

BCS70 technical report

Age 51 Survey

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1. Introduction

1.1 Study background and history

The 1970 British Cohort Study (BCS70) 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 BCS70 is the third:

- 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.

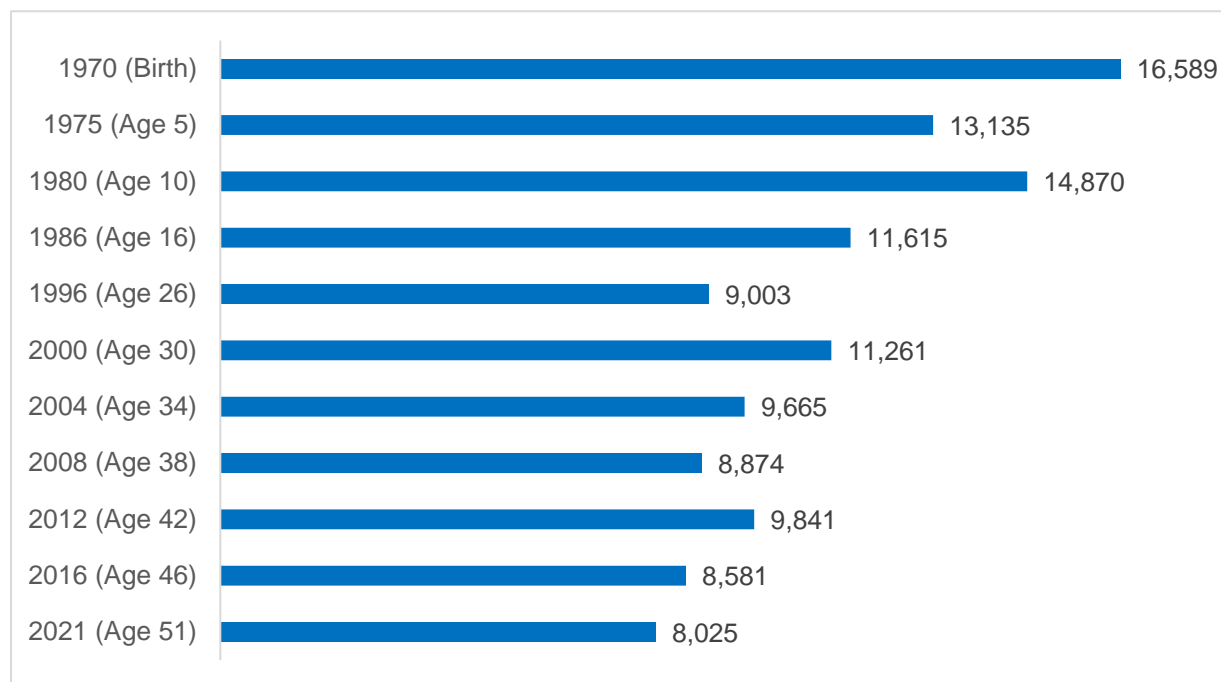
BCS70 began through the collection of data about the births and families of 17,196 babies born in the UK during one week in 1970. Since then, there have been ten further surveys (including this current survey) gathering information from respondents living in England, Scotland and Wales. With each successive attempt, the scope of enquiry has broadened from a strictly medical focus at birth, to encompass physical and educational development at Age Five (1975), physical, educational and social development at Age Ten (1980) and Age 16 (1986), and then to include economic development and other wider factors at Age 26 (1996), 30 (1999/2000), 34 (2004/2005) and 38 (2008/2009). The surveys which took place at Age 42 (2012/2013), Age 46 (2016-18) and the most recent survey at Age 51 (2021), enabled further investigation of the antecedents of mid-life circumstances. 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 funded by the ESRC (the Economic and Social Research Council).

1.1.1. Participation by sweep

The chart below shows the number of interviews achieved at each sweep of BCS70. All sweeps were conducted in-person with the exception of the Age 26 Sweep (postal survey), the Age 38 Sweep (telephone survey) and the Life in Your Early 50s Sweep (where the majority of interviews were either conducted by video call or in-person but a small proportion of interviews (677) were conducted by a shorter web version of the survey).

Figure 1:1 Number of interviews per sweep of BCS70



1.1.2 Sample and response figures

There are some discrepancies between figures that are presented in this document, the deposited data and the User Guide. The discrepancies are due to various reasons: requests for data deletion, resolution of duplicate cases, data editing and quality checking which can result in the removal of cases.

1.2 Introduction to Life in Your Early 50s Survey

This report provides an account of the design, development and conduct of the Life in Your Early 50s Survey which took place between 2021 – 2024 when cohort members were aged 51-53 years.

The National Centre for Social Research (NatCen) were the lead contractor for the Life in Your Early 50s 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 Life in Your Early 50s Survey was to collect information which would aid the understanding of midlife outcomes across multiple life domains and their lifetime

determinants. 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, particularly the 1958 cohort at 50, and the 1946 cohort at 52, allowing for study of social change.

2. Survey design

2.1 Introduction and scope

CLS contracted NatCen to conduct the development, fieldwork, and initial data preparation for the Life in Your Early 50s Survey. NatCen worked in collaboration with Verian on the interviewer fieldwork.

The Life in Your Early 50s Survey involved the following elements:

- Advance paper self-completion questionnaire
- Computer Assisted Interview (CAI) including a self-completion section (CASI/ CAWI)
- Cognitive assessments and data linkage consents
- Online Dietary Questionnaire

The Life in Your Early 50s Survey was designed to be an in-person sweep, with fieldwork starting in the summer of 2020. However, due to the COVID-19 pandemic fieldwork had to be postponed until 2021, with Waves 1-4 (of 7) being conducted by video call only.

The mainstage fieldwork took place between 2021 and 2023. Due to the delay to fieldwork starting, the sweep name changed from the 'Age 50 Survey' to the 'Life in Your Early 50s Survey'. In December 2023 all study members who had not taken part in the mainstage (including those living outside of Great Britain) were invited to take part in a short web version of the survey.

2.2 Video call first design (Waves 1-4)

Waves 1-4 were conducted by video call only – also known as Computer Assisted Video Interviewing (CAVI). These waves were set-up following on from a successful small-scale video call pilot (as well as a larger pilot conducted as part of the National Child Development Study NCDS). Further information on this development work can be found in Chapter 5.

Wave 1 was used as a 'dress rehearsal' phase, also referred to as the 'soft launch'. Fewer cases were issued during this sweep and time was allowed to make any necessary modifications to the questionnaire and procedures before issuing any further cases to field.

The video call interviews contained all survey elements outlined above 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 BCS70 project briefing was also adapted to explain the processes the interviewer would need to follow when administering the video interview.
- The survey was conducted using MS Teams. Interviewers used their CAPI 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. At a small number of points they also shared their interviewer screen with the cohort member.

-
- The sensitive questions were programmed into a CAWI (Computer Assisted Web Interview) and 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 paper self-completion questionnaire) along with a reply-paid envelope included 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).

2.3 In-person first design (Waves 5-7)

From Spring 2022 onwards it was considered feasible to return to in-person interviewing. Where possible all cases in Waves 5-7 were contacted by an in-person interviewer but a cohort member could request a video interview if they preferred. For some points it was not possible to find an in-person interviewer to undertake the work, so these points were allocated to a video interviewer. A small number of cases originally assigned to Waves 1-4, who had no email or telephone number, so needed to be worked in-person, were allocated to Waves 6 and 7. The main differences for the in-person interview waves from the video only waves 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 (see section 3.5.1 for more detail), where making contact and recruitment to interview was likely to be more difficult. In these cases the interviewer was instructed to make their first contact attempt in-person.
- The sensitive questions were programmed into the interview 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 paper self-completion survey was given or sent to the cohort member to complete before the interview. The interviewer could then collect the questionnaire during the interview and send this back to head office.
- Other documentation required for the interview was taken along by the interviewer, including the letter cancellation sheet administered as part of the cognitive assessments. This was collected by the interviewer at the end of 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.

2.4 Mop-up Survey

Following completion of mainstage fieldwork, a web survey was conducted in December to January 2024. Cohort members who had not responded to the main interview and emigrants (who were not part of the main survey) were invited to participate. Outcome codes and interviewer memos from the mainstage 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 and life-satisfaction modules
- The contact module

The survey did not include any cognitive assessments or the section on data linkage consent. Cohort members were also not asked to complete the paper self-completion questionnaire or the Online Dietary Questionnaire. Full details of the Mop-up Survey are provided in Chapter 8.

3. Sample design

3.1 Introduction

In the first sweep of BCS70, all babies born in the UK during one week in 1970 were selected. During the surveys at ages 5, 10 and 16, the cohort was augmented by additional children who were born outside Great Britain, but within the target week in 1970, and subsequently moved to and were educated within Britain. Individuals from Northern Ireland, who had been included in the birth survey, were not followed-up in subsequent sweeps (unless they moved to England, Scotland or Wales by the age of 16).

3.2 Issued sample for Life in Your Early 50s Survey

The issued sample for the Life in Your Early 50s Survey consisted of 12,041 cohort members in total. CLS issued the sample file to NatCen in June 2021. 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 46 survey (70% in 2016), with a further 14% last interviewed in 2012 in the Age 42 Survey. Around 6% of the sample had not been interviewed since childhood.

Table 3.1 Sweep when last interviewed of all cases issued to Life in Your Early 50s Survey

	<i>N</i>	%
1970 (birth)	73	1
1975 (Age 5)	52	0
1980 (Age 10)	285	2
1986 (Age 16)	259	2
1996 (Age 26)	111	1
2000 (Age 30)	281	2
2004 (Age 34)	364	3
2008 (Age 38)	433	4
2012 (Age 42)	1,671	14
2016 (Age 46)	8,484	70
No information	28	0
Total	12,041	100

Base: all issued sample, 12,041

3.3 Availability of remote contact details

The table below shows the availability of telephone and email addresses for the cohort member in the issued sample. The majority of cases provided at least one email or telephone number on which to contact them (92%) and almost four fifths of cases had provided both (79%). 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 (991 cohort members) but were issued to later waves when in-person interviewing had resumed.

Table 3:2 Availability of telephone and email details		
	<i>N</i>	%
Telephone number available (mobile or home or work)	10,935	91
Email address available	9,589	80
Cases with both an email and telephone number (home and mobile and work)	9,474	79
Cases with at least one form or remote contact	11,050	92
Cases with no telephone or email address	991	8
Total	12,041	100
<i>Base: all issued sample, 12,041</i>		

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 (82%).

Table 3.3 Availability of stable contact details		
	<i>N</i>	%
Contact details provided for one or more stable contacts (with address, telephone number or email address)	9,875	82
No stable contact details	2,166	18
Total	12,041	100
<i>Base: all issued sample, 12,041</i>		

3.5 Sample Allocation

3.5.1. Sample allocation based on difficult cases

The mainstage sample was examined to identify cases which were likely to be difficult to convert to an 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 for the following reasons:

- They were unproductive at the last survey.
- They had a survey status in the sample of “Gone Away” (G), meaning CLS had established they were no longer at the address but did not have a new address for them.
- They had a survey status in the sample of “Unconfirmed Address” (W), meaning a new address had been found but no interview or contact had been made with the individual at this address.

Originally it was planned for no more than 20% of difficult cases to be allocated to Wave 7 and the remaining difficult cases to be split fairly evenly across other waves. However, allocation was affected by fieldwork practicalities around the video mode and meant that more difficult cases needed to be added to Waves 6 and 7 than originally planned in these waves. Therefore, there were less difficult cases in the video only waves and more in the in-person Waves 5-7.

Table 3.4 Difficult cases in the final allocated waves					
	<i>Non-difficult</i>		<i>Difficult</i>		<i>Total</i>
	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>
Wave 1 – soft-launch (Video only)	818	78	225	22	1,043
Wave 2 (Video only)	1,089	74	381	26	1,470
Wave 3 (Video only)	1,070	73	391	27	1,461
Wave 4 (Video only)	1,428	74	489	26	1,917
Wave 5 (CAPI first)	1,489	69	681	31	2,170
Wave 6 (CAPI first)	1,452	60	971	40	2423
Wave 7 (CAPI first)	818	59	560	41	1,378
Total	8164	69	3698	31	11,862
<i>Base: all issued mainstage sample, 11,862</i>					

Table 3.5 Mode case first allocated to in the final waves ¹					
	<i>Allocated first to Video Mode</i>		<i>Allocated first to CAPI Mode</i>		<i>Total</i>
	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>
Pilot (CAPI mode)	n/a	n/a	134	100	134
Video Pilot (Video only)	45	100	n/a	n/a	45
Wave 1-soft-launch (Video only)	1,043	100	n/a	n/a	1,043
Wave 2 (Video only)	1,469	100	n/a	n/a	1,469
Wave 3 (Video only)	1,461	100	n/a	n/a	1,461
Wave 4 (Video only)	1,917	100	n/a	n/a	1,917
Wave 5 (CAPI First)	349	16	1,820	84	2,169
Wave 6 (CAPI First)	384	16	2,037	84	2,421
Wave 7 ² (CAPI First)	253	18	1,125	82	1,378
Total	6,921	58	5,116	42	12,037
<i>Base: all issued pilot, video pilot and mainstage sample, 12,037 (excluding cases that requested interview data or contact data deletion)</i>					

¹ The 38 cases from the pilot and 15 cases from the video pilot who were unproductive and were issued again in the mainstage, are shown in the mainstage waves.

² 108 cases were added into Wave 7 before it started: cases added to Wave 7 were 25 Scottish cases that needed to be transferred from NatCen to Verian, unproductive pilot and video pilot cases for reissue, 30 cases from Jersey, Guernsey and Isle of Man that had not been originally allocated a wave and 4 cases that were lacking full address details so had not been included in the original clustering exercise.

3.6 Cases traced through the NHS

The mainstage sample file contained 697 unconfirmed addresses that had been traced using the NHS central register shortly before fieldwork began. Of these addresses, 196 (28%) resulted in a productive interview.

3.7 Sample management

3.7.1. Serial Number Allocation

Each BCS70 cohort member has a unique CLS field serial number that was allocated at the beginning of the survey. 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 all documents provided such as the paper self-completion questionnaire and letter cancellation sheet.

3.7.2. 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 previous 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

3.7.3. 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:

- Cohort member's date of birth
- Cohort member's sex at birth 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 their 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 cohort member has reported previously the age they started smoking
- Whether cohort member had permanently stopped menstruating by Age 46 survey
- Whether cohort member had an oophorectomy or hysterectomy by Age 46 survey
- Whether cohort member was having HRT at Age 46 survey or had ever done so before
- Whether cohort member had a vasectomy or was sterilised by Age 46 survey
- Whether cohort member and their partner consented to link their data to NHS, HMRC and DWP records at the Age 42 survey.
- When last participated in a BCS70 survey and if participated in the Age 46 or 42 surveys
- Whether participated in at least one of the COVID-19 surveys and if during this interview said they would be willing to be interviewed in future by video call.
- Frequency of internet usage at Age 46 survey
- Word list used in previous cognitive survey
- Household composition at previous interview – name, sex, DOB of person living in household at the last interview
- Household grid numbers of partner/children

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 CAI 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.

3.7.4. Sample updates

CLS continued to trace cohort members during fieldwork and also received updated contact details from cohort members during the course of fieldwork. CLS continued to use NHS records for tracing. Newly obtained information was sent to NatCen in weekly sample update files. CLS started sending updates through to NatCen on the 5th July 2021, during the soft-launch, and these were then sent on a weekly basis until 30th 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)
- Interviewer's memos from 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 file of updates and used for the Mop-up Survey.

3.8 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. Questionnaire design and implementation

4.1 Overview

The Life in Your Early 50s Survey in-person or video interview lasted for an average of approximately 80 minutes. This contained various components including cognitive testing, a self-completion section including sensitive questions, consent to data linkage and consent to take part in an Online Dietary Questionnaire following the interview. Cohort members were also asked to complete a paper self-completion questionnaire before the interview which the interviewer could then collect at the interview or could be posted back by the respondent in the case of a video interview. The in-person (CAPI) and video interviews (CAVI)³ used the same Blaise 4 programme with slight adaptations for CAVI mainly in the form of interviewer instructions. Larger adaptations 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)

4.2.1. Contents of the Computer Assisted Interview (CAI)

The table below shows the different modules included in the CAPI/CAVI interview.

Table 4.1 Questionnaire Modules	
Questionnaire Module	Content
Household grid	Collected details about cohabiting partnerships, children (including those not in the household) and any other household members.
Family	Asked about non-cohabiting relationships, grandchildren, parents, and social contact.
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 assessments	Five short memory, concentration and knowledge tasks detailed in full in section 4.2.3.

³ Computer Assisted Personal Interview (CAPI) and Computer Assisted Video Interview (CAVI).

Table 4.1 Questionnaire Modules	
Lifelong learning	Asked questions about any new academic or vocational qualifications gained by the cohort member since the last interview (or 1st Jan 2012). For cohabiting partner, age left full-time education and highest qualification was recorded.
Health	Asked questions about physical and mental health and wellbeing, dental health, problems with eyesight, and hospital visits. It also included questions around lifestyle choices in terms of exercise, drinking, smoking; and collected self-reported height and weight measurements.
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 web interview – contained questions about political attitudes and voting, relationships, ownership of household tasks, mental health, children who have died, unsuccessful pregnancies, gynaecological problems, menstruation, experience of domestic violence 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 42 survey. Permission from both the cohort member and their cohabiting partner was sought.
Online Dietary Questionnaire (ODQ)	Recruitment to take-part in an Online Dietary Questionnaire for two days following the interview.
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 proxy, the contact details of the person who acted as proxy were collected.

4.2.2.Event Histories

There were three event histories included in the 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 38, 42 or 46 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 2008.
- Cohort members that had been interviewed in the last two sweeps (at either the Age 42 or Age 46 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 2012.

4.2.3.Cognitive function tasks

During the interview, all cohort members were asked to undertake five different cognitive assessments. The tasks were designed to measure different aspects of cognition and have been included in various other studies such as the National Child Development Study (NCDS) and the English Longitudinal Study of Ageing (ELSA).

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- **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 recorded the number of animals the cohort member said, 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. Scoring of this assessment was conducted in the office, rather than by interviewers.
 - **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.
 - **National Adult Reading Test (NART):** This tested knowledge of vocabulary. The words chosen for the test are intentionally challenging and unphonetic to test an individual’s vocabulary rather than their ability to apply regular pronunciation rules. Cohort members were shown 25 unphonetic words and were asked to read them out loud. For each word, interviewers assessed whether the cohort member had pronounced the word correctly. Interviewers were provided with training on the correct pronunciation of each of the words.

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 adaptations 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.

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- **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.
 - **National Adult Reading Test (NART):** the list of words to read out was shared with the respondent as a showcard on the screen.

4.2.4.Sensitive Questions

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

4.2.4.1. 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 option was available for the interviewer to read out the questions should the cohort member request this. 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.

4.2.4.2. 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 Teams⁴. 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 CAPI 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 CAPI survey and the options of don't know and prefer not to say were shown if a question was left blank.

4.2.5.Data linkage consents

⁴ 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.

BCS70 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 42 survey. In the Life in Your Early 50s Survey cohort members were asked to give consent if they had not taken part in the Age 42 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 42 Survey, they were a new partner or they were the same partner but they had refused consent to one or more of the health/economic records before.

Consent to data linkage was asked towards the end of the main 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 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. Consent to data linkage was recorded in the interview programme. Unlike the Age 42 survey there was no paper consent form that the cohort member had to sign. 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 recently agreed to (or refused) 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 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. 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 recently agreed to (or refused).

4.2.6. 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 main CAPI/CAVI 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.

4.2.7.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, data linkage, and the Online Dietary Questionnaire. The self-completion paper questionnaire was also not required.

4.2.8.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 household grid section (HGridOut).

4.2.9.Questionnaire length section timings

Video interviews were slightly longer on average overall, with a mean of 1 hour 20 minutes, compared to a mean of 1 hour 17 minutes for in-person interviews.

The longest module was the cognitive assessment module, with a mean of 11 minutes and 57 seconds. This module was longer for video interviews at 12 minutes and 36 seconds compared to in-person interviews at 11 minutes and 21 seconds. The data linkage module was also longer for video interviews (4 minutes and 12 seconds) than in-person interviews (2 minutes and 44 seconds).

The COVID-19 and CASI/CAWI modules were longer on average for in-person interviews (5 minutes and 44 seconds and 13 minutes and 24 seconds respectively) than video interviews (4 minutes and 58 seconds and 9 minutes and 45 seconds respectively). There was little difference in time between the timing of the other modules between the modes.

The timings data were capped at the higher end of the distribution, to take into account of 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 Module timings			
	Mean length (hours: minutes: seconds)		
Questionnaire Module	Overall	CAPI	CAVI
Household grid	0:04:35	0:04:46	0:04:24
Family	0:04:19	0:04:07	0:04:32
Housing	0:02:41	0:02:42	0:02:40
Employment	0:11:33	0:11:23	0:11:44
Income	0:07:30	0:07:17	0:07:45
Cognitive assessments	0:11:57	0:11:21	0:12:36
Lifelong learning	0:02:20	0:02:13	0:02:29
Health	0:08:01	0:08:08	0:07:52
COVID-19	0:05:22	0:05:44	0:04:58
CASI/CAWI	0:11:39	0:13:24	0:09:45
Data linkage	0:03:26	0:02:44	0:04:12
Online Dietary Questionnaire placement	0:02:06	0:02:19	0:01:51
Contact information	0:05:54	0:05:37	0:06:13
Total Interview length	1:18:55	1:17:27	1:20:28

4.2.10. Script quality control

The route the cohort member took through the questionnaire was controlled by the CAPI/CAVI and CAWI script, 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 CAPI/CAVI and CAWI data to a minimum.

4.3 Online Dietary Questionnaire

Cohort members were asked to complete an Online Dietary Questionnaire about two randomly selected days, one weekday and one weekend day, over the seven-day period following the interview. The questionnaire used was the Oxford WebQ, developed by the Cancer Epidemiology Unit at the University of Oxford. The online questionnaire was hosted by the University of Oxford.

Cohort members having an in-person interview were given a paper leaflet explaining the Online Dietary Questionnaire and what completion would involve. For cohort members taking part via video, the Online Dietary Questionnaire leaflet was shown to the respondent on their screen like a showcard. Cohort members who agreed to take part in the Online Dietary Questionnaire were emailed after the interview with a link to the questionnaire, a unique login code and instructions about which days to complete the questionnaire. For cohort members in an in-person interview, the interviewer would write this information on the paper Online Dietary Questionnaire leaflet.

The questionnaire asked about everything that the cohort member ate and drank the previous day, taking them through each food group and asking detailed questions about type of food and amount eaten. These days were selected at random by the interview programme and could not be changed even if the cohort member felt they were 'atypical' because they were on holiday, travelling or at a special occasion etc.

4.4 Paper self-completion questionnaire

Cohort Members were asked to complete a paper self-completion questionnaire before their interview. This was posted or given to respondents by the interviewer when the appointment was made for their visit. If the interview was in-person, the interviewer would then collect the completed questionnaire when they interviewed the respondent. The cohort member could also post the questionnaire back directly to the NatCen office (this was the only way to return it for the video interview).

The paper self-completion questionnaire included questions on:

- Leisure activities
- Personality, views and attitudes
- Health
- Physical activities
- News
- Alcohol consumption
- Screen time and reading
- Expectations for the future

5. Development work

5.1 Scope

The development stages of the Life in Your Early 50s Survey took place in several phases and consisted of a pilot study, a video pilot and a soft launch which was conducted as Wave 1 of the survey. Originally the survey was designed to have interviews conducted in-person. An in-person pilot was therefore conducted in January to March 2020 and mainstage fieldwork was due to start in the summer of 2020. However, the unexpected difficulties brought by the COVID-19 pandemic made it impossible to conduct in-person interviews. As a result, it was decided to explore the feasibility of using a video-call approach to fieldwork, which required an additional pilot study. This was followed by a soft launch of the mainstage in summer 2021 to test the practicalities of carrying out the survey via video with a larger sample size.

5.2 Pilot

5.2.1.Objectives

The pilot resembled the design of the mainstage as closely as possible with the purpose of fully testing the whole survey before the next phase. The pilot aimed to provide evidence regarding the likely response rates to the survey, assess the fieldwork procedures and materials, examine the CAPI questionnaire (including length), and test various fieldwork processes (systems, monitoring reports, etc.). It also assessed a new approach for collecting objective data on smartphone usage, the introduction of a new cognitive test (NART) and tested the protocols for collecting consent to data linkage from both cohort members and their partner.

5.2.2.Elements included

The pilot study included all the components of the main survey. Interviewers were asked to carry out a full interview including administering the Computer Assisted Self-Completion Interview (CASI) section and the data linkage consent questions. Before the interview, cohort members were given a paper self-completion questionnaire to complete. During the interview they were invited to complete an Online Dietary Questionnaire for two specified days following their interview. Interviewers used NatCen's new Electronic Address Record Form (e-ARF) for recording calls and outcomes.

5.2.3.Pilot fieldwork and timings

Interviewers began fieldwork on 21st January 2020 and finished in mid-March 2020. Fieldwork was carried out across Great Britain by 12 interviewers, 6 from Verian and 6 from NatCen, to reflect the split allocations approach that would be used in the mainstage. Interviewers attended a one-day briefing which trained them in all aspects of administering the survey.⁵

5.2.4.Sample and response rates

The pilot sample was comprised of 177 cases that were purposively selected from the main BCS70 sample. The pilot sample was selected so it would be comparable to the issued mainstage sample in terms of gender and past participation. In addition, this sub-sample

⁵ Verian were called Kantar at the time of interviewing.

included an oversampling of cohort members who had not previously agreed to data linkage so that the relevant procedures could be tested.

Out of the 177 issued cases, 116 full productive interviews were achieved, giving a response rate of 66%.

5.2.5. Key findings and changes

The main purpose of the pilot was to test all elements of the study and access fieldwork procedures and materials before mainstage fieldwork began. On the whole, the administration of the survey went smoothly with positive feedback from interviewers with only a small number of suggestions for improvement. The newly included National Adult Reading Test and module on Screen time were well received by both cohort members and interviewers. The significant findings from the pilot were:

- The key piece of feedback reported by both respondents and interviewers was the length of the questionnaire. The mean was 110 minutes, although when outliers were removed it was approximately 100 minutes. Following the pilot, CLS reviewed the script and shortened it by 25 minutes to fit the budgeted length of 75 minutes. These cuts were made by cutting questions from the income module, and by removing the collection of objective measures of smartphone screen-time, modules on technological and social participation and two cognitive assessment tasks, namely Serial 7s and Counting Backwards.
- It was recommended to change the order of the interview to make it flow better. Due to the popularity of the self-completion module, it was decided to place this earlier in the interview following on from the health module.
- The pilot tested asking for data linkage consent via CAPI, where previously paper signed consent had been obtained. Interviewer feedback from the pilots showed a mixed response: while some interviewers liked the CAPI module, most tended to prefer a paper-based approach as there was significantly less information to read out. Interviewers who preferred the CAPI approach, however, felt that reading out the information in CAPI ensured that cohort members were more informed about what they were consenting to. As NCDS had found comparable response rates for data linkage consents⁶ collected using CAPI and paper-based forms, it was expected that switching to CAPI would have minimal effect. Other advantages of using a CAPI approach were reduced printing costs and removing the need for chasing the return of the consent forms and reconciliation of their data against the CAPI. Therefore, it was decided to change to collecting consent via CAPI.
- Data linkage consent rates for partners were far lower than for cohort members. Eighteen percent of partners consented to health data linkage, 16% to DWP and 18% to HMRC. By comparison, the partner consent rate for the NCDS Dress Rehearsal was 29% for health data linkage and 24% for the two economic consents. It was decided that reminders to complete the data linkage web survey should be sent directly to the partner rather than to the cohort member to try to improve response. Although the first invitation for the partner to take part in the data linkage survey was still sent to the cohort member to forward. It was also decided that interviewer training should place a larger emphasis on the importance of partner data linkage consent.

⁶ National Child Development Study (NCDS) was developed alongside BCS70.

5.3 Video Pilot

5.3.1.Objectives

As in-person interviewing was not possible during the lockdown periods of the COVID-19 pandemic, the purpose of the video pilot was to assess the feasibility of using Computer Assisted Video Interviewing (CAVI) as an alternative.

The aims of the video pilot were to:

- Give an indication of the response rate which could be achieved for CAVI 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 was adequate and effective in teaching interviewers everything they need to know about carrying out interviews via video call.

The section below provides a summary of the video pilot. The full report can be found along with other documentation from this survey sweep at: <https://cls.ucl.ac.uk/cls-studies/1970-british-cohort-study/bcs70-age-51-sweep/>.

5.3.2.Elements included

The video interview was to mirror the CAPI interview as much as possible and included the following elements: the mainstage questionnaire (including cognitive assessments, data linkage consents and self-completion modules as a web survey), placement of the paper self-completion and Online Dietary Questionnaire.

Several components of the interviewing process needed to be adjusted to the video approach which were tested in the pilot:

- Different video conferencing platforms were compared to assess which would be best for the survey. Zoom was considered, but at the time did not have the required end-to-end encryption. It was decided to use MS Teams following initial feasibility testing that demonstrated this platform worked technically for both NatCen and Verian and provided the required functionality to conduct the interview. CLS, NatCen and Verian were also satisfied with the data security aspects of the platform.
- Respondent-facing materials, such as 'showcards' used during in-person interviews were amended slightly where necessary. The pilot tested two different techniques to display materials:
 - For much of the interview, a PDF file of showcards was shared with the cohort member.
 - For some modules, interviewers were instructed to share their interview program screen with the respondent.

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- The self-completion section of the questionnaire (Computed Assisted Self Interviewing (CASI)), which participants would usually complete on the interviewer laptop themselves, was administered via an online questionnaire (Computer Assisted Web Interviewing (CASI CAWI)) and shortened to 10 minutes. During the video interview, the interviewer invited the respondent to complete the CASI CAWI while the interviewer waited on the video call. For those who were unable or unwilling to complete the web survey during the interview, they were sent an e-mail with a link to the survey after the interview.
 - The paper self-completion questionnaire continued to be provided in advance but was instead provided with the advance letter (prior to an interview time and date being agreed). A reply-paid envelope was included to enable this to be posted back, once completed.
 - The interview was edited to reflect changes due to COVID-19 and government furlough schemes, largely in the Employment and Income modules.
 - Finally, because it requires a physical booklet in which the participant is asked to cross out letters, the letter cancellation cognitive task was removed from the interview for the video pilot.

5.3.3. Video pilot fieldwork and timings

The fieldwork period for the pilot lasted four weeks from Wednesday 9th September to Wednesday 7th October 2020. Six in-person interviewers were selected to conduct these interviews: three from NatCen and three from Verian, to reflect the split assignment of fieldwork across both agencies in the main BCS70 project. These interviewers were chosen on the basis that they reported being comfortable with technology – although not necessarily experienced in video calling specifically. All interviewers were trained in video call interviewing and its related protocols. The interviewers also attended a project briefing.

5.3.4. Sample and response rates

The pilot included 60 BCS70 cohort members. Sampling was skewed towards those who were more likely to participate in this mode:

- All participants had an email or telephone number and had participated in the previous wave of BCS70.
- Half the selected cases had expressed a willingness to be interviewed by video call in a recent online survey of cohort members conducted by CLS.
- Within this, using systematic random sampling, the sample was selected to be a spread in terms of gender, urban/rural location and region (GOR).

The pilot was successful with 44 cohort members completing an interview, giving a response rate of 73%.

5.3.5. Key findings and changes

The pilot showed that carrying out BCS70 interviews via video was technically feasible and enabled good quality interviews to be conducted in a way that seemed comparable with CAPI.

Feedback from both cohort members and interviewers was very positive, with only 3 respondents saying they would have much preferred an in-person interview, and some even expressing a preference for video call interviewing as it was less intrusive for their household.

Some respondents were initially hesitant about their ability to do a video call interview but, with encouragement, successfully completed one.

The various questionnaire modules were conducted successfully and were comparable with the CAPI approach. Sharing showcards and leaflets via the share screen function in MS Teams worked in all cases, although the efficiency of this process was affected by internet connection speeds and some interviewers' lack of familiarity with the software. Despite a relatively long interview at around an hour and a half, there were no break offs and interviewers reported engagement throughout.

Most respondents used a laptop or a tablet to join the call, but five cohort members used a smartphone. Although there was concern before the pilot about how well the video interview would work on a small smartphone screen, it was found that the video interview worked well on all devices.

Several improvements were identified through the pilot and later implemented. These included:

- Simplifying the initial MS Teams invitation to make it easier to join the call (nearly half of respondents experienced some difficulty in finding the link) and increasing the stated time required for the interview from 75 to 90 minutes based on the average length of survey completion.
- Improving visual prompts to enhance on-screen readability, i.e. by reformatting showcards and leaflets so text was not obstructed by tool bars and fitted on one screen.
- Improving other technical elements, such as the method for providing links to the web self-completion questionnaire.
- Refining the content of interviewer training to focus more on certain aspects: notably sharing screens, navigating between different programs and windows and keeping the respondent's video window visible throughout since these are aspects that proved most tricky for interviewers in the pilot.

Recommendations following the pilot were to:

- Move forward with developing and testing an integrated CAVI-CAPI approach (incorporating the improvements identified by the video pilot).
- Carry out a substantial CAVI-CAPI pilot of 300 cohort members with the National Child Development Survey (NCDS) cohort, the findings of which would also be used to identify changes needed for BCS70 mainstage video interviewing.

5.4 Soft Launch conducted at Wave 1

5.4.1.Objectives

Following the BCS70 video pilot, a larger scale video pilot was conducted in Spring 2021 with a sub-sample of cohort members from the National Child Development Study (NCDS). This pilot achieved 142 interviews with a response rate of 46%. Due to the success of the two pilots, it was felt that video interviewing was a viable mode for the mainstage surveys for these two studies. The BCS70 soft launch, conducted as Wave 1 of the mainstage survey, provided a final

opportunity to check that the survey could be rolled out on a larger scale with video interviewing. The aim of the soft launch was to check that all elements of the survey were working as planned and that the pilot recommendations had been successfully implemented. After the soft launch there was a pause in fieldwork to allow time for any amendments to be made to the mainstage survey before Wave 2. In this phase it was particularly important to assess the likely response rate that could be achieved via video interviewing. Due to the government measures in place at the time, the soft launch took place exclusively via video interviewing as in-person interviewing was not feasible.

5.4.2. Elements included

The soft-launch of the survey included all elements of the mainstage survey, including the main CAI questionnaire, the paper self-completion questionnaire and the Online Dietary Questionnaire. Design elements for the soft-launch particularly of note are:

- The continued use of MS Teams as a platform to conduct the video interviews with the 'share screen' function used to share showcards and leaflets with the respondent. Interviewer screen sharing was no longer used as a substitute for showcards, and only used to facilitate the sound file playing in the cognitive module.
- The letter cancellation sheet was included for the first time in the cognitive assessments to be conducted by video. A system was trialled where the respondent was sent the sheet in a sealed envelope in advance to open and complete during the interview when instructed.
- The paper self-completion was not sent with the advance letter (as it was in the pilot) but instead posted 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 had been agreed.
- Interviewers were advised to call the day before the interview to check that the 'interview pack' had been received and to check if the cohort member had any further queries about taking part by video call.
- A new module in the interview was included to ask about the impact of COVID-19 on the cohort members' health.
- The self-completion section of the questionnaire continued to be administered using a web link to the survey (CASI CAWI) during the interview, with the option of this being e-mailed after the interview for those who did not wish to complete during the interview.

5.4.3. Soft-launch fieldwork and timings

The soft launch took place from 29th June until 14th September 2021. Interviewing points were split evenly between Verian and NatCen and both agencies used interviewers who usually conducted in-person interviews to conduct the fieldwork.⁷ All interviewers attended training in video interviewing and were accredited before starting work. A one-day project briefing was delivered online.

⁷ From Wave 2 NatCen used their Telephone Unit interviewers to conduct video interviews, whereas Verian used interviewers who usually carried out in-person interviews throughout fieldwork.

5.4.4. Sample and response rates

The sample used for the soft launch had been originally drawn for the survey before the pandemic. It was amended for the purpose of this project, by removing:

- Cohort members who had already been part of the in-person or video call pilots
- Cohort members with no telephone or email address on file (since the soft launch was conducted by video only with all contact being made remotely)
- Cohort members who were no longer eligible to be issued (e.g. died, moved abroad)
- This resulted in a sample of 1,067 cases issued for the soft launch. In the soft-launch 558 interviews were achieved giving a response rate of 52%

5.4.5. Key findings and changes

The soft launch showed that the video interview mode could be successfully implemented on a large scale as over 500 video interviews were conducted and all aspects of the main BCS70 interviewing task were included (i.e. cognitive assessments, data linkage consents, a self-completion questionnaire via CAWI and Online Dietary Questionnaire). The administration of the paper questionnaire worked relatively well with 82% of those taking part in the main interview returning them. The new section about the impact of COVID-19 on the health of the cohort member worked well with only a few minor amendments made to this section before Wave 2. On the whole, feedback from interviewers was positive about the video interview and they reported that the administration of the survey worked well in this mode.

Some key findings of the soft launch are listed below:

- The administration of the letter cancellation task as part of the cognitive module required the cohort member to have a paper document to complete. The soft launch tested the practicalities of (1) posting this document to the cohort member in a sealed envelope, (2) the respondent waiting to open the envelope until instructed by the interviewer during the cognitive module to ensure they only had 1 minute to complete the test and (3) the cohort member posting the document back to head office at the end of the interview for it to be scored. The trial in the soft-launch found this approach worked sufficiently well. Interviewers reported that no cohort members had taken the letter cancellation sheet out of its envelope before they were instructed to do so in the interview, cohort members were also asked to hold the letter cancellation sheet up to the camera at the end of the test. Interviewers in the soft-launch debrief recommended that the respondent did this and also placed the test in a sealed envelope on the video call to ensure the respondent did not continue with the test after the interview. By the end of the soft-launch, 75% had returned their letter cancellation sheets, 22% had not returned them and 3% did not do the letter cancellation test (although return rates for in-person interviews are significantly higher). Following the soft-launch, the cognitive test was used as part of mainstage fieldwork for both in-person and video interviews.
- For the video interview, the self-completion questions were programmed in a Computer Assisted Web Survey (CASI CAWI) that the cohort member accessed in the main interview through a weblink. 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. However, in the soft launch the CASI CAWI completion rates amongst cohort members who said they

would complete it after the interview was fairly low (only 11% of respondents completed the CASI CAWI after the interview, whereas 22% of respondents said they would complete it afterwards but did not). Therefore, it was decided from Wave 2 onwards to provide a new option where the interviewer could show the CASI version on the screen during the interview for the cohort member to read themselves and answer. This option could be used when respondents could not access or use the web link themselves. If the respondent could not (or did not want to) do the CASI CAWI during the interview or have the interviewer complete the self-completion questionnaire with them, they were emailed the CASI CAWI following the interview. Further information is provided in Chapter 9.

6. Fieldwork

6.1 Fieldwork stages and fieldwork progress

6.1.1. Mainstage fieldwork

Due to the pandemic, the start of mainstage fieldwork was delayed by a year, from June 2020 to June 2021 and the first four waves of fieldwork were conducted by video. In mid-May 2022 in-person interviewing began. The next three waves of fieldwork adopted a CAPI-first approach, 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 fieldwork was extended, finishing on May 2023, due to slow rates of coverage caused by the impact of the pandemic on interviewer retention and recruitment.

6.1.2. Reissue Waves

Reissue waves ran alongside Waves 6 and 7 and then continued until the end of fieldwork (from 8th August 2022 to early November 2024). Reissues were split into 3 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 another interviewing mode where this had been requested (or for other reasons). Reissued cases comprised of:

- Cases that were allocated to a video only wave or were approached by a video interviewer in an in-person wave (because no local interviewers were available) and had requested an in-person interview. It also included cases which had been 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).
- A smaller number of cases who had been contacted in-person but who had requested a video interviewer.
- 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.

The volume of cases issued to the reissue wave were higher than in previous sweeps of the study and so fieldwork ran for an extended period. In the Age 46 Survey, 17% of cases were reissued, but in this survey 4,355 (36%) of cases were reissued (or reallocated). For further information see Chapter 9.

6.2 Fieldwork dates

The dates for each wave of fieldwork are given below.

Table 6:1 All stages and fieldwork dates for first issue and reissue cases

	Fieldwork mode	Start Date	End Date
Soft Launch (Wave 1) (Video only)	CAVI only	29/06/2021	18/09/2021
Wave 2 (Video only)	CAVI only	28/10/2021	31/01/2022
Wave 3 (Video only)	CAVI only	09/12/2021	30/03/2022
Wave 4 (Video only)	CAVI only	01/03/2022	21/06/2022
Wave 5 (CAPI first)	CAPI first	17/05/2022	30/09/2022
Wave 6 (CAPI first)	CAPI first	06/09/2022	31/07/2023
Wave 7 (CAPI first)	CAPI first	25/10/2022	25/05/2023
Reissue / Reallocation (Batch 1)	CAPI first	08/08/2022	07/11/2023
Reissue / Reallocation (Batch 2)	CAPI first	27/04/2023	07/11/2023
Reissue / Reallocation (Batch 3)	CAPI first	26/05/2023	07/11/2023

6.3 Interviewers

All interviews were conducted by interviewers working for NatCen or Verian. The fieldwork points were split evenly between agencies⁸.

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 CAVI trained and accredited interviewers based on their availability. Interviewers were then sent their document packs and sample information at the beginning of each fieldwork wave.

The organisation of video interviewing varied between agencies. Verian trained all their in-person interviewers working on BCS70 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 electronically 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 and likely to require tracing or likely to refuse, based on participation history and confirmation of address updates. 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 Verian was assigned all Scottish cases.

6.4 Interviewer Training

The following section details the training given to BCS70 interviewers, including the BCS70 project training and the specific technical training provided to video interviewers.

6.4.1. 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 video pilot and from the interviewers' feedback. The training programme followed a three-step process, a training course, a practice interview with a buddy and an accreditation process.

6.4.1.1. The Video Interviewing Training Course

The training course was developed and conducted by the NatCen BCS70 and NCDS⁹ 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 BCS70 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.

⁹ The research team's for BCS70 and NCDS (National Child Development Study) worked closely together on video interviewing and on other aspects of the project.

Training session 2 – Interviewing Using MS Teams

Training session 2 covered the technical skills needed to conduct the BCS70 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 Electronic Address Record Form (e-ARF)).
- **Specific technical skills needed to conduct the BCS70 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.
- **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.

6.4.1.2. 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.

6.4.1.3. 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.

6.4.2. Interviewer Project Briefings

All interviewers that worked on the Life in Your Early 50s Survey were briefed by members of the research team at NatCen or Verian. Researchers from CLS also attended some of the briefings. The briefing for the in-person interviewing pilot was conducted in-person but, due to the pandemic, all subsequent briefings were held online. Following the pilots, project briefings were held from the start of mainstage fieldwork 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, Online Dietary Questionnaire, 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.
- 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 CAVI interview such as the sharing of showcards, the adaptations 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.

The project briefings were adapted for different circumstances in the following ways:

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.

Interviewers briefed on NCDS

NatCen and Verian were running fieldwork for both the BCS70 Life in Your Early 50s Survey and NCDS Life in Your Early 60s Survey at the same time. These projects have a lot of similarities including the interview content, survey documents and contact and tracing methods. Therefore, some shorter BCS70 briefings were run for interviewers already trained on NCDS, which covered the different administration and survey requirements of BCS70.

6.5 Contact procedures

6.5.1. In-person

At the start of each wave, before interviewers commenced work, advance letters and e-mails were sent from NatCen head office to every cohort member included in the Life in Your Early 50s Survey.

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 46 survey or Age 42 survey and not refused at the Age 46 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 Electronic Address Record Form (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 6.7).

6.5.2. Video

At the start of each video wave, before interviewers commenced work, advance letters and e-mails were sent from NatCen head office to every cohort member included in the Life in Your Early 50s Survey. 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.

6.6 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 rather than mostly at the start and also due to interviewers having a 'generic' 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 cases¹⁰ (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 after reading the last interviewer's comments, could telephone the case first if 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:

¹⁰ For a more detailed definition of reallocation and reissue cases see section 6.1.2.

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 6.2 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 6:2 Changes in mode for each wave ¹¹												
	CAPI only		CAPI -> CAVI ¹²		CAVI only		CAVI -> CAPI		CAVI -> CAPI -> CAVI		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Pilot (CAPI only)	134	100	-	-	-	-	-	-	-	-	134	100
Video Pilot (Video only)	-	-	-	-	45	100	-	-	-	-	45	100
Wave 1-soft-launch	-	-	-	-	643	62	399	38	1	0	1,043	100
Wave 2	-	-	-	-	844	57	615	42	10	1	1,469	100
Wave 3	-	-	-	-	859	59	596	41	6	0	1,461	100
Wave 4	-	-	-	-	1,136	59	769	40	12	1	1,917	100
Wave 5	1,762	81	58	3	206	9	143	7	-	-	2,169	100
Wave 6	1,977	82	60	2	222	9	162	7	-	-	2,421	100
Wave 7	1,084	79	43	3	135	10	116	8	-	-	1,378	100
Total	4,957	41	161	1	4,090	34	2,800	23	29	0	12,037	100
<i>Base: all issued pilot, video pilot and mainstage sample, 12,037 (excluding cases that requested interview data or contact data deletion)</i>												

6.7 Tracing cohort members

6.7.1. 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.
- 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.

¹¹ The 38 cases from the pilot and 15 cases from the video pilot who were unproductive and were issued again in the mainstage, are shown in the mainstage waves.

¹² This includes 2 cases which was CAPI->CAVI->CAPI.

-
- 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 electronic address record form (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 fortnightly throughout fieldwork in a 'mover' file. This file included details of all the tracing attempts already undertaken by NatCen/Verian.

6.7.2.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 mainstage fieldwork (only the Mop-up phase). Unsuccessful tracing attempts were returned to CLS for tracing as detailed above.

6.7.3.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 (CAVI). 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.

6.8 Interviewer appointments and the returning of paper documents

6.8.1. 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, interviewers were required to follow protocols to minimize 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 questionnaire in advance of their interview, and this was sent (or given) to the cohort member along with a blank envelope to seal for privacy. 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 letter cancellation sheet and the self-completion questionnaire 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 is included in Appendix A.

6.8.2. 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 paper self-completion questionnaire and for this 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 questionnaire to NatCen for processing. A postage paid envelope was provided.

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

6.9 Electronic Address Record Form (e-ARF)

NatCen's Electronic Address Record Form (e-ARF) was used by the interviewer on BCS70 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 to access the CAI interview.

The sample information and tracking information provided for the interviewer 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 interviewer 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 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 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 would record a final outcome code and leave any comments on the case. The section had checks in place to stop an interviewer signing off a case with too few contacts attempts or without completing the tracing activities.

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

6.10 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 agency. An overall response rate for all issued cases was also calculated.

The second report contained the following tables:

- Current outcome by fieldwork wave
- Current outcome by sex
- Current outcome by country
- Current outcome by outcome at the Age 46 Survey
- Current outcome by sweep of last interview
- Response to the 5 cognitive assessments by wave
- Response to self-completion questionnaire by wave (CASI / CASI CAWI)
- Intentions to complete paper self-completions (with returns) by wave

-
- Cohort member and partner consent to link data to health, DWP and HMRC records by wave
 - Agreement to complete the Online Dietary Questionnaire (QDQ) by wave
 - Device used for video interview and whether respondent is willing to do a video call in the future by wave

From May 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.

6.11 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 Electronic Address Record Form (e-ARF) and the admin module at the end of the interview (See 6.4 Interviewer Training). Interviewers were given 'test cases' as part of their assignment and were instructed to use these to practice 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.

6.12 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 e-mail 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.

6.13 Ethics

The Life in Your Early 50s Survey was approved by the Health Research Authority's London, Brighton & Sussex Research Ethics Committee.

6.14 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. One respondent used an interpreter in the Life in Your Early 50s Survey.

7. Respondent communication and engagement

7.1 Respondent communication

7.1.1. Participant website

The address for the BCS70 survey website (www.bcs70.info) was provided on most respondent communications (advance letter and various information leaflets). 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 BCS70.

7.1.2. Facebook page

CLS manage an official BCS70 Facebook page (www.facebook.com/1970BritishCohortStudy/) which provides information to study members about the study. Study members can 'react' and comment on CLS posts. Study members cannot 'join' this official Facebook page. The list of followers is private and there is no facility to encourage cohort members to interact with each other.

7.1.3. Birthday mailing

A birthday card and booklet detailing the recent findings of the survey is sent to the cohort member every year. Three birthday mailings were sent during the fieldwork period between 2021 and 2023. In 2020 (the year the first pilot took place), CLS launched a campaign to celebrate the cohort members 50th birthday. CLS marked this special birthday in a variety of ways:

- Including a special anniversary publication with cohort members' yearly birthday card, outlining what the study has achieved.
- Planting a small woodland area for cohort members to visit, the planting of trees symbolising the investment study members make to a positive future.
- Publishing on the study website 50 different stories over a period of 50 weeks, celebrating the impact study members have had on society.
- Launching a podcast series titled '50 Years of Life in Britain'.
- An online event took place in April 2021 (this replaced the in-person event which was originally planned but could not go ahead due to the pandemic).

7.1.4. Survey helpline

During the course of the survey, NatCen provided an e-mail address and a freephone contact telephone number that the cohort member could call if they had any questions about the survey

or wanted to opt out of the research. CLS also provided an e-mail address and freephone number that the cohort members could contact about the study.

7.2 Advance materials

7.2.1. 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. The letter for Waves 1 to 4 invited cohort members to have a video interview although noted if they would prefer an in-person interview this could happen later. The letters used in Waves 5 to 7 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 copy of the advanced letter can be found in Appendix A.

7.2.2. 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 about a day after the letters went out and contained the same invitation and information as the advance letter, excluding the video call FAQ section.

7.2.3. Survey booklet

An eight-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 both the interview process 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.

7.3 Reissues

7.3.1. Providing advance letters/generic 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 (Spring 2023). 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.

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.

7.4 Appointment letters

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. 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.

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.

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

7.5 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.

7.6 Online Dietary Questionnaire booklet

An extra booklet was provided to cohort members who agreed to take part in 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.

7.7 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 CAVI 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.

7.8 Post interview notifications and reminders

Once an interview had taken place a series of notifications and reminders were sent to participants (as required) at various stages as text messages, emails and occasionally by letter:

Table 7.1 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	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 questionnaire 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 28	Email and Text
Proxy thank-you letter	Post interview for proxy cases only - letters sent in batches as required	Letter

8. Mop-up Survey

8.1 Survey Design Overview

For the first time on BCS70 a shorter web interview (CAWI) was included in the survey design to follow on from mainstage fieldwork. The purpose of this survey was two-fold: firstly, to try to capture some key information from cohort members who had not participated in the main survey and secondly to collect information from emigrants (who were not part of the main survey). 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.

8.2 Sample

The sample and feedforward files followed the same structure as provided for the mainstage 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 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 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.

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
561	Interviewed but cohort member requested data to be deleted

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 were issued to the Mop-up Survey.

To create the sample for the Mop-up Survey, the emigrant and non-responder files were combined, giving 474 emigrants and 3,773 non-responders.

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.

8.3 Questionnaire

The questionnaire for the Mop-up Survey was a shortened version of the mainstage survey, designed to take approximately 20 minutes to complete. The table below shows the modules included and not included in the Mop-up 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. 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 mainstage survey which was programmed in Blaise 4.

The average total length of the Mop-up Survey was 25 minutes and nine seconds.

Table 8:2 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 mainstage 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.
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.

Table 8:2 Questionnaire Modules	
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 mainstage survey.

A paper self-completion questionnaire was not provided to respondents to complete during this stage of the research.

8.4 Fieldwork

The web survey, hosted by NatCen was opened on 7th December 2023 and finished on 14th January 2024.

8.5 Respondent communication and engagement

Cohort members were sent a letter and/or an email invitation to the survey. To avoid postage costs/delays, emigrants were sent an email invitation only. Cohort members who did not respond to the main survey were sent a letter and 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 mainstage interview before. The email explained the importance of the study and the cohort member's contribution. It also 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.

The email contained both a direct link to the survey and also 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.

Before Christmas, two reminder emails and texts were sent to cohort members, followed by a third reminder email and text after Christmas. The reminder emails provided similar information to the email invitation but were shorter in content and the last reminder email gave the end date of the study. The texts contained the link to the survey and study contact details. A second reminder letter was also sent out in early January to cohort members who had no email or mobile phone number in the sample. Timings are shown in the table below.

Cohort members who had already completed the survey or had opted out were removed from the reminder sample.¹³

Table 8:3 Communication timetable	
Communication	Date Sent
Invitation email	07/12/2023
Invitation letter	11/12/2023
1 st email and text reminder	15/12/2023
2 nd email and text reminder	21/12/2023
2 nd Reminder letter (only sent to those without an e-mail address or mobile number)	05/01/2024
3 rd Reminder email and text reminder	05/01/2024

Following completion, a thank you email (or letter if 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 invitation and reminder letter can be found in Appendix A.

¹³ 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.

9. Survey Response

9.1 Overview of response

In total, 8,025 interviews were achieved during the Life in Your Early 50s Survey, a response of 65%.¹⁴ This includes interviews conducted as part of the pilot, video pilot, 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 ineligible only) and the co-operation rate (base excludes both confirmed and uncertain ineligible). For reasons of clarity the text accompanying the tables generally quotes figures for response rate only.

Table 9.1 provides an overview of response. This table includes cases which were part of the main 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’) 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 9.1.3.1. In total 7798 interviews were achieved giving a response rate of 65%.

Table 9:1 Overview of response rates from pilots, mainstage survey and Mop-up (excluding emigrants)		
	<i>N</i>	%
Productive	7,798	65
<i>by video interview</i>	3,500	45
<i>by in-person interview</i>	3,848	49
<i>by web in mop-up</i>	450	6
Non-contact	656	5
Refusal	2619	22
Other unproductive	391	3
Unknown eligibility (no contact)	474	4
Ineligible	103	1
<i>Total</i>	12,041	100
Co-operation rate¹⁵	68%	
Response rate¹⁶	65%	
<i>All issued sample (excluding emigrants), 12,041</i>		

9.1.1. Sample eligibility

Of the 12,041 cohort members issued in the main sample (excluding cases known to be emigrants before mainstage fieldwork started), 95% (n=11,464) were successfully traced and

¹⁴ Response rate base is 12,412 cases (12041 mainstage cases plus 474 emigrant cases with 103 confirmed ineligible removed).

¹⁵ The co-operation rate is the percentage of productive interviews from the sample of confirmed eligible cohort members that is excluding confirmed and uncertain ineligible. Base is 11,464.

¹⁶ 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 11,938.

eligible (following the pilots, mainstage and Mop-up Survey). The remaining 5% were made up of sample members who were confirmed to be ineligible (1%) or movers whose eligibility was uncertain as they could not be traced (4%). Where ineligibility was confirmed, it was found that 62 cohort members had died, 30 had emigrated, 6 were in prison and 1 was out of survey (i.e. was found not have been born in the relevant week). 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 9.2.¹⁷

Table 9:2 Summary of sample eligibility after the Mop-up including pilot, mainstage survey and Mop-up cases (excluding emigrant cases known before mainstage)		
	<i>N</i>	<i>% issued sample</i>
Confirmed eligible	11,464	95
Confirmed ineligible	103	1
<i>Died (781)</i>	62	1
<i>Moved abroad (780)</i>	30	0
<i>Out of Survey (787)</i>	1	0
<i>In prison (789)</i>	6	0
<i>Other (790)</i>	4	0
Uncertain eligibility (untraced movers) (652, 653, 671, 673, 675) ¹⁸	474	4
<i>All issued sample (excluding emigrants)</i>	<i>12,041</i>	<i>100</i>

During the main part of the survey, those living outside of Great Britain were classed as ‘ineligible’. Cases known to be ‘emigrants’ at the start of mainstage fieldwork are therefore not included in table 9.2.

9.1.2. Response rate from mainstage fieldwork and pilots

A total of 7,188 cohort members were interviewed during mainstage fieldwork between June 2020 and early November 2023. This gave a response rate of 60%¹⁹, and a co-operation rate of 63%.²⁰ When the productive cases in the pilot and video pilot are added in this gives a total of 7,348 productive CAI cases overall (7,332 fully productive, 11 partially productive and 5 interviewed by proxy). When including the pilots, this gave a response rate of 62%, and a co-operation rate of 64%.

9.1.3. Response rate with the Mop-Up Survey included

A further 450 cohort members were surveyed in the web-based Mop-up Survey running from December 2023 to January 2024, giving a total of 7,798 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 65% and the co-operation rate to 68%. The table below shows the total

¹⁷ There were 16 cases who were classed as uncertain eligibles and seven who had moved abroad at the end of mainstage fieldwork who took part in the Mop-up Survey.

¹⁸ Outcome codes: 652 – address inaccessible, 653 – unable to locate address, 671 certain respondent moved – new address not obtained, 672 - new address found in my area but could not be attempted, 673 - follow-up address in UK but outside my area, and 675 - untraced mover.

¹⁹ 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 11,938.

²⁰ 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 11,464.

number of interviews achieved and the response and co-operation rate at each stage of fieldwork.

Table 9:3 Survey response at each stage of fieldwork				
		<i>Mainstage</i>	<i>Mainstage with pilots</i>	<i>Mainstage with pilots and Mop-up cases</i>
Number of completed interviews	<i>N</i>	7,188	7,348	7,798
Co-operation rate	%	63	64	68
Response rate	%	60	62	65
<i>Base: All issued sample (excluding emigrants), 12,041</i>				

9.1.3.1. Study members not resident in Great Britain

The Mop-up Survey also invited cohort members who were not living in Great Britain at the time of the survey to participate. These cases (also known as 'emigrants') were not eligible for the main survey. A further 227 interviews with these emigrant cases were achieved bringing the total number of interviews to 8,025. A survey response rate of 65% was achieved from 12,515 sample members.²¹

9.1.3.2. Mop-up overall response

Six hundred and seventy-seven cohort members took part in the Mop-up Survey giving an overall 'Mop-up' response rate of 16%. The response rate was particularly high amongst emigrants with almost half of those invited taking part (48%). The response rate was lower for non-responders to the main survey with 12% taking part. Figures are shown in Table 9.4.²²

Table 9:4 Mop-up Survey response							
	<i>Sample size</i>	<i>Productive completes</i>		<i>Productive partials</i>		<i>All productives</i>	
		<i>N</i>	%	<i>N</i>	%	<i>N</i>	%
Non-responders to main survey	3,773	414	11	36	1	450	12
Emigrants	474	214	45	13	3	227	48
Total	4,247	628	15	49	1	677	16
<i>Base: All cases issued to Mop-up Survey, 4,247</i>							

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

Of the total number of interviews included in the pilot, video pilot and mainstage survey (before the Mop-up Survey), 52% were completed in-person and 48% were completed by video. Waves 1 to 4 were conducted by video only due to the covid pandemic and this was when the majority of video interviews were conducted. In Waves 5-7 the majority of cases were allocated to an in-person interviewer but the cohort member could request a video interview if preferred. A small

²¹ Response rate base is 12,412 cases (12041 cases issued to the pilots and mainstage fieldwork plus 474 emigrant cases with 103 confirmed ineligible removed).

²² The base for the response rates for the Mop-up survey does not exclude ineligible as we did not collect information about ineligible during the Mop-up Survey.

number of cases were allocated to a video interview where an in-person interviewer was not available.

Table 9:5 Mode of Interview – pilot, video pilot and mainstage interviews						
	<i>In-person</i>		<i>Video</i>		<i>Total</i>	
	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>
Productive interviews	3848	52	3500	48	7348	100
<i>Total number of interviews pilot, video call pilot and mainstage, 7348</i>						

The table below shows the mode of interview following the Mop-up Survey. An additional 450 web interviews were carried out with cases who had been invited but not participated in the main survey which was six percent of all interviews.

Table 9:6 Mode of Interview – all interviews (including Mop-up)								
	<i>In-person</i>		<i>Video</i>		<i>Web</i>		<i>Total</i>	
	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>
Productive interviews	3848	49	3500	45	450	6	7798	100
<i>Total number of interviews pilot, video call pilot, mainstage and mop-up (excluding emigrants), 7798</i>								

9.2 The achieved response

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

Table 9.7 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%)²³. 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 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%).

²³ 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 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.

Table 9:7 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	4,428	64	2,920	57	7,348	61
<i>by video interview</i>	3,433	78	67	2	3,500	48
<i>by in-person interview</i>	995	22	2,853	98	3,848	52
Non-contact	485	7	252	5	737	6
Refusal	1,599	23	1,309	26	2,908	24
Other unproductive	263	4	177	3	440	4
Unknown eligibility (no contact)	80	1	410	8	490	4
Ineligible	53	1	57	1	110	1
Recontact in later wave	4	0	0	0	4	0
<i>Total</i>	6,912	100	5,125	100	12,037	100
Co-operation rate²⁴	65%		63%		64%	
Response rate²⁵	65%		58%		62%	
<i>Base: pilot, video pilot and mainstage call sample (excludes 4 cases which requested their interview or contact data to be deleted), 12,037</i>						

9.3 Reissues / reallocations in the mainstage survey

A much higher proportion of cases were reissued in the mainstage survey (before the Mop-up Survey) compared to what was expected and compared to previous waves. In the Age 46 Survey, 17% of cases were reissued, but in this survey 4,355 (36%) of cases were reissued (or reallocated). 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.

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

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

The table below shows the unproductive cases at first issue by outcome and the proportion who were reissued. There were 4,355 unproductive cases at first issue which were selected for reissue. These resulted in 1,324 productive interviews.

Table 9:8 Outcome of reissue cases by first issue outcome						
<i>First issue outcome</i>	<i>Total</i>	<i>Number reissued</i>	<i>% of cases reissued</i>	<i>Number of productive reissues</i>	<i>% of productive reissues, out of total reissues</i>	<i>% of productive reissues, out of total unproductive cases</i>
Unproductive - non-contact	1012	958	95	244	25	24
Unproductive – refusal	2159	1089	50	345	32	16
Unproductive – other	1935	1751	90	633	36	33
Unknown eligibility	808	554	69	102	18	13
Ineligible	74	3	4	0	0	0
Not issued	7	0	-	-	-	-
Unknown	2	0	-	-	-	-
Total	5,997	4,355	73	1,324	30	22

Base: all unproductive cases at first issue, 5997 (excludes 4 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 (34%) compared to those first issued to an in-person interviewer (23%).

Table 9:9 Final response for cases which were reissued						
	<i>Allocated to CAVI first</i>		<i>Allocated to CAPI first</i>		<i>Total</i>	
	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>
Productive	1,042	34	282	22	1,324	30
Non-contact	461	15	210	17	671	15
Refusal	1,286	41	491	39	1,777	41
Other unproductive	210	7	99	8	309	7
Unknown eligibility (no contact)	74	2	163	13	237	5
Ineligible	22	1	11	1	33	1
Recontact in later wave	4	0	0	0	4	0
Total	3,099	100	1,256	100	4,355	100
Co-operation rate²⁶	35%		26%		32%	
Response rate²⁷	34%		23%		31%	

²⁶ The co-operation rate calculation is based on mainstage outcome before the Mop-up Survey.

²⁷ The response rate calculation is based on the mainstage outcome before the Mop-up Survey.

Base: all unproductive cases at first issue which were reissued, 4,355 (excludes 4 cases who requested their interview or contact data be deleted).

9.4 Response by country of Issue

Survey response (including the Mop-up survey but excluding emigrants) was highest in Scotland (69%) and lower in England (65%) and Wales (60%). The proportion of non-contacts was similar across the three countries, but the refusal rate was slightly higher in Wales (26%) compared to England (22%) and Scotland (18%). See table 9.10.

Table 9:10 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	10,340	100	966	100	699	100	30	100	12,035	100
Productive	6,694	65	665	69	416	60	22	73	7,797	65
Non-contact	571	6	44	5	37	5	4	13	656	5
Refusal	2,255	22	177	18	180	26	3	10	2,615	22
Other unproductive	337	3	24	2	29	4	0	0	390	3
Unknown Eligibility (no-contact)	396	4	44	5	33	5	1	3	474	
Ineligible	87	1	12	1	4	1	0	0	103	1
Co-operation ²⁸ rate	68%		73%		63%		76%		68%	
Response rate ²⁹	65%		70%		60%		73%		65%	
<p>Base: all productive interviews in pilot, video pilot, mainstage and the Mop-up survey (excluding emigrants and 4 cases who requested their interview or contact data be deleted), 12035³⁰</p>										

²⁸ The co-operation rate calculation is based on mainstage outcome before the Mop-up Survey.

²⁹ The response rate calculation is based on main stage outcome before the Mop-up Survey.

³⁰ 2 cases issued did not have an issued address.

9.5 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 2016 had an 82% survey response, compared to 35% amongst those last interviewed in 2012. 126 interviews were achieved amongst cohort members that had last taken part before the year 2004.

Table 9:11 Response in mainstage by sweep of last interview (including pilot, mainstage and Mop-up but excluding emigrant cases)

	Pre-2004		2004		2008		2012		2016		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Total issued	1,061	100	363	100	431	100	1,671	100	8,483	100	12,009	100
Productive	126	12	62	17	92	21	579	35	6,931	82	7,790	65
Non-contact	192	18	64	18	55	13	159	10	181	2	651	5
Refusal	373	35	163	45	226	52	737	44	1,105	13	2,604	22
Other unproductive	78	7	21	6	28	6	100	6	164	2	391	3
Unknown Eligibility (no-contact)	274	26	51	14	24	6	74	4	48	1	471	4
Ineligible	18	2	2	1	6	1	22	1	54	1	102	1
Co-operation rate	16%		20%		23%		37%		83%		68%	
Response rate	12%		17%		22%		35%		82%		65%	

Base: all cohort members issued to mainstage including mop-up, 12009³¹

9.6 Response in comparison with survey targets

The Life in Your Early 50s Survey aimed to achieve around 9,000 interviews with a response rate of 75%. This response would exceed that achieved in the Age 46 Survey which took place in 2016 (c. 8600 interviews and overall response rate of 70%) and would be in line with the response achieved at the Age 42 Survey which took place in 2012 (c.9850 and overall response rate of 75%).

It was expected to be possible to achieve a higher response than the Age 46 Survey as the Life in Your Early 50s Survey would have lower respondent burden. The Age 46 survey also had half of the fieldwork conducted by nurses, achieving a lower response (63%) in comparison with interviewers who were involved in the latter half of fieldwork (71%).

9.7 What was achieved in comparison with target (Impact of pandemic on response rate)

An overall response of 65% (including the Mop-up Survey). This follows the trajectory of declining response rates experienced by the cohort through the 50+ years of contact had with them.

³¹ 28 cases have missing data for date of previous interview. 4 cases have been excluded because they requested their interview data or contact data to be deleted.

However, it is important to note that 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 period during fieldwork when 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.

9.8 Response rates for each element

9.8.1. Paper self-completion

Cohort members in the mainstage survey and pilots were sent or given a paper self-completion questionnaire in advance of the interview.³² 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 questionnaire back directly to the NatCen office (this was the only way to return it for the video interview). Out of the 7,343³³ full and partial interviews conducted with cohort members in-person and by video, 5,946 paper questionnaires were completed and returned to the office (81%).³⁴

The rate of return varied by mode of interview, with 86% of questionnaires being returned from video interviews and 76% being returned from in-person interviews. Amongst cohort members who completed in-person interviews there was a higher proportion who intended to complete the questionnaire after the interview but did not return it, than amongst those taking part by video (20% versus 12% respectively). Of respondents interviewed in-person, only a minority of cases were collected by interviewers and not returned (2%). Table 9.12 shows whether questionnaires were collected by interviewers or left with respondents to post back, broken down by whether a completed questionnaire was received or not.

³² Paper questionnaires were not included as part of the mop-up survey.

³³ This figure excludes proxy interviews as they were not asked to complete the paper questionnaire.

³⁴ An additional 89 paper self-completion questionnaires were received from cohort members who had not completed a mainstage questionnaire.

Table 9:12 Completion of paper self-completion questionnaire by mode of pilot/video pilot and mainstage interview

	<i>In-person</i>		<i>Video</i>		<i>Total</i>	
	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>
Returned						
Completed before visit, collected by interviewer (CAPI)	1691	44	-	-	1691	23
Completed during visit, collected by interviewer (CAPI)	341	9	-	-	341	5
Cohort Member reported sending back before the interview (CAVI)	-	-	1334	38	1334	18
Cohort member said they would post back after the interview / requested a replacement	901	23	1665	48	2566	35
Refused in interview but later completed	3	0	4	0	7	0
No intention given but returned	2	0	5	0	7	0
Total Returned	2938	76	3008	86	5946	81
Not Returned						
Paper self-completion collected by interviewer - Not received	94	2	-	-	94	1
Cohort Member reported sending back before the interview (CAVI) – Not received	-	-	38	1	38	1
Cohort member said they would post back after the interview / (CAVI) requested a replacement	764	20	424	12	1188	16
Refused to complete	45	1	25	1	70	1
Unknown as partial	2	0	5	0	7	0
Total Not Returned	905	24	492	14	1397	19
Total	3843	100	3500	100	7343	100

Base: all fully and partially productive cases from the pilot, video pilot and mainstage, 7343³⁵

9.8.2.CASI/CASI CAWI

Towards the end of the pilot/video pilot and mainstage interview there was a self-completion section lasting around 10 to 15 minutes containing sensitive questions.³⁶ 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, although different approaches were offered at different stages of fieldwork (see below for more detail). Three respondents completed this element in both modes.

Of those respondents who completed the interview and were eligible, 93% completed the self-completion section. There was a different rate of completion by mode, with 96% of those

³⁵ Proxy cases are excluded from this table as proxy cases are not asked to complete the self-completion questionnaire.
³⁶ The self-completion section was not included in the Mop-Up Survey.

interviewed in-person completing the self-completion module compared to 89% interviewed by video.

Table 9:13 Completion of the self-completion questionnaire (CASI or CASI CAWI)						
	<i>In-person</i>		<i>Video</i>		<i>Total</i>	
	<i>N</i>	<i>%</i>	<i>N</i>	<i>N</i>	<i>N</i>	<i>%</i>
Completed CASI	3,691	96	231	7	3,922	53
Completed CASI CAWI	1	0	2,880	82	2,881	39
Both modes completed	2	0	1	0	3	0
Total completes	3,694	96	3,112	89	6,806	93
Not completed	148	4	383	11	531	7
Total	3,842	100	3,495	100	7,337	100
<i>Base: All fully and partially productive cases from pilot, video pilot and mainstage, who were asked to participate in the self-completion questionnaire, 7337³⁷</i>						

Of those cohort members taking part in an in-person interview, 93% completed the CASI section by themselves and 3% completed it with help from an interviewer. Figures are shown in table 9.14.

Table 9:14 Completion of CASI by respondents interviewed in-person only		
	<i>N</i>	<i>%</i>
CASI completed by respondent	3474	93
CASI completed by respondent, but interviewer helped to complete some questions	103	3
Refused to complete CASI	147	4
Intended to complete during the interview but not completed	2	0
Total	3726	100
<i>Base: All fully productive in-person participants who reached this point in the questionnaire from the video pilot and mainstage 3,726³⁸</i>		

In Wave 1 (soft launch), when interviews were conducted by video, 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 65% of cohort members accessed and completed the CASI CAWI during the interview in this wave. Only 11% of respondents completed the CASI CAWI after the interview, whereas 22% of respondents said they would complete it afterwards but did not. Response rates to the CASI CAWI were therefore relatively low with a 76% response rate achieved compared to a 99% response rate to the self-completion section in the Age 46 survey.³⁹

At Wave 2, 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

³⁷ 6 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.

³⁸ This base does not include pilot respondents (116 cases) or proxy interviews.

³⁹ Age 46 Survey consisted of in-person interviews.

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 92% response rate to the CASI CAWI was achieved after Wave 1 amongst the video interviews. Figures are shown in Table 9.15.

Table 9:15 Completion of the self-completion questionnaire in the video interview (CASI/CASI CAWI)						
	Interview completed in Wave 1 at first issue		Interview completed after Wave 1 first issue		Total	
	N	%	N	%	N	%
Web survey completed by cohort member during interview (CASI CAWI)	363	65	2,081	72	2,444	71
Screen sharing during interview (CASI)	-	-	232	8	232	7
Web survey completed after interview (CASI CAWI)	60	11	335	12	395	11
Refused but then completed CASI CAWI	-	-	1	0	1	0
Completed CASI CAWI – method not specified	-	-	4	0	4	0
Total completed	423	76	2,653	92	3,076	89
Reported would complete web survey after interview – not completed	125	22	115	4	240	7
Reported web survey completed during the interview – not completed	4	1	29	1	33	1
Refused completion	3	1	94	3	97	3
Not completed – no reason provided	1	0	3	0	4	0
Total not completed	133	24	241	8	374	11
Total	556	100	2,894	100	3,450	100
<i>Base: All mainstage survey video participants who reached this point in the questionnaire 3,450</i>						

9.8.3.Data linkage

9.8.3.1. Cohort member

Cohort members who had completed an interview and who had not given consent in the Age 42 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.⁴⁰ The consent rate to link health records was higher (61%) than that for economic records (52% for DWP linkage and 51% for HMRC linkage⁴¹). Consent rates for both health and economic records in the video mode were slightly lower than in the in-person interviewing mode. Figures are shown in table 9.16.

⁴⁰ Data linkage was not included in the Mop-up Survey.

⁴¹ A small number of cohort members subsequently contacted the office to withdraw their consent after their interview.

Table 9:16 Consent to data-linkage by the cohort members who had not given consent at Age 42						
	<i>In-person</i>		<i>Video</i>		<i>Total</i>	
	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>
Health						
Consent given	722	63	543	58	1,265	61
Consent refused	431	37	390	42	821	39
Unweighted base	1,153	100	933	100	2,086	100
DWP						
Consent given	706	54	534	50	1,240	52
Consent refused	594	46	530	50	1,124	48
Unweighted base	1,300	100	1064	100	2,364	100
HMRC						
Consent given	734	53	553	49	1,287	51
Consent refused	653	47	573	51	1,226	49
Total	1,387	100	1126	100	2,513	100

Base: All participants from pilot, video pilot and mainstage who had not given consent previously and had reached this point in the questionnaire (Health 2,086, DWP 2364 and HMRC 2,513)

9.8.3.2. 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 42 survey. The tables on the next pages show the consent rate for the co-resident partners who were eligible to be asked for consent.

In total, 39% of partners who had not given consent previously gave consent to data linkages with the NHS, 37% to DWP and 37% to HMRC. Agreement rates are slightly higher in the video mode.

Table 9:17 Consent to health data-linkage by the partner						
	<i>In-person</i>		<i>Video</i>		<i>Total</i>	
	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>
Health						
Consent given (total)	340	36	359	43	699	39
Consent given during CAPI	277	29	142	17	419	23
Consent given via CAWI	63	7	217	26	280	16
Partner consent not given (total)	613	64	484	57	1,097	61
Partner refused consent in main interview or web survey	105	11	103	12	208	12
CM did not give permission to talk to partner	224	24	174	21	398	22
Partner not present – CM refused to pass on letter/email	67	7	27	3	94	5
CM agreed to pass on the letter/email (no data linkage received)	217	23	180	21	397	22
Total	953	100	843	100	1796	100
Base: All partners who had not previously consented to health data linkage from pilot, video pilot and mainstage, 1796						

Table 9:18 Consent to DWP data-linkage by the partner						
	<i>In-person</i>		<i>Video</i>		<i>Total</i>	
	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>
DWP						
Consent received (total)	342	34	352	40	694	37
Consent received CAPI	280	28	144	16	424	23
Consent received CAWI	62	6	208	24	270	14
Partner consent not given (total)	660	66	522	60	1,182	63
Partner refused consent in main interview or web survey	113	11	108	12	221	12
Cohort member did not give permission to talk to partner	242	24	198	23	440	23
Partner not present – Cohort Member refuses to pass on letter/email	74	7	28	3	102	5
Cohort Member agreed to pass on the letter/email (no data linkage received)	231	23	188	22	419	22
Total	1002	100	874	100	1,876	100
Base: All partners who had not previously consented to DWP data linkage from pilot, video pilot and mainstage, 1,876						

Table 9:19 Consent to HMRC data-linkage by the partner						
	<i>In-person</i>		<i>Video</i>		<i>Total</i>	
	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>
HMRC						
Consent received (total)	338	34	355	40	693	37
Consent received CAPI	277	28	148	17	425	22
Consent received CAWI	61	6	207	23	268	14
Partner consent not given (total)	669	66	532	60	1,201	63
Partner refused consent in main interview or web survey	119	12	113	13	232	12
Cohort member did not give permission to talk to partner	242	24	201	23	443	23
Partner not present – Cohort Member refuses to pass on letter/email	75	7	28	3	103	5
Cohort Member agreed to pass on the letter/email (no data linkage received)	233	23	190	21	423	22
Total	1007	100	887	100	1,894	100
Base: All partners who had not previously consented to HMRC data linkage from pilot, video pilot and mainstage, 1,894						

9.9 Cognitive assessments

The cognitive assessments were completed during the main interview and the results were entered into the CAI.⁴² The agreement rate for all five of the cognitive assessments was very high. Ninety nine 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. Ninety-six per cent of cohort members also completed the National Adult Reading Test with similar rates of completion in both modes (95% by CAPI and 97% by CAVI). The letter cancellation test had a slightly lower response of 94%, with a lower agreement rate in the video mode compared to the in-person mode (91% 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.

⁴² Cognitive assessments were not included in the Mop-up Survey

Table 9:20 Completion of cognitive assessments						
	<i>In-person</i>		<i>Video</i>		<i>Total</i>	
	<i>N</i>	<i>%</i>	<i>N</i>	<i>N</i>	<i>N</i>	<i>%</i>
Word recall test						
Completed	3,792	99	3,477	99	7,269	99
Not completed	50	1	20	1	70	1
Animal naming						
Completed	3,787	99	3,478	99	7,265	99
Not completed	55	1	19	1	74	1
Letter cancellation⁴³						
Agreed to complete it	3,695	96	3,156	91	6,851	94
Not agreed	147	4	297	9	444	6
Delayed word recall test						
Completed	3,792	99	3,477	99	7,269	99
Not completed	50	1	20	1	70	1
National Adult Reading Test (NART)						
Completed	3,650	95	3,399	97	7,049	96
Not completed	192	5	98	3	290	4
<i>Base: all 7,332 fully productive cases and 7 partially productive cases⁴⁴ interviewed in pilot, video pilot and mainstage, 7,339.⁴⁵</i>						

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-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 85% respectively). Figures are shown in table 9.21.

Table 9:21 Return of letter cancellation sheet						
	<i>In-person</i>		<i>Video</i>		<i>Total</i>	
	<i>N</i>	<i>%</i>	<i>N</i>	<i>N</i>	<i>N</i>	<i>%</i>
Letter Cancellation test						
Returned	3,329	90	2684	85	6013	88
Not returned	366	10	472	15	838	12
Total	3695	100	3156	100	6851	100
<i>Base: all cohort members in pilot, video pilot and mainstage who participated in the letter cancellation task, 6,851</i>						

9.10 Online Dietary questionnaire

⁴³ The base for letter cancellation is 7295 cases as 44 cases interviewed in the video pilot were not asked to complete the letter cancellation.

⁴⁴ The remaining 4 partially productive cases exited the interview before the cognitive function section.

⁴⁵ Proxy respondents were not asked this section of the questionnaire

Of those 7,335 cohort members who were asked the Online Dietary Questionnaire module in the main interview, 91% agreed to complete it and 9% were unwilling or unable to do so.⁴⁶ Agreement to take part was slightly higher for cohort members completing the interview by video rather than in-person (95% vs 87% respectively), which may be due to this group being more familiar with and having greater access to the internet.

Table 9:22 Response to Online Dietary Questionnaire						
	<i>In-person</i>		<i>Video</i>		<i>Total</i>	
	<i>N</i>	<i>%</i>	<i>N</i>	<i>N</i>	<i>N</i>	<i>%</i>
Yes willing	3,343	87	3,324	95	6,667	91
Not willing or unable	498	13	170	5	668	9
	3841	100	3494	100	7335	100
<i>Base: all 7,332 fully productive cases and 3 partially productive cases⁴⁷ who reached this point in the questionnaire in pilot, video pilot and mainstage, 7,335</i>						

Of those cohort members that were eligible and agreed to complete the Online Dietary Questionnaire, 76% completed it on at least one day, and 61% 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, 47% completed it on the correct two days they were randomly allocated. Of those who were eligible and agreed, 70% completed the diary on at least one correct day. Table 9.23 shows a more detailed breakdown of this.

Table 9:23 Number of Online Dietary Questionnaire days completed correctly		
	<i>N</i>	<i>%</i>
2 days completed, both correct	3,115	47
2 days completed, one correct	720	11
2 days completed, none correct	218	3
1 day completed, correct	779	12
1 day completed, incorrect	228	3
0 days completed	1,607	24
Total	6,667	100
<i>Base: cohort members who agreed to complete the Online Dietary Questionnaire in pilot, video pilot and mainstage, 6667</i>		

9.11 Response by interviewer contact

Interviewers in the mainstage survey were required to log all contact attempts⁴⁸. 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 3.8. By mode the mean number of telephone calls required to achieve an interview with cases originally allocated to

⁴⁶ The Online Dietary Questionnaire was not included as part of the Mop-up Survey.

⁴⁷ The remaining 8 partially productive cases exited the interview before they were asked if they would be willing to complete the Online Dietary Questionnaire.

⁴⁸ In some cases interviewers have not recorded all of the contact attempts they make.

video was 4.3, whereas the mean number of telephone calls needed to achieve an interview with cases originally allocated to an in-person interview was 3.1.

Table 9:24 Number of telephone calls to achieve an interview

	<i>In-person</i>		<i>Video</i>		<i>Total</i>	
	<i>N</i>	<i>%</i>	<i>N</i>	<i>N</i>	<i>N</i>	<i>%</i>
0 ⁴⁹	141	5	16	0	157	2
1	793	28	977	22	1770	25
2	631	23	837	19	1468	20
3	400	14	692	16	1092	15
4	272	10	426	10	698	10
5	163	6	335	8	498	7
6	124	4	235	5	359	5
7	76	3	186	4	262	4
8 or 9	109	4	250	6	359	5
10 or 14	72	3	300	7	372	5
15 or more	23	1	130	3	153	2
Total	2804	100	4384	100	7188	100
<i>Base: all productive interviews in mainstage - excludes pilot and video pilot cases, 7188</i>						

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 was 0.9. 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 1.6.

⁴⁹ In some cases the interviewer has not recorded their contact attempts.

Table 9:25 Number of in-person calls to achieve an interview						
	<i>In-person</i>		<i>Video</i>		<i>Total</i>	
	<i>N</i>	<i>%</i>	<i>N</i>	<i>N</i>	<i>N</i>	<i>%</i>
0 ⁵⁰	214	8	3382	77	3596	50
1	1686	60	440	10	2126	30
2	451	16	273	6	724	10
3	191	7	160	4	351	5
4	121	4	60	1	181	3
5	59	2	40	1	99	1
6	22	1	13	0	35	1
7	25	1	8	0	33	1
8 or 9	25	1	6	0	31	0
10 or 14	10	0	2	0	12	0
15 or more	0	0	0	0	0	0
Total	2804	100	4384	100	7188	100
<i>Base: all productive interviews in mainstage – excludes pilot and video pilot cases, 7188</i>						

When looking at both the in-person visits and telephone calls required to complete an interview, the mean total number of calls was 4.7. For cases first allocated to video mode, the mean number of total calls was 4.8 and for cases first allocated to an in-person interview the mean number of total calls was 4.7 to achieve an interview.

Table 9:26 Number of total calls to achieve an interview (in-person and telephone)						
	<i>In-person</i>		<i>Video</i>		<i>Total</i>	
	<i>N</i>	<i>%</i>	<i>N</i>	<i>N</i>	<i>N</i>	<i>%</i>
1	93	3	954	22	1047	15
2	661	24	778	18	1439	20
3	587	21	657	15	1244	17
4	417	15	392	9	809	11
5	289	10	325	7	614	9
6	182	7	224	5	406	6
7	156	6	192	4	348	5
8 or 9	171	6	288	7	459	6
10 or 14	181	7	373	9	554	8
15 or more	64	2	194	4	258	4
Not recorded	3	0	7	0	10	0
Total	2804	100	4384	100	7188	100
<i>Base: all productive interviews in mainstage excludes pilot and video pilot cases, 7188</i>						

⁵⁰ In some cases the interviewer has not recorded their contact attempts.

9.12 Movers and tracing

Amongst the cases issued, 8% had moved from the issued address. Table 9.27 outlines tracing success for these cases. Just under half of all movers were traced (49%), 19% of cases were traced by CLS and sent to NatCen as sample updates. 30% of the sample were traced by the interviewers.

Table 9:27 Movers by sample origin		
	<i>Total</i>	
	<i>N</i>	<i>%</i>
Traced by CLS	175	19
Traced by interviewer	280	30
Total traced movers	455	49
Untraced movers	473	51
Total Movers	928	100
<i>Base: all movers for pilot, video pilot and mainstage, 928</i>		

Table 9.28 shows the outcomes for traced movers, broken down by whether these were traced by interviewers, or traced by CLS. As the table shows, where cohort members were traced by interviewers, a much higher response rate was achieved than where cohort members were traced by CLS.

Out of the 455 traced movers, 224 resulted in a productive interview (49%).

Table 9:28 Outcomes for traced movers						
	<i>Mover (traced by CLS)</i>		<i>Mover (traced by field)</i>		<i>Total</i>	
	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>
Productive	12	7	212	76	224	49
Unproductive - non-contact	91	52	25	9	116	25
Unproductive - refusal	43	25	34	12	77	17
Unproductive - other	23	13	4	1	27	6
Unknown eligibility	4	2	0	0	4	1
Ineligible	2	1	5	2	7	2
Total	175	100	280	100	455	100
<i>Base: all traced movers for pilot, video pilot and mainstage, 455</i>						

10. Coding, data editing and data preparation

10.1 Routing checks and editing

Data was checked after fieldwork to ensure that 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 CAPI, CAVI, and CAWI data (including the Mop-up data) was minimal due to the routing and consistency checks in the programme. This 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.'

10.2 Coding open ended and other specify

The CAPI and CAVI interviews included a small number of questions which were open-ended where responses were recorded verbatim. These answers were not coded but were provided in verbatim format.

Most of the questions that required coding were 'other-specify' questions, where the interviewer entered a text response because they believed the answer did not fit into any of the pre-specified responses. 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 given which did not fit into the existing code frame. In some instances there were not a sufficient number of answers to create a new code. In these instances, coders assigned these cases to an 'other' code.

Code frames were 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 January 2023.

10.2.1. 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).

10.3 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 e.g. grid formats were not in the web surveys and instead followed how the questions were programmed in the main in-person interview.

10.4 Editing paper questionnaire data

Returns of the paper self-completion questionnaires, cognitive function booklets and letter cancellation sheet were checked against the expected outcome in the CAPI/CAVI interview. If the CAI survey indicated that a paper document was with the interviewer but it had not been returned, the interviewer 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.

The self-completion paper questionnaire was scanned and the resulting data was imported into a database. This data was then checked in a similar way to the CAPI/CAVI 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 was one open-ended question which asked cohort members to record how they imagine their life will be at 60. This 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.

10.5 Combining pilot data with mainstage data

Although very little editing was undertaken on the mainstage survey data, some editing of the pilot and video pilot was required in order to merge it with the main data. This was due to changes being made to the questionnaire between the two pilots 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, then the data could not be merged and a pilot version of the question was included in the combined dataset.

Where a question had not been asked at a specific fieldwork stage the missing cases for that question were coded to -3 - 'Not asked case at fieldwork stage.'

10.6 Treatment of Mop-up data

The Mop-up data was processed separately from the main CAI data and not provided to CLS merged with the main data as it was a much shorter version of the questionnaire.

10.7 Problems with CAI data

A small number of interviews (29) were conducted by telephone rather than by video call. In some cases this was because of technical difficulties experienced in the video interview.

10.8 Data outputs

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

- Respondent level 'flat file'
- Hierarchical files including relationships history, child grid and activity history
- Paper self-completion data
- Data from the completion of the Online Dietary Questionnaire

10.9 Sample contact information

Contact information was provided to CLS Cohort Maintenance Team following an agreed format. This contact information 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.

10.10 Consent data

Consent data 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 where this was not held previously (see section 4.2.5 for more details). The data provided also included any subsequent withdrawals of consent. Consents were recorded for the National Health Service (NHS), Department for Work and Pensions (DWP) and HM Revenue and Customs (HMRC) in a 'yes' or 'no' with the date and mode consent was collected in.

10.11 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.

