by interviewers or biomedical fieldworkers and not returned (2% and 0% respectively).

Table 12:14 Method of receipt of Childhood paper self-completion questionnaire by mode at post-COVID mainstage interview

	In-person		*Video*		*Total*	
	N	*%*	*N*	*%*	*N*	*%*
Returned						
Completed before or during visit, collected by interviewer (in-person)	2,061	53	-	-	2,061	34
Collected at health visit	142	4	115	5	257	4
Cohort Member reported sending back before the interview (video)	-	-	839	39	839	14
Cohort Member reported sending back before the health visit	821	21	753	35	1,574	26
Cohort member said they would post back after the interview or health visit, requested a replacement	289	7	268	13	557	9
Refused in interview but later completed	13	0	15	1	28	0
Intended to return questionnaire at health visit – no further information	6	0	-	-	6	0
Intention not known (partial interview)	13	0	2	0	15	0
Total Returned	**3,345**	**87**	**1,992**	**93**	**5,337**	**89**
Not Returned						
Completed before or during visit, collected by interviewer (in-person) - Not received	83	2	-	-	83	1
Collected at health visit - Not received	2	0	1	0	3	0
Cohort Member reported sending back before the interview (video) – Not received	-	-	10	0	10	0
Cohort Member reported sending back before the health visit – Not received	77	2	39	2	116	2
Cohort member said they would post back after the interview or health visit, requested a replacement – Not received	242	6	75	4	317	5
Refused to complete	101	3	16	1	117	2
Intended to return questionnaire at health visit – no further information	6	0	-	-	6	0
Intention not known (partial interview)	6	0	3	0	9	0
Total Not Returned	**517**	**13**	**144**	**7**	**661**	**11**
Unweighted base	**3,862**	**100**	**2,136**	**100**	**5,998**	**100**
Base: all fully productive cases and partially productive cases from post-COVID mainstage, 5,998[33]						

[33] Proxy cases are excluded from this table as proxy cases are not asked to complete the self-completion questionnaire.

12.8.3. CASI/CASI CAWI

Towards the end of the interview there was a self-completion section lasting around 10 to 15 minutes containing sensitive questions[34]. For those taking part in-person, this was administered by Computer Assisted Self Interviewing (CASI). For those taking part by video, a Computer Assisted Web interview (CAWI) was offered during the interview, referred to as CASI CAWI, and in the post-COVID Mainstage waves the cohort member could also complete the CASI with an interviewer during their interviewer. 74 video respondents completed this element in both modes.

Of those respondents who completed the interview and were eligible, 95% completed the self-completion section. There were similar rates of completion by mode, with 96% of those interviewed in-person completing the self-completion module compared to 93% interviewed by video.

Table 12:15 Completion of the self-completion questionnaire (CASI or CASI CAWI)

	In-person		*Video*		*Total*	
	N	*%*	*N*	*%*	*N*	*%*
Completed CASI	5,297	96	322	14	5,619	72
Completed CASI CAWI	0	0	1,724	76	1,724	22
Both modes completed	0	0	74	3	74	1
Total completes	**5,297**	**96**	**2,120**	**93**	**7,417**	**95**
Not completed	**215**	**4**	**154**	**7**	**369**	**5**
Total	5,512	100	2,274	100	7,786	100

Base: All mainstage survey cohort members who were asked to complete the self-completion questionnaire (CASI/CASI CAWI), 7,786[35]

Of those cohort members taking part in an in-person interview, 91% completed the CASI section by themselves and 5% completed it with help from an interviewer. Figures are shown in the table below.

Table 12:16 Completion of CASI by respondents interviewed in-person only

	N	*%*
CASI completed by respondent	5,003	91
CASI completed by respondent, but interviewer helped to complete some questions	294	5
Refused to complete CASI	211	4
Intended to complete during the interview but not completed	4	0
Total	5,512	100

Base: All participants interviewed in-person who reached this point in the questionnaire 5,512[36]

[34] The self-completion section was not included in the Mop-Up Survey.

[35] 13 partials did not reach this part of the questionnaire and so have been excluded from the base. Proxy interviews have also been excluded as they are not asked this section.

[36] This base does not include proxy interviews or partials who did not reach this point in the questionnaire.

In the video pilot, if the cohort member could not access or complete the CASI CAWI during the interview, the survey link could be emailed to them to complete later. Around 58% of cohort members accessed and completed the CASI CAWI during the pilot interview. Twenty percent of respondents completed the CASI CAWI after the interview, whereas 15% of respondents said they would complete it afterwards but did not. Response rates to the CASI CAWI were therefore relatively low with an 81% response rate achieved.

In the mainstage post-COVID (after the video pilot), a new option was made available in the video interview where the interviewer could show the CASI version on the screen during the interview for the cohort member to answer, if they could not access the web link during the interview. Interviewers were also briefed to ensure that the cohort member completed the CASI CAWI during the interview wherever possible. These strategies were relatively successful and a 94% response rate to the CASI CAWI was achieved amongst the video interviews. Figures are shown in the table below.

Table 12:17 Completion of the self-completion questionnaire in the video interview (CASI/CASI CAWI)

	Video Pilot		*Post-COVID Mainstage*		*Total*	
	N	*%*	*N*	*%*	*N*	*%*
Web survey completed by cohort member during interview (CASI CAWI)	82	58	1,212	57	1,294	57
Screen sharing during interview (CASI)	-	-	391	18	391	17
Web survey completed after interview (CASI CAWI)	28	20	398	19	426	19
Refused but then completed CASI CAWI	0	-	4	0	4	0
Intention not known and completed	5	4	0	-	5	0
Total completed	**115**	**81**	**2,005**	**94**	**2,120**	**93**
Reported would complete web survey after interview – not completed	21	15	61	3	82	4
Reported web survey completed during the interview – not completed	0	-	15	1	15	1
Refused completion	6	4	50	2	56	2
Not completed – no intention provided	0	-	1	0	1	0
Total not completed	**27**	**19**	**127**	**6**	**154**	**7**
Total	**142**	**100**	**2,132**	**100**	**2,274**	**100**
Base: All video participants who reached this point in the questionnaire 2,274						

12.8.4. Data linkage

12.8.4.1. Cohort member

Cohort members who had completed an interview and who had not given consent in the Age 50 survey (due to not taking part or refusing consent during the survey) were asked for consent to link their survey data to information from routine health and economic records[37]. The consent rate to link health records was higher (62%) than that for economic records (50% for DWP linkage and 49% for HMRC linkage[38]). Consent rates for

[37] Data linkage was not included in the Mop-up Survey.
[38] A small number of cohort members subsequently contacted the office to withdraw their consent after their interview.

both health and economic records were similar in the video mode and in-person interviewing mode. Figures are shown in table 12:18.

Table 12:18 Consent to data-linkage by the cohort members who had not given consent at Age 50						
	In-person		*Video*		*Total*	
	N	*%*	*N*	*%*	*N*	*%*
Health						
Consent given	918	62	321	62	1,239	62
Consent refused	574	38	198	38	772	38
Unweighted base	1,492	100	519	100	2,011	100
DWP						
Consent given	941	50	335	49	1,276	50
Consent refused	948	50	343	51	1,291	50
Unweighted base	1,889	100	678	100	2,567	100
HMRC						
Consent given	917	49	324	48	1,241	48
Consent refused	972	51	354	52	1,326	52
Total	1,889	100	678	100	2,567	100
Base: All participants from pilot, dress rehearsal and mainstage who had not given consent previously and had reached this point in the questionnaire (Health 1,492, DWP 1,889 and HMRC 1,889)						

12.8.4.2. Partner

The co-resident partners of cohort members were also asked if they would give consent to health and economic data linkages, if these partners were new, had not been asked previously or had not consented at the Age 50 survey. Table 12:19 shows the consent rate for the co-resident partners who were eligible to be asked for consent.

In total, 50% of partners who had not given consent previously gave consent to data linkages with the NHS, 46% to DWP and 45% to HMRC. Agreement rates were much higher in video mode (63% for health and 58% for both economic consents) than in-person (47% for health and 42% for both economic consents).

Table 12:19 Consent to data-linkage by partners who had not given consent at Age 50						
	In-person		*Video*		*Total*	
	N	*%*	*N*	*%*	*N*	*%*
Health						
Consent given	773	47	318	63	1,091	50
Consent refused	884	53	187	37	1,071	50
Unweighted base	1,657	100	505	100	2,162	100
DWP						
Consent given	734	42	305	58	1,039	46
Consent refused	1,023	58	217	42	1,240	54
Unweighted base	1,757	100	522	100	2,279	100

Table 12:19 Consent to data-linkage by partners who had not given consent at Age 50						
HMRC						
Consent given	733	42	304	58	1,037	45
Consent refused	1,024	58	219	42	1,243	55
Total	1,757	100	523	100	2,280	100
Base: All partners from pilot, dress rehearsal and mainstage who had not given consent previously and had reached this point in the questionnaire (Health 1,657, DWP 1,757 and HMRC 1,757)						

12.8.5. Cognitive assessments

The cognitive assessments were completed during the main interview and the results were entered into the CAI[39]. The agreement rate for all four of the cognitive assessments was very high. Ninety-eight percent or more of those completing the interview also completed the word recall, animal naming and delayed word recall tests and this was the same across both modes. The letter cancellation test had a slightly lower response of 95%, with a lower agreement rate in the video mode compared to the in-person mode (92% vs. 96% respectively). The letter cancellation task had to be posted to the cohort member before the video interview which may explain the lower agreement rates in this mode – some participants may not have received the task or were unable to locate it when required.

Table 12:20 Completion of cognitive assessments						
	In-person		*Video*		*Total*	
	N	*%*	*N*	*N*	*N*	*%*
Word recall test						
Completed	5,400	98	2,250	99	7,650	98
Not completed	116	2	25	1	141	2
Animal naming						
Completed	5,401	98	2,251	99	7,652	98
Not completed	115	2	24	1	139	2
Letter cancellation						
Agreed to complete it	5,291	96	2,085	92	7,376	95
Not agreed	225	4	190	8	415	5
Delayed word recall test						
Completed	5,400	98	2,250	99	7,650	98
Not completed	116	2	25	1	141	2
Base: all 7,773 fully productive cases and 18 partially productive cases[40] interviewed in pilots, dress rehearsal and mainstage, 7,791 [41]						

Of those who took part in the letter cancellation task, in 88% of interviews the letter cancellation sheet was returned to head office for processing. There was a higher return rate of the letter cancellation sheet amongst in-

[39] Cognitive assessments were not included in the Mop-up Survey
[40] The remaining 8 partially productive cases exited the interview before the cognitive function section.
[41] Proxy respondents were not asked this section of the questionnaire

person interviews, where the interviewer collected the sheet during the interview, compared to video interviews where the respondent had to return the sheet themselves (90% versus 86% respectively). Figures are shown in Table 12:21.

Table 12:21 Return of letter cancellation sheet						
	In-person		*Video*		*Total*	
	N	*%*	*N*	*N*	*N*	*%*
Returned	4,782	90	1,790	86	6,572	89
Not returned	509	10	295	14	804	11
Total	5,291	100	2,085	100	7,376	100
Base: all cohort members in pilots, dress rehearsal and mainstage who agreed to do the letter cancellation task, 7,376						

12.1 Response by interviewer contact

Interviewers in the main survey were required to log all contact attempts[42]. This data has been examined to see how many contact attempts were required to achieve an interview. The mean number of telephone calls required to achieve an interview was 2.3. The mean number of telephone calls required to achieve an interview with cases originally allocated to video was 2.5, whereas it was 2.1 for cases first allocated to an in-person interview.

Table 12:22 Number of telephone calls to achieve an interview in Mainstage and video pilot[43]						
	In-person		*Video*		*Total*	
	N	*%*	*N*	*%*	*N*	*%*
0	474	10	179	6	653	9
1	*1,712*	37	958	33	2,670	35
2	1,068	23	714	24	1,782	24
3	572	12	450	15	1,022	14
4	303	7	253	9	556	7
5	205	4	146	5	351	5
6	96	2	85	3	181	2
7	47	1	55	2	102	1
8 or 9	64	1	62	2	126	2
10 or 14	40	1	26	1	66	1
15 or more	9	0	7	0	16	0
Total	4,590	100	2,935	100	7,525	100
Base: all productive interviews in main survey - excludes pilot and dress rehearsal cases, 7,525						

[42] In some cases, interviewers have not recorded all the contact attempts they made including visits.
[43] Of the 474 people interviewed in person who had 0 telephone calls recorded, 108 had a text message or email contact recorded. Of the 179 people interviewed by video who had 0 telephone calls recorded, 65 had a text message or email contact recorded.

It is also possible to look at the number of in-person visits required to achieve an interview. A high proportion of cases had no in-person visit due to the inclusion of video interviewing in this Sweep. The mean number of in-person calls required to achieve an interview (including the actual interview) was 1.1. For cases first allocated to video mode the mean number of in-person visits to achieve an interview was 0.5. For cases first allocated to an in-person interview the mean number of visits to achieve an interview was 1.4.

Table 12:23 Number of in-person calls to achieve an interview in Mainstage and video pilot

	In-person		*Video*		*Total*	
	N	*%*	*N*	*N*	*N*	*%*
0	233	5	2,170	74	2,393	32
1	3,179	69	351	12	3,530	47
2	703	15	228	8	931	12
3	244	5	90	3	334	4
4	95	2	53	2	148	2
5	67	1	24	1	91	1
6	41	1	7	0	48	1
7	16	0	5	0	21	0
8 or 9	15	0	5	0	20	0
10 or 14	6	0	2	0	8	0
15 or more	1	0	0	-	1	0
Total	4,590	100	2.935	100	7,525	100
Base: all productive interviews in mainstage – excludes pilot and dress rehearsal cases,7,525						

When looking at both the in-person visits and telephone calls required to complete an interview, the mean total number of calls was 3.4. For cases first allocated to video mode, the mean number of total calls was 3 and for cases first allocated to an in-person interview the mean number of total calls was 3.6 to achieve an interview.

Table 12:24 Number of total calls (in-person or telephone) to achieve an interview in Mainstage and video pilot

	In-person		*Video*		*Total*	
	N	*%*	*N*	*N*	*N*	*%*
1	217	5	761	26	978	13
2	1,586	35	729	25	2,315	31
3	1,079	24	533	18	1,612	21
4	629	14	312	11	941	13
5	393	9	197	7	590	8
6	265	6	132	4	397	5
7	134	3	83	3	217	3
8 or 9	158	3	87	3	245	3
10 or 14	99	2	47	2	146	2
15 or more	21	0	9	0	30	0
Not recorded	9	0	45	2	54	1
Total	4,590	100	2,935	100	7,525	100

Table 12:24 Number of total calls (in-person or telephone) to achieve an interview in Mainstage and video pilot
Base: all productive interviews in mainstage excludes pilot and dress rehearsal, 7,525

12.2 Movers and tracing

Amongst the 11,162 cases issued in the video pilot and mainstage, 13% had moved from the issued address. Table 11.23 outlines tracing success for these cases. Almost three quarters of all movers were traced (74%), 12% of cases were traced by CLS and sent to NatCen as sample updates. 62% of the sample were traced by the interviewers or via cohort member updating their information to NatCen during fieldwork period'

Table 12:25 Movers by sample origin		
	N	*%*
Traced by CLS	173	12
Traced by interviewer/reported by cohort member to NatCen	901	62
Total traced movers	**1,074**	**74**
Untraced movers	386	26
Total Movers	**1,460**	**100**
Base: all movers for mainstage and video pilot, 1,460		

Table 12:27 shows the outcomes for traced movers, broken down by whether these were traced by interviewers, or traced by CLS. As the table shows, when cohort members were traced by interviewers, a much higher response rate was achieved than when cohort members were traced by CLS.

Out of the 1,074 traced movers, 777 resulted in a productive interview (72%).

Table 12:26 Outcomes for traced movers in video pilot and mainstage						
	Mover (traced by CLS)		*Mover (traced by interviewers)*		*Total*	
	N	*%*	*N*	*%*	*N*	*%*
Productive	60	35	717	80	777	72
Unproductive - non-contact	49	28	19	2	68	6
Unproductive - refusal	24	14	81	9	105	10
Unproductive - other	40	23	84	9	124	12
Total	173	100	901	100	1,074	100
Base: all traced movers for video pilot and mainstage, 1,460						

13. Response to biomeasures

13.1 Overall response to health visit

Of the 7,775 cohort members who completed the interview, 7,167 (92%) consented to a biomedical fieldworker contacting them to arrange a follow-up health visit. Of these, 6,309 cases had a fully productive health visit, giving a response rate of 88%.

Table 13:12 Response to health visit		
	N	%
Base: all cases interviewed eligible to be offered a health visit[44]	7,775	100
Interview productive, but biomeasure visit refused to interviewer	608	8
Cases eligible for health visit	7,167	92
Base: all cases eligible for health visit	7,167	100
Fully productive health visit (bio-measures)	6,309	88

13.2 Response to each biomeasure

Most of the individual biomeasures were obtained from over 98% of respondents who had a health visit. The blood sample had a much lower response of 86% of eligible respondents, which is partly because in order for the measure to have been obtained, a blood sample needed to have been taken, received at the lab and matched to a respondent who had provided signed consent.

Table 13:2 Response to follow-up health visit			
Biomeasure	*At least 1 measure obtained*	*Base (eligible for measure)*	*Response (%)*
Blood pressure – seated	*6,246*	*6,309*	*99*
Blood pressure – standing	*6,175*	*6,309*	*98*
Grip strength	*6,177*	*6,241*	*99*
Consent for a blood sample to be taken	*5,233*	*5,909*	*5,233*
Consent to blood storage for future analysis	*5,167*	*5,909*	*5,167*
Consent to DNA extraction and storage	*5,075*	*5,909*	*5,075*
At least one analyte measured by RVI	*5,019*	*5,909*	*5,019*
At least one analyte measured by Bristol	*5,072*	*5,909*	*5,072*
Weight	*6,125*	*6,237*	*98*
Body fat	*5,906*	*6,187*	*95*
Waist	*6,231*	*6,309*	*99*

[44] This includes 7,773 fully productive interviews and 2 partial interviews. Respondents interviewed by proxy or only partially interviewed are excluded. Mop-up cases were also not asked to have a health visit.

Hip	*6,228*	*6,309*	*99*
Timed Walk	*5,998*	*6,009*	*100*
Leg raise	*5,970*	*5,990*	*100*
Base: productive health visits, for which cohort member was eligible to complete the particular measurement			

13.3 Response to online dietary questionnaire

Of the 6,309 cohort members who had a health visit, 95% agreed to complete the online dietary questionnaire and 5% were unwilling or unable to do so.

Table 13:3 Response to Online Dietary Questionnaire		
	Total	
	N	*%*
Yes willing	5,974	95
Not willing or unable	335	5
Total	6,309	100
Base: all productive health visit cases in pilots, dress rehearsal and mainstage, 6,309		

Of those cohort members that were eligible and agreed to complete the Online Dietary Questionnaire, 85% completed it on at least one day, and 76% completed it on two days, although some of these respondents completed it on different days to the ones they were assigned.

Of those that were eligible and agreed to complete the questionnaire, 65% completed it on the correct two days they were randomly allocated. Of those who were eligible and agreed, 81% completed the diary on at least one correct day. Table 13.4 shows a more detailed breakdown of this.

Table 13:4 Number of Online Dietary Questionnaire days completed correctly		
	N	*%*
2 days completed, both correct	3,885	65
2 days completed, one correct	542	9
2 days completed, none correct	135	2
1 day completed, correct	410	7
1 day completed, incorrect	115	2
0 days completed	887	15
Total	5,974	100
Base: cohort members who agreed to complete the Online Dietary Questionnaire in pilot, video pilot and mainstage, 5,974		

14. Coding, data editing and data preparation

14.1 Routing checks and editing

Once fieldwork was closed, data was checked to ensure that the routing of the questionnaire worked as intended, i.e. all questions that should have been answered did have a response, and questions that should not have been answered did not have a response. The need for editing the CAI (including the Mop-up data) was minimal due to the routing and consistency checks included directly in the programme. “Hard” checks must be resolved at the time of the interview, while “soft” checks can be suppressed by the interviewer or the cohort member before moving on to the next question.

Post-fieldwork routing checking found a very small number of missing responses at questions which should have been answered. This was caused in some cases by a respondent giving a particular answer at one question and going back and changing their answer and a subsequent question being missed. Cases such as this were coded -2 ‘Not asked due to scripting/routing error.’

14.2 Coding open ended and other specify

The in-person and video interviews included a small number of questions which were open-ended where responses were recorded verbatim. Most commonly, items which required coding were “other-specify” questions where the cohort member/interviewer did not feel that a particular answer fit into any of the pre-specified answer options and opted to enter a text response instead. In many cases, it was possible for these answers to be coded back into the existing code frame (back coding). However, in some cases a new response category was created when there was a sufficient number of similar responses. In some instances, there were not a sufficient number of answers to create a new code. Coders then assigned these cases to an ‘other’ code.

Every code frame was devised by researchers at NatCen, with reference to code frames that had been used on previous sweeps of BCS70. CLS commented on and signed off the code frames in April 2024.

14.3 Occupational coding

Questions relating to type of occupation were coded using Standard Occupational Classification (SOC 2020). The 2010 SOC codes were also provided in the data set for reference. Questions relating to type of economic activity were coded using the UK Standard Industrial Classification of Economic Activities (SIC 2007).

14.4 Mode effects

Where possible, questions administered across the different mode (in-person, video and web) were programmed in a similar way to limit any mode effects. For example, there were no grid formats in the web surveys, which instead followed how the questions were programmed in the main in-person interview.

14.5 Editing paper questionnaire data

Returns of the paper self-completion questionnaires, cognitive function booklets and letter cancellation sheets were checked against the expected outcome in the in-person or video interview. If the CAI survey indicated that a paper document was with the interviewer or biomedical fieldworker but it had not been returned, the interviewer / biomedical fieldworker was reminded to return the document. In some cases, a paper self-completion questionnaire was returned but no pilot, video pilot or mainstage interview had been completed. These were still included in the data.

Both self-completion paper questionnaires (Your Life Now and Childhood Questionnaires) were scanned and the resulting data was imported into a database. This data was then checked in a similar way to the CAI data. Some editing was conducted, including editing out instances where cohort members had ticked more than one response to a question where only one response was required, and editing out instances where a cohort member had entered an invalid response to one of the numeric questions. There were no open-ended questions in the Your Life Now questionnaire. However, there were multiple open-ended questions in the Childhood questionnaire for which the information was not coded but provided in verbatim format.

The letter cancellation sheets were scanned and the resulting data was imported into a database. The score for this test was derived for each cohort member.

The cognitive function booklets were scanned and provided to CLS.

14.6 Combining pilot and dress rehearsal data with mainstage data

Although very little editing was undertaken on the mainstage survey data, some editing of the pilot and dress rehearsal was required in order to merge it with the main data. This was due to changes being made to the questionnaire between the development stages and mainstage fieldwork. Changes included:

- Minor wording changes to questions
- More significant changes to questions that changed their meaning
- Changing the pre-coded answer options
- Questions added or deleted

Where questions were semantically the same (even if small changes had been made) the data was merged. However, if questions had changed in meaning or the response options had changed, the data could not be merged and a pilot or dress rehearsal version of the question was included in the combined dataset.

For any questions which were not asked at a fieldwork stage, the missing answers are coded to -3 - ‘Not asked case at fieldwork stage.’

14.7 Treatment of Mop-up data

Being a much shorter version of the questionnaire, the Mop-up data was processed and provided to CLS separately from the main CAI data.

14.8 Problems with data

The variable FINLIT3 (Financial literacy – interest one year) was subject to a programming script error where respondents were allowed to leave the question without providing any response. We would usually expect a valid response or a value to indicate a “Don’t know” or “Refused to answer” response. This affected 150 cases across all fieldwork stages. This is the result of a data processing issue where variations on the standard “Don’t know” and “Refused to answer” codes were introduced in survey programming, which therefore caused the cases to be coded as -2 (Missing due to scripting error) instead of the relevant missing value category.

In addition, 32 cases for FINLIT4 (Financial literacy – interest over five years) have been coded as -2 (Missing due to scripting error). These cases are all from the Pilot fieldwork stage. This is due to a change in routing conditions between Pilot and later fieldwork stages which was not picked up by the Data Management team. Subsequent checking indicates that these 32 cases would not have seen this question due to the routing condition in place during Pilot (i.e. they did not provide the correct response to FINLIT3 to be shown FINLIT4).

The variable LOLW (Whether illnesses/conditions reduce ability to work) was also subject to a programming script error in the Pilot and Dress Rehearsal fieldwork stages. This question was to be shown if LOLM (Whether illnesses/conditions reduced ability to carry out day-to-day activities) was answered with 1=“Yes, a lot” or 2=“Yes, a little”. However, for the affected fieldwork stages this was erroneously programmed to look at LOLP (For how long has your ability to carry out day-to-day activities been reduced?) instead. This affected 80 cases.

Finally, the letter cancellation scoring documents for the pilot cases were destroyed by mistake before they were coded so this information is missing from the datasets.

14.9 Data outputs

Data was provided following a detailed data specification provided by CLS Research Data Managers. Data from the Mop-up Survey was delivered separately and followed a similar format. The following files were provided:

- Respondent level ‘flat file’ including data from the interview and health visit
- Hierarchical files including relationships history, child grid and activity history
- Paper self-completion data
- Data from the completion of the Online Dietary Questionnaire
- Blood data from both labs

14.10 Sample contact information

Contact information was provided to the CLS Cohort Maintenance Team following an agreed format. This data was provided in two files – one for ‘productive cases’ where an interview had been achieved and all contact details confirmed; the other for ‘unproductive cases’ where an interview had not been achieved but some new contact details may have been collected via interviewer contact and tracing.

14.11 Consent data

Consent to linking survey data to records held by National Health Service (NHS), Department for Work and Pensions (DWP) and HM Revenue and Customs (HMRC) was also provided to the CLS Cohort Maintenance Team following an agreed format. This included a record of all data linkage consents collected from both study members and their partners either during the interview or from subsequent contact (either via a web survey sent

to partners only or direct contact from the study member/partner). Consent was only collected amongst cohort members who had not provided it in the past (see Section 4.6 for more details). The data provided also included any subsequent withdrawals of consent, as well as the date and mode that consent was collected in.

14.12 Paradata

Paradata was collected during fieldwork through the contact made with the interviewer, tracing attempts and subsequent completion of the questionnaire.

The data delivered to CLS included the following information:

Outcome data

- Final reconciled outcome code (with description) for each issued case and date of final outcome.
- Reasons for refusal and whether the interviewer suggests it was a permanent refusal.
- Interviewer comments on a case.
- Total number of telephone calls and visits made to a case across all the times it has been issued.

For each issue

- Details of each time a case has been issued including the date and outcome for each issue.
- Details of each contact attempt within each issue such as mode of contact, date, who was contacted and the outcome.
- Total number of telephone calls and visits made to a case at each issue.

Productive cases

- Mode of interview, script version and completion flag for each individual survey element such as the paper self-completion questionnaire, the Online Dietary Questionnaire etc.
- Timing data from the survey for each module.
- Interviewer characteristics.
- For video and web interviews information on the device type, browser and screen resolution used.

Tracing

- Details about the tracing attempted on each case, and if conducted the mode of contact and who was contacted (neighbour, stable contact etc).
- Whether any new contact information was collected and if any contact was made using these new contact details.
- Total number of tracing activities.

Video specific

- Information related to video interviewing such as interviewer feedback on problems with the video call.
- Whether the cohort member has an internet connected device.
- Reason for refusal of a video interview.

Paradata for the Mop-up web survey was also provided and included information on device type, browser details and timings for each module.