

Technical Report of the 1958
National Child Development
Study: Age 55 survey
(2013/2014)



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1. Introduction

1.1 The National Child Development Study

The National Child Development Study (NCDS), is one of Britain's world renowned national longitudinal birth cohort studies run by the Centre for Longitudinal Studies (CLS) at the Institute of Education, University of London.

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 the lifetime of whole generations. There are currently five national birth cohort surveys in the UK, three of which are run by CLS:

- National Survey of Health and Development (started in 1946)
- National Child Development Study (started in 1958);
- 1970 British Cohort Study (started in 1970);
- Millennium Cohort Study (started in 2000);
- Life Study (starting in 2014)

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 used by academic researchers and policy makers to understand and improve life in Britain today and in the future.

1.2 Background to the study

NCDS started life as the Perinatal Mortality Survey, which was designed to examine the social and obstetric factors associated with stillbirth and infant mortality. In the first survey, data were collected about the births and families of 17,638 babies born in Great Britain during one week in March 1958. Since then, there have been seven surveys gathering information from respondents living in England, Scotland and Wales¹, in order to monitor their health, education, social and economic circumstances. These surveys were carried out in 1965 (age seven), 1969 (age eleven), 1974 (age sixteen), 1981 (age 23), 1991 (age 33), 1999/2000 (age 42), 2004/2005 (age 46) and 2008/2009 (age 50). As part of the 1991 survey, information was additionally collected on the children of one in three cohort members; this included assessments of the behaviour and cognitive development of around 5,000 co-resident children. There have also been surveys of sub-samples of the cohort: most recently, in 1995 (age 37) a 10% representative sub-sample was assessed for difficulties with basic skills. In addition, during 2002-2004, 9,340 NCDS cohort members participated in a bio-medical survey, carried out by qualified nurses.

Data for NCDS have so far been collected from a number of different sources; the midwife present at birth, the cohort members' parents, the head and class teachers, health service personnel, the cohort members themselves, their spouses, cohabitantes and children. Data has been collected using a variety of methods: paper, electronic and self-completion questionnaires, clinical records, medical examinations,

¹ Including the Channel Islands, Isle of Man and other offshore islands.

physical measurements, ability tests, educational assessments and diaries.² Most of the sweeps have been carried out face-to face with interviewers in the cohort members homes, but the age 46 sweep of NCDS was conducted for the first time as a telephone interview (CATI).³

The Centre for Longitudinal Studies (CLS) at the Institute of Education, University of London (and formerly the Social Statistics Research Unit at City University), has been responsible for the study since 1985. The study is funded by the ESRC (the Economic and Social Research Council). TNS BMRB in collaboration with CLS were responsible for the development, fieldwork and initial data preparation for the Age 55 survey.

1.3 Current Study

Following competitive tender, the Centre for Longitudinal Studies commissioned TNS BMRB to carry out the instrument development, data collection and initial data preparation for the ninth sweep of the NCDS.

This report provides an account of the design, development and conduct of the ninth follow-up survey which took place in 2013/14.

The Age 55 survey adopted a sequential mixed-mode design, with a CAWI⁴ stage followed by a CATI stage. It was the first time two different data collection modes had been offered as sequential alternatives in the same survey and was also the first time that online data collection was used. Cohort members were asked to complete the questionnaire online, non-responders were then contacted by telephone after five weeks and asked to do a telephone interview instead.

A total of 177 cohort members successfully completed the dress rehearsal survey for the Age 55 survey, and 8,958 cohort member successfully completed the main stage. This gives an overall total of 9,135 completed interviews.

² For further information on NCDS sweeps see: Power, C. and Elliott, J. (2005) Cohort Profile: 1958 British birth cohort (National Child Development Study). *International Journal of Epidemiology*, 2005, Information can also be found on the CLS website <http://www.cls.ioe.ac.uk>.

³ CATI stands for Computer Assisted Telephone Interview.

⁴ CAWI stands for Computer Assisted Web Interview.

2. Sample design

2.1 Introduction

The NCDS selected all babies born in Great Britain during one week in March 1958. In later sweeps up to age 16, the cohort was augmented by additional children who were born outside Great Britain but within the target week in 1958. These children had moved to and were educated within Britain before the age of sixteen (see Table 2.1). Immigrants were included at sweeps NCDS 1-3, but no further attempts were made to augment the sample.

Table 2.1: Number of Cohort Members ever participating in NCDS

	N	%
Births during one week in March 1958	17,638	95
Immigrants to age 16	920	5
TOTAL COHORT MEMBERS	18,558	100

As in previous sweeps of the NCDS, the target sample for the survey was all cohort members currently living in England, Scotland or Wales⁵, excluding permanent refusals. The sample definition was subsequently refined, and some cohort members were excluded for specific reasons. The sample issued for the ninth follow-up study (i.e. cohort members invited to take part in the Age 55 survey) comprised 11,553 cohort members. Further details are given below.

2.2 Issued sample for the Age 55 survey

The issued sample for the Age 55 survey consisted of 11,553 cohort members. The issued sample for the ninth follow-up comprised of the following:

- Those who participated in any of the past three survey sweeps, and who had not subsequently withdrawn from the study, died or were considered inappropriate to issue (following review of interviewer notes recorded at the time of the last survey) (11,008 cohort members).
- Those who had not participated in any surveys since 2000, but had confirm their address to CLS in some other way since this time, and had not subsequently withdrawn from the study or died (545 cohort members).

Of the 11,553 cases which were issued, these included 367 cohort members who are recent emigrants who had participated in at least one of the two last surveys or have recently contacted CLS to confirm or update their contact details. They also included five cases that were not originally issued to TNS BMRB at the start of fieldwork as they had lost contact with the study, but the cohort members re-established contact with CLS during the course of fieldwork.

⁵ Including the Channel Islands, Isle of Man and other offshore islands.

The majority (82%) of the issued sample had been interviewed at the previous wave of the survey in 2008, but some had not participated in the study for a significant length of time (see Table 2.2).

Table 2.2: Sweep of last interview

	n	%
NCDS 2008	9456	82
NCDS 2004	897	8
NCDS 2000	735	6
NCDS 1991	168	2
NCDS 1981	189	2
NCDS 1974	83	1
NCDS 1969	9	<1
NCDS 1965	7	<1
Perinatal Mortality Survey (1985)	9	<1
TOTAL	11,553	100

2.3 Sample structure

As described in more detail in Section 3.1 and 3.2, the Age 55 survey adopted a sequential (CAWI, followed by CATI) mixed-mode design. However, an experimental design was embedded into the survey, whereby a random sample of 1,499 (of the 10,558 cases with UK telephone numbers) were allocated to a telephone-only data collection protocol.

2.4 Serial Numbers

Each NCDS cohort member has a unique serial number that was allocated at the beginning of the study in 1958. In order to facilitate fieldwork management and data processing, and to increase confidentiality, each cohort member in the issued sample was allocated a unique TNS BMRB serial number. The TNS BMRB serial number was used on all letters and emails (advance letters/emails, reminder letters/emails, tracing letters and thank you letters).

2.5 The sample files

CLS was responsible for providing sample information for cohort members who are part of the 1958 National Child Development Study to TNS BMRB to ensure this information was as accurate and up-to-date as possible.

The sample information that was provided to TNS BMRB was split into two types: fixed sample, and live sample. The fixed sample files contained details of all sample members, and contained information that was not subject to change, such as:

- Serial number;
- Survey outcome from previous sweep;

- Date of last interview;
- Address at last interview;
- Reasons for refusal from previous sweep;
- Whether previous sweeps had been conducted as a proxy interview.

The live sample file contained information that could change and needed to be as up-to-date as possible. Live sample files were produced for each wave, and included the following information:

- Serial number;
- Survey status;
- Cohort member details (name, gender, date of birth);
- Contact details for the cohort member – and address, up to three telephone numbers and an email address;
- The name and mobile telephone number of the cohort member’s partner;
- The name, address, telephone numbers and email address of up to two stable contacts (family members or friends who could be used to trace cohort members if required);
- Useful memos from the address database.

2.5.1 **Delivery of sample files to TNS BMRB**

The fixed sample file was delivered to TNS BMRB eight weeks before fieldwork, and the live sample file seven weeks before fieldwork.

Once the sample was delivered to TNS BMRB it was used to produce the advance letters and emails. The information was also loaded into the CATI programme.

2.5.2 **Other sample information**

In addition to the fixed and live sample files, ‘feed-forward’ data files were also delivered to TNS BMRB before the start of fieldwork. These contained the answers cohort members had given to key questions in previous interviews.

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

The answers contained in the files were loaded or ‘fed-forward’ into the current questionnaire. For example, the cohort member’s job title and economic activity was fed forward and the cohort member was asked if that was still their job.

As well as information from previous interviews being added to question text, it 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.

2.6 **Sample updates**

CLS continued to trace cohort members until the start of fieldwork in September 2013. After this CLS still received updated contact details from some cohort members during the course of fieldwork even though they were not actively tracing them. CLS sent sample updates to TNS BMRB on a weekly basis during the course of fieldwork.

Sample updates could include:

- Status changes (eligibility status, participation status, status of address)
- Change to contact information
- Other useful information for interviewers

Section 5.9 gives details of how sample updates were handled by TNS BMRB.

2.7 Return of sample to CLS at end of fieldwork

TNS BMRB was responsible for updating contact information for cohort members that were interviewed at this sweep of fieldwork and transferring this updated information to CLS at the end of fieldwork. Updated contact information was also supplied, where possible, for cases who were not interviewed at this sweep.

3. The questionnaire

The Age 55 study comprised of a 30 minute web (CAWI) or telephone (CATI) interview. Proxy interviews were not permitted for this round of interviewing.

The questionnaire was designed in a number of 'modules' and these were as follows:

- Updating contact information (1), which consisted of:
 - Personal contact details (name, address, home and work telephone numbers, email address, whether live in Great Britain)
- Grids, which consisted of:
 - Partnership history
 - Children (both those living with the cohort member and those not living with the cohort member)
 - Other household members
- Family, which consisted of:
 - Grandchildren
 - Parents
- Housing, which consisted of:
 - Housing history
 - Details of current home
 - Rent/mortgage payments
 - Emigration details
- Employment and income, which consisted of:
 - Activity history
 - Details of current job including pay and hours
 - Retirement and pensions
 - Sources of income and total household income
- Lifelong learning, which consisted of:
 - Details of any qualifications obtained since last interviewed
- Health, which consisted of:
 - General state of health
 - Details of any health issues since last interview
 - Menstruation and gynaecological issues
 - Smoking and drinking
 - Height and weight
- Civic participation and leisure time activities, which consisted of:
 - Voting in last General Election
 - Frequency of participation in specific leisure activities
- Updating contact information (2), which consisted of:
 - Work telephone number
 - Partner contact details
 - Stable contact details
 - Plans to move in the next 12 months

This chapter contains a brief description of each element of the study. Details of the development work for the study are contained in Chapter 4.

3.1 The interview

The Age 55 survey adopted a sequential (CAWI, followed by CATI) mixed-mode design. It was the first time two different data collection modes had been offered as sequential alternatives in the same survey and was also the first time that online data collection was used. All cohort members in the mixed mode sample were asked to complete the questionnaire online. Non-responders (after five weeks and two reminder letters/emails) were contacted by telephone (where a telephone number was available) and asked to do a telephone interview instead.

The survey took approximately 30 minutes to complete and aimed to update information on the cohort members' circumstances and key events in their lives. The time period which the questions referred to depended on when the cohort member was last interviewed. This is discussed in Section 3.2.2 below. The majority of questions in the interview were asked in earlier sweeps of the NCDS and in BCS70 which allows comparisons to be made across the NCDS sweeps and with the BCS70 cohort.

3.2 Data collection mode experiment

A random 1,499 of the 10,558 cases with UK telephone numbers were allocated to a telephone-only data collection protocol, in order to allow CLS and TNS BMRB to test whether or not there were mode effects both on the overall survey response rate, and on the responses to questions given by participants. It was expected that this sample would yield approximately 1,200 completed interviews, a sufficient number to detect any substantial mode effects that might bias inferences. A larger allocation would have increased the sensitivity of this analysis but data collection costs would have exceeded the study budget.

In addition, there were uncertainties around the impact of offering a sequential mixed mode option on survey response rate, and therefore a mode experiment design allows the response rate to be compared between the sequential mixed mode data collection approach and the telephone-only data collection approach.

3.3 Questionnaire design

A separate descriptive paper (Brown, 2014⁶) gives full details of the design of the Age 55 questionnaire. However, a summary of the key features is described here.

3.3.1 Questionnaire mode

The survey was designed to work across both CAWI and CATI modes in such a way to minimise the potential measurement differences across the two modes. The design of the questionnaire draws extensively on the Unimodal design principles (set out by Dillman et al. 2009⁷). In particular, the questionnaire focussed mainly on the collection of factual data, to minimise the likelihood of differences in measurement between the web and telephone responders due to the difference in mode employed (or so-called 'mode effect').

3.3.2 General layout

The survey used a 'simple' design with a white background. The question and response options occupied the centre of the visual field. A top banner included the NCDS logos and the colour scheme replicated

⁶ Brown, M. (2014) Designing the NCDS Age 55 Web Survey – Currently unpublished

⁷ DillmanD, Smyth J and Christian L (2009) Internet, Mail and Mixed-Mode Surveys -The Tailored Design Method (3rd Edition), John Wiley and Sons: New Jersey.

those used in the letterhead printed on previous mailings to cohort members. A bottom banner included the TNS BMRB logo. Two clickable links were included in the top banner: one giving general advice for completing the survey and the other giving information about privacy and data security.

3.3.3 Question layout and text

All question text was left justified with ragged right margins. Response options were generally laid out vertically, and response options were justified left with buttons on the left. All question text and response options were blank. The font used was Verdana and in size 12. HTML 'Next' and 'Back' buttons were provided on all screens.

3.3.4 Grid questions

The vast majority of multi-code questions were presented in Yes/No grids, with both CAWI and CATI respondents required to provide a response to each option. In these grids, the items were displayed vertically with the response options displayed horizontally.

3.3.5 Numeric questions/open questions

Numeric questions and open questions used a similar format whereby a grey text box was provided underneath the question text in which respondents could enter their answer.

3.3.6 Additional clarification

As far as possible all clarification and instructions were incorporated into the question text. However, where clarifications would not be relevant for all respondents they were provided via help screens which were accessed via clicking a hyperlink on screen. The help screens would appear in a 'pop up' window on top of the main screen and could then be closed by clicking a 'close' button in the top right corner.

3.3.7 Missing data

The 'Don't know' and 'Refusal' options were hidden on questions when they first appeared, and were activated when the respondent clicked 'Next' without providing an answer. In addition, an error message appeared in red above the question text which said 'Please give an answer, or select 'Don't know' or 'Don't want to answer''. Instructions about this were provided at the beginning of the interview to cohort members. However, in addition, on questions which had typically resulted in higher levels of non-response in previous sweeps of the study, additional reminders about skipping questions were provided. These took the form of a help screen entitled 'What if I don't know or don't want to answer?'.

3.3.8 Logic checks and use of 'fed forward' data

The number of checks was much reduced in comparison to prior sweeps and in particular hard checks were kept to an absolute minimum so as to avoid the possibility of a respondent becoming 'stuck' and unable to proceed. Soft checks were presented as additional questions in which respondents were asked to confirm whether their response had been correct. If the respondent needed to correct their answer they were routed back to the prior question to do so. Hard checks were displayed as error messages in red text above the question text.

In line with previous sweeps of the study, the questionnaire made extensive use of information which is 'fed forward' from previous sweeps. All questions which presented information from prior sweeps had response options which allowed respondents to indicate that the fed forward data was incorrect, which then routed to follow-up questions which allowed respondents to re-provide the relevant data.

3.3.9 Screen resolution

Cohort members were instructed to complete the survey on a desktop computer, laptop or tablet. In addition, the CAWI survey was set up to block cohort members accessing the survey on a device with a

small screen resolution. The block was set at screen resolutions of 350,000 (product of height x width). In these instances the following message appeared on screen: *'Unfortunately the survey is not designed to be completed on mobile devices. Please try accessing the survey again from your home computer, laptop or tablet.'*

3.3.10 Event histories

The interview included three event history modules: Relationship history, Housing history and Employment history. These modules asked cohort members to update their situation in these areas in chronological order from a point set by the program. The date at which the cohort member is asked to update their situation from depended on when they were last interviewed and the history section:

Relationship history:

- Cohort members last interviewed at age 50 (2008/9), age 46 (2004/5) or age 42 (1999/2000) were asked to update their situation from the date of their last interview.
- Cohort members who were not interviewed at 42, 46 or 50 were asked to update their situation from the 1st January 2000.

Housing history and Economic History:

- Cohort members last interviewed at age 50 (2008/9) or age 46 (2004/5) were asked to update their situation from the date of their last interview.
- Cohort members who were not interviewed at 46 or 50 were asked to update their situation from the 1st January 2004.

For the first time at this sweep the three histories were collected using interactive electronic calendars built into the CAWI/CATI script. Previous research has shown that calendars can be beneficial in aiding respondents to give accurate information during complex event histories. Consistency checks can be built in, by greying out periods which are logically impossible for a particular event or periods that we do not wish to ask about. This makes navigation easier for respondents and also saves time as it prevents incorrect answers being entered in the first place and removes the need to navigate backwards to change answers. In addition, as both respondents and interviewers can see the calendar building up on screen this can be beneficial as a way of prompting the respondent should they have difficulty recalling certain dates.

An event history calendar was developed for the Age 42 sweep of the BCS, and this calendar was further developed within the Age 55 NCDS survey to be interactive, allowing cohort members to click in the calendar itself to indicate when a particular activity had taken place. Further details of the development of the interactive calendar are provided in Chapter 4.

The calendar would start from the point of the last interview (or from 1st January 2004 or 2000) and fill as the cohort member's history was updated. The calendar had one line for each of:

- Marriages (or civil partnerships) – this would be coloured in for any periods of marriage or civil partnership and would also display the name of the cohort member's spouse or civil partner;
- Cohabiting relationships – this would be coloured in for any periods of cohabiting with a partner (including a spouse or civil partner) and would also display the name of the partner;
- Where the cohort member lived – this would display the postcode, or the name of the town for each of the places the cohort member had lived since the start of the history;
- The cohort member's economic activity – this would display the cohort member's job title or other economic activity for each activity since the start of the history.

The event histories were completed by the respondent (CAWI) / interviewer (CATI) clicking in the correct cell to indicate the date a particular change occurred. The completed lines of the calendar remained on screen for subsequent histories (so marriages and cohabitations appeared when the cohort member was asked about their housing history, and marriages, cohabitations and housing all appeared when the cohort member was asked about their economic activity history).

Two examples of the event calendar are shown below. The first example shows the calendar during the relationship history, and the second example shows the calendar in the employment history.



[Help with completing the survey](#) [Privacy Statement](#)

When did you get divorced? If you don't know the precise month, please give your best estimate.

Select the month and year in the calendar below by clicking in the relevant box in the line labelled 'who you were married to', then click Next.

		2010																	
		Aug	Sep	Oct	Nov	Dec													
Who you lived with	Who you were married to							Mary											
		2011																	
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec						
Who you lived with	Who you were married to	Mary												[Red Box]					
		2012																	
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec						
Who you lived with	Who you were married to																		
		2013																	
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec						
Who you lived with	Who you were married to																		
		2014																	
		Jan	Feb	Mar	Apr	May													
Who you lived with	Who you were married to																		



[Help with completing the survey](#) [Privacy Statement](#)

When did that period of full-time employment with that employer end? If you don't know the precise month, please give your best estimate.

Select the month and year in the calendar below by clicking in the relevant box on the line labelled 'What you were doing'.

		2010																	
		Aug	Sep	Oct	Nov	Dec													
Who you lived with	Who you were married to							Mary											
Where you lived	What you were doing							SE1 2QY						Teacher					
		2011																	
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec						
Who you lived with	Who you were married to	Mary												Mary					
Where you lived	What you were doing							SE1 2QY						Teacher					
		2012																	
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec						
Who you lived with	Who you were married to							Sarah						Sarah					
Where you lived	What you were doing	Teacher						SE1 2QY											
		2013																	
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec						
Who you lived with	Who you were married to	Sarah																	
Where you lived	What you were doing	Sarah																	

3.3.11 Collection of contact information

The questionnaire included two separate contact blocks:

- The first block confirmed and updated the majority of the cohort members personal contact details: their full name, their telephone (home and mobile), address and email address details. This was placed at the start of the interview to allowed up to date contact details be recorded for partial interviews. This was particularly important for the partial interviews completed by CAWI as this information would not have been recorded elsewhere.
- The second block confirmed and updated the cohort member's work telephone number (if applicable), along with the name and telephone number of their partner (if applicable), and asked cohort member to confirm, update or provide contact details for one or two stable contacts, who could be contacted in future to help trace the cohort member if they had moved.

4. Development work

4.1 Scope of the development work

The development and piloting stages of the Age 55 survey were conducted over a 10 month period from September 2012 to June 2013. The programme of development work included usability testing, a pilot study and a dress rehearsal.

4.2 Usability testing

4.2.1 Objectives

The usability testing stage of the Age 55 survey took place between September and November 2012. The main objective of this stage was to thoroughly test the suitability of the questionnaire for CAWI administration, identify potential problem areas and develop solutions to these.

4.2.2 Overview of approach

The usability tests were conducted in two stages; the first consisted of 10 accompanied tests whereby members of the research team sat with respondents as they completed the CAWI survey and probed for feedback as they went through, the second consisted of 10 remotely observed tests whereby members of the research team observed respondents from another room as they completed the CAWI survey. The whole questionnaire was tested.

Following each stage of usability testing, feedback was collated and amendments to the web instrument were agreed with CLS. Researchers used a prepared usability testing guide to make notes about the findings during the tests. When agreeing changes to the web instrument, feedback was drawn from both the researchers' notes from the usability tests as well as from examining the recordings of the tests.

4.2.3 Sample

The aim of the usability testing was not to provide a representative sample, but rather to recruit members of the public of a similar age to the cohort members who could act as a first test sample and ensure that most questionnaire routes would be tested.

Recruitment for the usability testing was carried out by TNS BMRB's specialist qualitative recruiters. Recruiters were required to recruit members of the general public aged between 50 and 60 to prescribed quotas. In order to ensure that the people recruited were in general relatively comfortable with completing CAWI surveys, and therefore would be more likely to complete a survey online rather than on the telephone if given the choice, a quota was set on likely mode of choice between web and telephone. A quota was also set on the number of life changes (relationships, housing and economic activity) in a reference period of either four or eight years, to ensure that there were a sufficient number of respondents who would experience using the interactive event history calendar and that this could be tested for both long and short reference periods.

In order to ensure that feed forward data could be tested as part of the usability tests, respondents were asked to complete a short background questionnaire once they had been recruited. This background information was then used to simulate feed forward data and was fed into the CAWI survey.

When recruited, respondents were given an appointment time to come into TNS BMRB's office to conduct the test. When respondents arrived researchers explained what the task involved, what they would be required to do and asked them to read and sign a permission letter to indicate that they consented to taking part and to being filmed.

4.2.4 **Fieldwork**

The first stage of usability tests were conducted on the 18th and 19th September 2012, and the second stage was conducted on the 22nd and 23rd November 2012. All usability tests were conducted at TNS BMRB's office in Ealing.

Respondents completed the survey on a desktop computer and their face, the screens they looked at and their conversation with the researcher was recorded using 'Morae', specialist usability testing software, which TNS BMRB uses to conduct usability tests. Morae enables researchers to record the usability tests, observe from a remote computer and edit videos for analysis.

4.2.5 **Focus of usability testing**

A guide to be used by researchers was drawn up and agreed between TNS BMRB and CLS prior to the user testing which contained pre-prepared probes and questions. There were specific elements of the survey that researchers were keen to get feedback on, these included:

- The interactive calendar, specifically:
 - How easy this was to use/understand
 - How helpful it was in terms of remembering dates
- Help screens
- Strategy of hiding don't know and refused buttons
- Error messages
- Logic checks
- Verification screens at the beginning of the survey
- Layout of single code vs. multi-code questions
- Numeric questions
- Questions using a grid layout
- Contact details section
- Instructions for completion
- Look and feel
- Technical support links.

The focus of the guide changed slightly between the first and second stage of usability tests.

4.2.6 **First stage of usability tests**

For the first stage of usability tests researchers accompanied respondents as they completed the survey. Respondents were left to complete the CAWI survey without help and researchers observed and prompted them for feedback at defined points in the survey and at the end. Researchers also probed respondents if it became clear that they were experiencing difficulties or asked for help. This approach was used for the first usability test to ensure that the maximum amount of feedback possible was received for the first test.

For the first stage of the usability tests two different versions of the interactive calendar were tested; one whereby respondents needed to click in a small online booking style calendar picker underneath the display, and another whereby respondents needed to click in the calendar display itself to select their answer. After a few tests using the online booking style calendar, it became clear that this was not optimal for use on the web and this calendar was not used again in testing.

4.2.7 Changes in between 1st and 2nd usability tests

Following the findings from the first stage of usability tests changes were made to the questionnaire and web script. The main changes made were:

- Help screens with instructions for how to say 'don't know' or 'don't want to answer' were added at key questions where it was felt likely that respondents would want to say don't know or refused
- Key instructions for how to complete questions were changed from grey text to be the same format as the question text itself
- The format of help screens was redesigned
- The script was reprogrammed so that numeric separators were allowed
- The calendar was simplified and made clearer:
 - Only relevant rows were shown
 - The way dates were selected was changed to be more obvious
 - Instructions were made clearer.

4.2.8 Second stage of usability tests

For the second stage of usability tests the approach taken was changed so that instead of accompanying respondents as they completed the CAWI survey, researchers observed from a computer in another room using Morae Observer. Researchers left respondents to complete the CAWI survey and did not intervene unless it was clear that they were having serious problems. While observing researchers made notes of anything that occurred which would be worthwhile following up on and then asked questions about this and the issues mentioned above after the respondent had completed the survey. This approach was used on the second round of testing in order to more accurately simulate the experience of completing a CAWI survey at home.

4.2.9 Changes following the second stage of usability tests

Prior to the pilot some further fairly minor changes were made to the questionnaire and web script as a result of the findings from the second stage of usability tests. The main changes made were:

- An introduction screen explaining how to complete the calendar was introduced at the beginning of the questionnaire
- An open-ended question was included at the end of the calendar to allow respondents to mention anything that they believed they had entered incorrectly
- The format of the income questions was amended
- Some other minor wording, routing and instruction changes were made to improve the web script.

4.3 First pilot survey

4.3.1 Objectives

The first pilot for the Ages 55 follow-up survey took place between January and March 2013 and the main objectives were to:

- Estimate the length of the CATI interview, in order to establish whether any questions needed to be cut before the dress rehearsal

- Test and evaluate the content of both the CAWI and CATI interviews
- Test and evaluate the fieldwork documents, procedures for accessing and completing the survey online and interviewer training and fieldwork procedures for CATI.

4.3.2 Elements included in the first pilot

The pilot included all elements that were intended to be used on the Age 55 survey, and interviews were carried out across both the CAWI and CATI modes. The CAWI and CATI interviews were the same, with the exception of some mode specific tweaks and consisted of a standard questionnaire which collected information about relationships, family members, housing, employment and income, lifelong learning, and health.

4.3.3 Pilot briefing and fieldwork

Web fieldwork for the pilot started on 24th January 2013 and remained open for the entire fieldwork period. Telephone fieldwork was carried out from 14th February to 5th March 2013. The briefing was held on the 14th February 2013. Four telephone interviewers worked on the pilot. All telephone interviews were conducted by TNS BMRB's telephone centre in Ealing.

4.3.4 Pilot sample

The pilot sample came from two sources. Firstly, 62 respondents who took part in the pilot of the Age 50 Follow up of NCDS and agreed to be recontacted were issued. All 62 original pilot respondents were offered the option of either doing the survey online or on the telephone. Secondly, 30 new respondents (aged between 50-60) were recruited using TNS BMRB's specialist qualitative recruitment team. Of these respondents, 21 were offered the option of either doing the survey online or on the telephone and 9 were only offered the option of completing the survey on the telephone (in order to try and boost the numbers completing the CATI survey).

Feed forward sample collected from the Age 50 pilot survey was used for original pilot respondents. Newly recruited respondents were asked to complete a short background questionnaire once they had been recruited, and this information was used to simulate feed forward data and was fed into the CAWI or CATI survey.

4.3.5 Contact procedure

All issued respondents were sent an advance letter and a colour information leaflet. An email was also sent where an email address was available. Those who were offered the option of both methodologies were provided with details of how to access the CAWI survey in both the letter and email and were told that they would receive a telephone call should they not be able to complete the survey online. All respondents were offered a £20 cash incentive for completing the survey.

Pilot respondents from the Age 50 survey were sent a reminder if they had not completed the CAWI survey after one week. This comprised of an email with a link to the information leaflet and a letter sent on the same day.

All respondents who had not completed the CAWI survey after three weeks received a telephone call from a telephone interviewer asking them if they would be able to complete the survey over the telephone.

4.3.6 Key findings and changes

Feedback from the pilot was collected in a variety of ways:

- The research team made follow up calls to respondents who completed the survey online asking respondents for their feedback about the experience of completing the survey
- Some telephone interviews were recorded and researchers listened to recordings, making notes on anything not working or requiring improvement

- Questions were included at the end of both the CAWI and CATI interviews asking respondents for their feedback on how they found the questionnaires and whether there were any particular questions they had issues with
- Researchers received some calls from respondents during the fieldwork period, and issues raised during these calls have been noted in the report
- Data from timing points for different sections of the questionnaire was also examined.

Both the CAWI and CATI interviews were generally well received by respondents. The key findings are detailed below:

CAWI interview

- 50% of original pilot cases completed the survey online and there were no abandonments which was encouraging
- Feedback from respondents about the CAWI survey was very positive with no significant issues raised about the survey itself
- Some respondents had problems accessing the survey because it was not possible to find it using Google
- The main reasons for not completing the survey online seemed to be due to lack of internet access or confidence in using the internet or simply a preference for telephone interviews
- It was recommended that the CAWI stage at the dress rehearsal ran in a very similar format to the pilot stage, with the main exceptions being:
 - It was recommended that all respondents who have not completed a CAWI interview are sent both an email and letter reminder after the first week (day 7) and then again after the second week (day 14). The CATI stage will then start a week later (day 21). With this approach it will be possible to monitor the impact of the reminders amongst the whole sample and explore response between those who had an email address (so will receive both the email and letter reminder), and those without email address (so will receive just the letter reminder)
 - It was recommended that that respondents were not permitted to complete the CAWI survey on devices with a screen size below a minimum size
 - A small number of minor adjustments to specific questions to aid completion.

CATI interview

- The CATI survey was around 14 minutes longer than the target interview length and there were various things which may have impacted on the interview length:
 - Interviewer familiarity with the questionnaire
 - Respondents having difficulty in remembering dates
 - Respondents and interviewers having difficulty calculating answers for numeric questions
 - Respondents going away to look up contact details.

Although the questionnaire length was longer than anticipated, the average length was calculated from a very small number of interviews and therefore no recommendations for reducing the interview length were made at this stage. It was felt that the dress rehearsal stage would provide a better indication of the overall questionnaire length (where a larger number of interviews were to be conducted).

- It was recommend that the CATI stage at the dress rehearsal ran in a very similar format to the pilot stage, with the following areas of consideration:
 - Consideration of whether interviewers were given calculators to help them with some of the age and numeric questions
 - A small number of minor adjustments to specific questions to aid completion.

Pilot materials

- These worked well and were well received.

4.4 Second pilot survey – the dress rehearsal

4.4.1 Objectives

The second pilot survey was a dress rehearsal and took place from the 24th April to 27nd June 2013. The main objectives of the dress rehearsal stage for the Age 55 survey were to:

- Test proposed fieldwork procedures.
- Provide estimates for fieldwork response at the main stage.
- Estimate the length of the CATI interview, in order to establish whether any questions needed to be cut before the main stage.
- Test and evaluate the content of both the CAWI and CATI interviews.

Respondents in the dress rehearsal were drawn from the main cohort with the intention that their responses to the survey would be combined with the interviews conducted at the main stage. As such the fieldwork processes were the same as those that were proposed to be used at the main stage.

4.4.2 Elements included in the dress rehearsal

The dress rehearsal included all elements that were intended to be used on the Age 55 survey, and interviews were carried out across both the CAWI and CATI modes. The CAWI and CATI interviews were the same, with the exception of some mode specific tweaks and consisted of the standard questionnaire.

4.4.3 Dress rehearsal briefing and fieldwork

CAWI fieldwork for the dress rehearsal started on 24th April 2013 and remained open for the entire fieldwork period. Telephone fieldwork was carried out by TNS BMRB's telephone unit, and took place from the 21st May to the 27th June 2013. Three interviewers worked on the dress rehearsal (including the telephone tracing element), and they were briefed by TNS BMRB researchers, with contributions from the CLS research team.

4.4.4 Dress rehearsal sample

A sample of 240 cohort members was selected for the dress rehearsal. These consisted of 215 respondents based in the UK and 25 respondents who were thought to be living abroad. Respondents living abroad were over sampled for the dress rehearsal so that the likely response for this group could be better estimated.

4.4.5 Dress rehearsal contact procedure

All respondents were sent an advance letter and a colour information leaflet. Those for whom an email was available were also sent an email at the same time, with the same information as contained in the advance letter and a link to the colour information leaflet and to the survey. Respondents were provided with details of how to access the CAWI survey and were informed that they would receive a telephone call should they not be able to complete the survey online.

Respondents were sent reminders if they had not completed the CAWI survey after one and two weeks. These comprised of an email (with a link to the information leaflet and the survey) and a letter sent on the same day as the email. Respondents who had not completed the CAWI survey after four weeks received a telephone call from a telephone interviewer asking them if they would be able to complete the survey over the telephone. This was a change from the recommendation of the first pilot (where three weeks was suggested). The response to the web survey was strong, with a significant number of cohort members completing the survey in the latter part of the second week. A decision was therefore taken to

extend the CAWI only fieldwork (and delay the start of the CATI fieldwork) whilst a significant number of web completes were still being received.

Respondents were called at different times of the day and on different days across the fieldwork period. The minimum call requirement was 10 calls, however, during the course of the dress rehearsal fieldwork the majority of cohort members were called in excess of this. Up to three telephone numbers were available per respondent: home telephone number, mobile telephone number and work telephone number. Where multiple numbers were available, the following hierarchy was used to order the telephone numbers to be dialled:

1. Cohort Member's landline telephone number
2. Cohort Member's mobile telephone number
3. Cohort Member's work telephone number

When a number was proven to be unproductive without refusal then the next available number in the hierarchy was activated.

After three weeks of telephone fieldwork TNS BMRB started a tracing exercise to try and trace any movers and cases where contact details were invalid or unavailable. Where stable contact or partner contact details which included a telephone number were available, these were transferred to a tracing telephone interviewer who attempted to trace the cohort member by contacting stable contacts or partners. Where stable contact details/partner contact details were not available, these cases were transferred for postal tracing, with cases being sent a stable contact letter and/or an occupier letter.

4.4.6 CAWI response

In total 236 cases were issued to the CAWI stage⁸. Table 4.1 displays the final web completion figures, including breaks for emigrant status, presence of an email address, and whether they took part in the 2008 survey.

Table 4.1: Final CAWI Response (dress rehearsal)

	All	Emigrant status		Presence of email address		Whether took part in 2008 survey	
		Emigrant	Non-emigrant	Present	Not present	Took part	Did not take part
TOTAL issued sample	236	21	215	168	68	182	54
Completed CAWI survey	136	10	126	125	11	116	20
%	57.6%	47.6%	58.6%	74.4%	16.2%	63.8%	37.0%
Partial web survey	1	-	1	1	-	1	-
%	0.4%	-	0.5%	0.6%	-	0.6%	-

⁸ Note - 240 cases were initially selected for the dress rehearsal stage, however amongst these, four cases were emigrant cases without an email address, so these could not be issued.

4.4.7 CAWI and CATI response for all GB (non-emigrant) cases

Table 4.2 shows the overall response across the web and telephone stages for all GB (non-emigrant) cases⁹.

Table 4.2: Final CAWI and CATI response for all GB (non-emigrant) cases (dress rehearsal)

	N	Total Sample (%)	Telephone Sample (%)
Total GB sample	215	100.0%	
Web issued	215	100.0%	
Full web interview	126	58.6%	
Partial web interview	1	0.5%	
GB not complete Web and no Tel number	7	3.3%	
Telephone issued	89		
Telephone cases with a telephone final outcome	81		100.0%
Full interviews	41		50.6%
Partial interviews	3		3.7%
Ineligible	1		1.2%
Non contact	1		1.2%
Telephone number invalid	5		6.2%
Not contactable on telephone number(s)	2		2.5%
Refusal	7		8.6%
Unavailable during fieldwork	4		4.9%
Will complete on web (but not done so)	2		2.5%
Other unproductive	15		18.5%
TOTAL FULL INTERVIEWS (ALL MODES)	167	77.7%	

4.4.8 Overall response across all cases cases

Across all cases (GB and non-GB), a total 177 full interviews were conducted (136 CAWI interviews and 41 CATI interviews).

4.4.9 Key findings and changes

In general, the dress rehearsal went extremely well, and the response was very encouraging. The key findings are detailed below:

CAWI Stage

- Response on the CAWI stage was extremely positive with 57% of all issued cases completing a CAWI interview, and 59% amongst GB only cases. This was higher than the estimated expected CAWI completion rate
- There were a small number of web partial interviews in the CAWI stage, however, when such cases were followed up in the CATI stage interviewers were generally able to persuade respondents to complete their interview over the telephone with them

⁹ (Emigrant cases were not eligible for the telephone stage and therefore are not included in this table).

- Overall the contact and reminder strategy appeared to work well and was well received. Some minor modifications were recommended (e.g. around reminder timings and mode) to boost response further for the main stage
- Unlike the pilot stage there were no reported problems from respondents struggling to access the survey via Google or other search engines
- Feedback from respondents about the CAWI survey was very positive and no significant issues were raised about the CAWI survey itself

CATI Stage

- The CATI interview length was longer than intended with an average length of 40 minutes
- Overall response amongst GB cases across both the CAWI and CATI stages was positive. In total, interviews were achieved in 78% of cases
- Eleven cases were transferred to tracing, and new contact details were achieved in over half of these cases which is encouraging

5. Conduct of fieldwork

5.1 Contact procedure for the CAWI stage

5.1.1 Advance letter, email and survey leaflet

Advance letters were sent to all non-emigrant cohort members allocated to the mixed mode sample group on 12th September 2013. There were four different types of advance letters for the mixed mode sample as follows:

- One for cohort members with a telephone number who took part in the last sweep of the study
- One for cohort members with a telephone number who refused to take part in the last sweep of the study
- One for cohort members with a telephone number who were non-contacts, other unproductive or not issued at the last sweep of the study
- One for cohort members without a telephone number

All four letters introduced the study, stating its importance and the importance of cohort member's continuing participation, but the wording varied slightly to be more relevant to the cohort member's response at the previous survey and whether a telephone number was available for them. It explained that this sweep of the study could be completed online for the first time and provided instructions for completion. The letter provided a web address for cohort members to go to, along with a unique user ID to enter to be able to complete the CAWI survey. It also informed them that if for any reason they could not complete the survey online, an interviewer would call them in a few weeks to take part over the telephone. For those cohort members without a telephone number, it explained that if they wished to take part via telephone they should get in touch with TNS BMRB to provide their telephone number.

A colour leaflet was also sent with these letters. The leaflet gave cohort members more information about the current wave of the study, including how to complete it online and the topics to be covered.

In addition, email invitations were also sent to all non-emigrant cohort members where an email address was present. There were four different types of email invitations in line with the four types of advance letters. Email invitations contained instructions for logging in to the online survey as well as a web link to a PDF version of the survey leaflet. To access the survey a hyperlink was included in the email which cohort members were required to click on and then enter their unique user ID which was also provided in the email. The unique user ID consisted of a nine digit numerical ID number,

All emigrant cohort members were only invited to complete the CAWI version of survey, and were invited to do so via an advance email. An advance letter was not sent. The email they received explained that the current sweep of the study could be completed online and did not mention the possibility of completing via telephone. The email also included a link to a different version of the PDF leaflet, which explained more details about the current wave of the study but again did not mention the telephone stage.

Copies of the advance letters and emails are included in the appendices.

5.1.2 First reminders

The first reminders were sent on 23rd September 2013 (day 12). Reminder letters were sent to all non-emigrant cohort members who had not yet completed the survey. There were four types of reminder letters sent following the sample breakdown used for the advance letters. The reminder letters included a web link to the survey leaflet. Reminder emails were also sent to these cohort members where an email address was available. There were four types of reminder emails, based on the sample breakdown used for the advance emails.

All emigrant cohort members who had not yet completed the CAWI survey were sent a reminder email, in line with their advance email.

Copies of the reminder letters and emails are included in the appendices.

5.1.3 Second reminders

The second reminders were sent on 23rd October 2013 (day 23). Reminder letters and emails were sent to all non-emigrant cohort members who had an email address and had not yet completed the survey¹⁰. There were two types of second reminder letters/emails for this group:

- One for cohort members with a telephone number
- One for cohort members without a telephone number

In addition, all emigrant cohort members who had not yet completed the CAWI survey were sent a second reminder email.

Copies of the reminder letters and emails are included in the appendices.

5.2 Contact procedure for the CATI stage

The following sample was issued to the CATI stage:

- All non-emigrant cohort members who were allocated to the mixed mode sample who had not completed the CAWI survey and a telephone number was available for them (this included cohort members who had started the CAWI survey but had not completed)
- All cohort members allocated to the telephone only sample group.

Even once the sample had been issued to the CATI stage, the CAWI stage remained open throughout the whole fieldwork period so that cohort members allocated to the mixed mode sample group could still complete the CAWI survey at any time.

5.2.1 Advance letters and leaflets for 'telephone only' sample

All cohort members who were allocated to the telephone only sample group (who were not invited to complete the CAWI survey) were sent an advance letter on 18th October 2013. There were three types of advance letters for this sample:

- One for cohort members who took part in the last sweep of the study
- One for cohort members who refused to take part in the last sweep of the study
- One for cohort members who were non-contacts, other unproductives or not issued at the last sweep of the survey.

¹⁰ Second reminder letters and emails were not sent to cohort members who did not have an email address.

All three letters introduced the study, stated its importance and the importance of cohort member's continuing participation, but the wording varied slightly to be more relevant to the cohort member's response at the previous survey. The letter introduced TNS BMRB's role in the survey and provided a free phone contact number. A leaflet was also sent with these letters. The leaflet gave cohort members more information about the current wave of the study including the topics to be covered.

In addition all cohort members allocated to the telephone only sample group, where an email address was available, were also sent advance emails. There were three types of email in line with the advance letters. The emails contained a link to a PDF version of the survey leaflet.

Copies of the advance letters and emails are included in the appendices.

5.3 Interview briefings for the CATI stage

All interviews that worked on the CATI stage of the Age 55 survey were briefed by members of the TNS BMRB research team. Researchers from CLS attended some of the briefings. Three half day briefings took place starting on the 14th October.

Briefings covered the following topics:

- Introduction to the briefing team
- Background to the study
- Advance letters and emails
- Who we are speaking to
- Avoiding refusals
- Dealing with movers
- Making contact & recording outcomes
- Questionnaire – Overview
- Practice interviews

5.3.1 Materials for interviewers

Telephone interviewers were provided with copies of the advance letter, emails and survey leaflet to help them when contacting cohort members and to ensure they were aware of the advance materials that cohort members had received. They were also provided with the detailed project briefing slides.

5.4 Issuing sample to interviewers

The CATI stage began on the 14th October, and sample was issued in two batches:

- All non-emigrant cohort members who hadn't completed the CAWI stage, where a telephone number was available, were issued to the CATI stage on the 14th October 2013.
- All cohort members who were allocated to the telephone only group were issued to the CATI stage on the 23rd October 2013.

For each case, the following CATI contact stages were followed:

1. CATI introduction screen
2. Initial outcomes
3. Follow up questions

5.4.1 **CATI introduction screen**

The CATI introduction screen contained the information text for interviewers to use when making their introductions to cohort members. In addition, it also informed interviewers of the last interview status (interviewed / non-contact / declined to take part), and whether the cohort member was part of the mixed mode or telephone only sample group.

There were two versions of the introduction text:

- One 'standard' version for all cohort members allocated to the mixed mode sample group but had not started the CAWI survey and for cohort members allocated to the telephone only sample group.
- A revised version for all cohort members allocated to the mixed mode sample group who had started the interview online but had not completed it. This introduction text encouraged the cohort member to complete the survey over the telephone with the interviewer from the point at which they stopped in the CAWI survey.

5.4.2 **Initial outcomes**

Following the introduction, interviewers could code the following outcomes:

1. Continue with interview
2. Answering Machine
3. Not available - make appointment (on same number)
4. New telephone number provided
5. Not contactable at number and no new number provided
6. Not capable of doing an interview on the telephone
7. Refused
8. Proxy refusal
9. Cohort member has already completed over the web
10. Cohort member will complete over the web
11. Not available during fieldwork period
12. Died - (use ONLY if died - NOT for other reasons)
13. Moved abroad

5.4.3 **Follow up questions**

Following coding the initial outcome, for all outcomes except for 'Continue with interview', the interviewers were prompted to record further information about the cohort member. The information recorded is shown in the Table 5.1:

Table 5.1: Follow up questions after initial outcome coded

Initial Outcome	Interviewer Action / Information prompted to record
2. Answering Machine	<ul style="list-style-type: none"> ■ Interviewer prompted to leave answer phone message. There were two standard messages which could be left: <p data-bbox="502 432 1396 683"><i>IF COHORT MEMBER ANSWERPHONE MESSAGE: Good morning/ afternoon/ evening. This is a message for [text fill: cohort member's name]. My name is and I'm calling on behalf of TNS-BMRB about the National Child Development Study. You should recently have received a letter from us explaining that we would be calling you. I will call back another time to try to contact you. If you want to get in touch with us please call us on 0800 015 0655. Thank you, goodbye.</i></p> <p data-bbox="502 728 1396 862"><i>IF UNKNOWN ANSWERPHONE MESSAGE: Good morning/ afternoon/ evening. This is a message for [text fill: cohort member's name] and I'm calling on behalf of TNS-BMRB about a survey. We will call back another time to try to contact them. Thank you, goodbye.</i></p>
3. Not available - make appointment (on same number)	<ul style="list-style-type: none"> ■ Appointment arranged ■ Whether spoke to cohort member, and if not who spoken to ■ Whether any additional telephone numbers to contact cohort member on, and whether these are the same as those held on the sample file ■ The new additional numbers (if different to those already held) ■ Email address (if known/available) ■ Whether cohort member still lives at current address (on sample file) ■ New address (if different)
4. New telephone number provided	<ul style="list-style-type: none"> ■ Whether the new number is the same as one held on the sample file ■ The new number (if different to those already held) ■ Whether spoke to cohort member, and if not, who spoken to ■ Appointment arranged to call back
5. Not contactable at number and no new number provided	<ul style="list-style-type: none"> ■ Whether cohort member still lives at address (from sample) ■ New address (if available) ■ Whether person willing to pass on letter to cohort member (if know new address but not willing to pass it to TNS BMRB)
6. Not capable of doing an interview on the telephone	<ul style="list-style-type: none"> ■ Why cohort member is not capable of doing the interview on the phone. ■ Whether spoke to cohort member, and if not, who spoken to
7. Refused	<ul style="list-style-type: none"> ■ Whether cohort member still lives at current address (on sample file) ■ New address (if different) ■ Reason for refusal ■ Whether refusal permanent and whether case could be re-issued
8. Proxy refusal	<ul style="list-style-type: none"> ■ Whether cohort member still lives at current address (on sample file) ■ New address (if different)

	<ul style="list-style-type: none"> ■ Reason for refusal ■ Whether refusal permanent and whether case could be re-issued ■ Whether cohort member still lives at current address (on sample file) ■ New address (if different) ■ Whether any additional telephone numbers to contact cohort member on, and whether these are the same as those held on the sample file ■ The new additional number (if it is different to those already held) ■ Email address (if known/available) ■ Who refused on behalf of cohort member
9. Cohort member has already completed over the web	<ul style="list-style-type: none"> ■ When/how long ago the respondent said they completed ■ Whether spoke to cohort member, and if not, who they spoke to ■ Whether any additional telephone numbers to contact cohort member on, and whether these are the same as those held on the sample file ■ The new additional number (if different to those already held) ■ Email address (if known/available) ■ Whether cohort member still lives at current address (on sample file) ■ New address (if different)
10. Cohort member will complete over the web	<ul style="list-style-type: none"> ■ Interviewer prompted to provide log in details and web address for the cohort member to complete online. ■ Whether spoke to cohort member, and if not, who they spoke to ■ Whether any additional telephone numbers to contact cohort member on, and whether these are the same as those held on the sample file ■ The new additional number (if different to those already held) ■ Email address (if known/available) ■ Whether cohort member still lives at current address (on sample file) ■ New address (if different) ■ Respondent re-called a minimum of two weeks later if they had not since completed the CAWI survey
11. Not available during fieldwork period	<ul style="list-style-type: none"> ■ Why cohort member is unavailable and when they will be available to take part ■ Whether spoke to cohort member, and if not, who they spoke to. ■ Whether any additional telephone numbers to contact cohort member on, and whether these are the same as those held on the sample file ■ The new additional number (if different to those already held) ■ Email address (if known/available) ■ Whether cohort member still lives at current address (on sample file) ■ New address (if different)
12. Died - (use ONLY if died - NOT for other reasons)	<ul style="list-style-type: none"> ■ Who interviewer spoke to
13. Moved abroad	<ul style="list-style-type: none"> ■ Who interviewer spoke to ■ New address (if known) ■ New telephone number (if known) ■ Email address (if known)

5.5 Managing contact telephone numbers

Across the majority of fieldwork the assignment of cases to the interviewers was automated via an electronic CATI sample management system. The system identifies an available interviewer and an 'autodialler' dials the number for the interviewer to whom the contact has been assigned. A priority queuing facility is built into the system which can be tailored to prioritise different types of contact (e.g. first contact, no reply at last call, specific appointment), and to ensure that appointments are kept at the agreed time. The dialler was set up for non-predictive dialling, which meant that cohort members were only called when a telephone interviewer was available. The exception to this was in the latter weeks of fieldwork (from 29th January onwards) when the management of the survey was changed to no longer be managed through the 'autodialler'.

Up to four telephone numbers were available for a cohort member. The following hierarchy was used to order the telephone numbers which were dialled:

1. Cohort Member's landline telephone number
2. Cohort Member's mobile telephone number
3. Cohort Member's work telephone number
4. Telephone number from telephone lookup

When a number was proven to be unproductive without refusal (Invalid / Moved - no new number/ Unsuccessful after 10+ calls) the next available number in the hierarchy was activated. When second and third numbers were proven to be unproductive without refusal, these were switched back to the first number in the hierarchy. During the majority of fieldwork this changing of numbers was managed centrally by the researchers.

Only during the last weeks of fieldwork when the survey was no longer managed through the 'autodialler', this switching of numbers was managed directly by interviewers.

5.6 Further reminders during telephone fieldwork

During telephone fieldwork further reminders were sent out to some cohort members.

5.6.1 Third reminders

The third reminders were sent on the 17th December 2014. Reminder letters were sent to all cohort members currently being dialled in the CATI survey with no final outcome. There were five types of letter:

- One for cohort members in the mixed mode sample group where no contact had been made (with the cohort member)
- One for cohort members in telephone only sample where no contact had been made (with the cohort member)
- One for cohort members in the mixed mode sample group where contact had been made (with the cohort member)
- One for cohort members in the telephone only sample group where contact had been made (with the cohort member)
- One for cohort members who had partially completed the survey online, but had not completed the survey in full (either over the telephone or online).

Reminder emails (reflecting the five reminder letters) were also sent out where an email address was held on the sample file for these cohort members.

Copies of the reminder letters and emails are included in the appendices.

5.6.2 Fourth reminders

The fourth reminders stage were sent on the 13th January 2014. A reminder letter was sent out to all cohort members who in CATI stage had reported to the telephone interviewer that they would complete the survey online but had not yet done so. A reminder email was also sent when an email address was available for the cohort member.

Copies of the reminder letters and emails are included in the appendices.

5.6.3 Text messaging

Text messages were sent out on the 24th January to all cohort members with a mobile phone number where no contact had been made with the cohort member. The text message was sent from a number branded as NCDS survey and read as follows:

The Age 55 phone survey finishes soon. We'll call from 02084334496. To make an appointment call 08000150655 or ncds@tns-bmrb.co.uk. We hope you can take part!

5.7 Tracing procedures

During fieldwork an extensive tracing exercise was carried out to try to locate cohort members who had not completed the survey, and whom contact had not been made with during the CATI stage. The tracing exercise consisted of tracing cohort members: via alternative contacts by telephone (by a dedicated telephone tracing team at TNS BMRB), via alternative contacts and occupiers by letter (sent out by TNS BMRB), and transferring cases back to CLS for further tracing.

The following groups were traced during telephone fieldwork:

- A. Those whose issued contact details had been confirmed as being incorrect and no further contact details were held; or
- B. Those where all the available telephone numbers had been exhausted, and contact had not been made with the cohort member or cohort member's contact details had not been confirmed with anyone.
- C. Those who had not previously provided CLS with a telephone number and could not therefore be issued to the telephone stage.

In total, TNS BMRB identified 1,140 cases to be traced, and of these 325 cohort members were successfully traced.¹¹

5.7.1 Cases traced via the alternative contacts by the telephone tracing team

The cases A and B listed above were passed to the dedicated telephone tracing team of interviewers for tracing when they had provided CLS with either:

¹¹ A successfully traced case is a case where contact details are confirmed or updated.

- a stable contact (name and telephone number)¹²;
- or a partner (name and telephone number which is different to that of the cohort member) who could be contacted.

All telephone tracing interviewers received a tracing briefing from members of the research team. The tracing interviews were carried out in a short CATI script. The interviewers were presented with the following information when making their tracing calls:

- Why the record needs tracing
- The partner name and contact telephone number (if available)
- The first stable contact name, telephone number and relationship to the cohort member (if available)
- The second stable contact name, telephone number and relationship to cohort member (if available).

For cases where there were both sets of alternative contact details, the partner was contacted as the first priority, the first stable contact as the second priority, the second stable contact as a third. The CATI script recorded when each call was made and the outcome of each call. During the tracing calls the interviewers attempted to speak to the partner/stable contact and confirm/collect the cohort member's new address, home and mobile telephone number and email address from them. Following the tracing calls the following actions took place:

- If a new telephone number was collected, the case was re-activated in the main survey with the new telephone number
- If a new address or email address was obtained, the advance letter/email was sent out to the respondent
- If the new details were known but the partner/stable contact was unwilling to pass them on, a tracing letter was sent out to them. The tracing letter was addressed to the cohort member, and it explained to them that we were trying to contact them for the study and asked them to contact TNS BMRB with their new contact details. The tracing letter was sent out to the stable contact in a sealed envelope and they were asked to pass it onto the cohort member. A copy of the tracing letter is included in the appendices.

5.7.2 Cases traced via stable contact letter

The cases A and B (listed at the start of this section) were traced via a stable contact letter where:

- They had not been issued to the telephone tracing stage because whilst a stable contact name and address was available, there was no telephone number
- They had been issued to the telephone tracing stage but contact was not been made with the stable contact or partner.

The stable contact letter was addressed to the stable contact and 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 contact TNS BMRB to provide the cohort member's new contact details, or to pass on the letter to the cohort member so they could contact TNS BMRB with their new details. A copy of the stable letter is included in the appendices.

5.7.3 Cases to be traced via occupier letters

The cases A and B (listed at the start of this section) were traced via occupier letters where:

¹² Up to two stable contacts were provided to TNS BMRB from CLS.

- There was no stable contact or partner contact details available so they could not be traced via telephone or stable contact letter
- They had been issued to the telephone tracing stage but contact had not been made with the stable contact or partner.

In addition, tracing cases C were also traced via the occupier letter.

The occupier letters were addressed to the cohort member’s address and asked them either to call TNS BMRB 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 applicable). A copy of the occupier letter is included in the appendices.

5.7.4 Cases transferred to CLS for further tracing

All tracing cases (A, B and C listed at the start of this section) which were unsuccessfully traced by TNS BMRB using the above tracing procedures, were passed on to the tracing team at CLS for further tracing.

Cases were sent through in batches across fieldwork in a ‘mover’ file. This file included details of all the tracing attempts already undertaken by TNS BMRB. In total, six mover files were sent across the fieldwork period, and 1,047 cases were sent. A breakdown of the files sent is shown in Table 5.2 below.

Table 5.2 Mover files sent from TNS BMRB to CLS during fieldwork

File	Date sent	Number of cases
1	31/10/2013	383
2	22/11/2013	271
3	06/01/2014	41
4	29/01/2014	117
5	03/02/2014	153
6	20/02/2014	82
TOTAL		1,047

Of the 1,047 cases sent to CLS in the mover files, 29 cohort members were successfully traced¹³.

5.8 Sample management during fieldwork

CLS continued to trace cohort members during the fieldwork period. CLS would send sample updates weekly to TNS BMRB. These sample updates consisted of three types:

- Changes in classification information: eligibility status, participation status, status of address
- Changes to contact information: change of address, telephone numbers, names, sex, dates of birth, stable address details, etc.
- Other information useful for contacting and tracing.

In total CLS sent through to TNS BMRB 22 sample updates during the fieldwork period. A breakdown of the month these were sent through, along with the number of cases is given in Table 5.3.

¹³ A successfully traced case is a case where contact details are confirmed or updated.

Table 5.3 Sample updates sent by CLS to TNS BMRB

Month	Number of cases
September 2013	69
October2013	22
November 2013	83
December 2013	117
January 2014	466
February 2014	383
March 2014	67
TOTAL	1,207

The action taken as a result of the sample updates depended on the type of sample update and the progress of the case. Table 5.2 summarises the actions taken by TNS BMRB as a result of sample updates from CLS.

Table 5.4 summarises the action taken by TNS BMRB as a result of these updates.

Table 5.4: Actions taken as a result of sample updates

Type of update	Not yet issued to CATI stage	Issued to interviewer and not yet returned with final outcome	Issued to TNS BMRB's Telephone Unit and final outcome assigned by interviewer
Change in eligibility status, i.e. death or emigration of cohort member	Appropriate outcome assigned by the research team and case not issued to CATI stage and no further reminders sent.	Appropriate outcome code assigned by Telephone Unit supervisor. This meant the record case would no longer be dialled.	If case had a productive outcome, no action. If case had an unproductive outcome a new survey outcome code was assigned to reflect this change if status.
Change in participation status (e.g. cohort member refused to take part)	As above.	As above.	No action.
Change in address status: issued address invalid and no new address	No further reminders sent out to address.	No further reminders sent out to address.	No action.
Updated address or email address	New advance letter / email sent out to respondent.	New advance letter / email sent out to respondent.	For productive outcomes, and unproductive outcomes where the interviewer had made contact with the cohort member, the sample database was amended and the updated contact information was used when the case was returned to CLS. For unproductive cases with untraced or non-contact outcomes, the case was re-issued with a new letter/email being sent out
Updated telephone number	The sample database was updated.	Telephone Unit supervisors manually updated the telephone number being dialled.	For productive outcomes, and unproductive outcomes where the interviewer had made contact with the cohort member, the sample database was amended and the updated contact information was used when the case was returned to CLS. For unproductive cases with untraced or non-contact outcomes, the case was re-issued with a new telephone number being dialled.

Cohort members also sometimes contacted TNS BMRB with information. This information was handled in the same way as the sample updates from CLS.

When telephone interviews received updated contact details this information was recorded in the outcome follow up questions described earlier in Section 5.4.3.

5.9 Fieldwork progress

Fieldwork began on the 12th September 2013, when the CAWI stage started. The telephone stage then started on 14th October 2013, and fieldwork ended on 19th March 2014. The CAWI stage remained open

throughout fieldwork so that cohort members allocated to the mixed mode sample group could still complete the CAWI survey at any time.

Fieldwork progress reports were sent to CLS weekly. These comprised of the survey response (broadly in the categories of productive CAWI, productive CATI, non-productive, ineligible and outstanding) by different sample groups: mixed mode sample group (including separate breaks for mixed mode sample group – GB cases and mixed mode sample group – emigrant) and telephone only sample group.

5.10 Thank you letters and emails

Thank you letters were sent to all cohort members who had completed the interview except for emigrants, and a copy can be found in the appendices. Thank you letters were sent on a monthly basis, and the contact information was cleaned before sending the letters. All emigrants who completed the study were sent a thank you email.

A copy of the thank you letter and email is included in the appendices.

5.11 Fieldwork quality control

All interviewers were required to attend a half-day briefing and conduct practice interviews before starting work. During the briefing, interviewers conducted dummy interviews.

TNS BMRB's standard telephone fieldwork quality control procedures ensure that telephone interviews are validated during the course of the interview by a team of supervisors using undetected, remote listening facilities. No interviews are carried out without a supervisor present. A systematic method is used to select interviewers to be monitored, which ensures that all interviewers are monitored on a regular basis. Feedback is given to interviewers on each interview monitored. In addition, a monthly performance review is held with each interviewer.

The interviewer's route through the CATI questionnaire was programmed so that all relevant questions came on route according to the cohort member's earlier answers. Consistency checks of values and measurements were built into the CATI. 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.

5.12 Fieldwork issues and complaints

Complaints about the survey could be received by TNS BMRB or by CLS. If complaints were made directly to CLS, the matter would be referred to TNS BMRB for further investigation. Once fully investigated either TNS BMRB or CLS would respond, depending on the nature of the complaint. If the complaint concerned the interviewer's conduct, the matter would be handled by one of the managers of the Telephone Unit.

If complaints were made directly to the TNS BMRB research team, the matter would be investigated and then forwarded to the managers of the Telephone Unit (if it concerned a CATI interview) and CLS.

5.13 Confidentiality issues

In order to maintain confidentiality, interviewers were instructed to avoid mentioning the title of the study to anyone but the cohort member (or their partner).

The advance letter and information leaflet informed cohort members that their answers were treated in strict confidence in accordance with the Data Protection Act.

6. Survey response

6.1 Summary

A total of 8,958 cohort members successfully completed the Age 55 survey, a response rate¹⁴ of 78% was achieved, and a co-operation rate¹⁵ of 88%.

6.2 Details of overall survey response

Productive interviews were completed for 78% of the sample (8,958 interviews). Productive cases were made up of full productive interviews, and partially productive interviews.

Of the 8,958 productive interviews completed, 65% were completed on the CAWI survey and 35% were completed on the CATI survey.

There were two types of partial interviews:

- Partially productive interviews - partial interviews where at least the household grid section of the survey has been completed and the cohort member stopped after the variable HISTINT. These partial interviews are included with the productive interview total.
- Partially unproductive interviews - partial interviews where the cohort member started the survey but stopped before the end of the household grid (before the variable HISTINT).

Table 6.1 provides a detailed breakdown for contact and response to the survey.

¹⁴ The survey response rate is the percentage of productive interviews from the sample, excluding ineligible cohort members.

¹⁵ The co-operation rate is the percentage of productive interviews from the sample of eligible cohort members where contact was made.

Table 6.1: Full details of contact and survey response

	No. of cohort members	% of all sample	% of contacted sample
Total issued sample	11,553	100	-
Total contacted sample	10,194	88	100
		%	%
Issued to the CAWI stage	11,553		
CAWI productive interviews	5,857	51	57
Full CAWI interview	5,7999	50	57
Partial CAWI interview (productive)	59	1	1
CAWI unproductive	713	6	1
Partial CAWI interview (unproductive)	55	<1	1
No web interview and emigrant case	166	1	-
No web interview and no telephone number present	492	4	-
Issued to CATI stage	4,980	43	48
CATI productive interviews	3,101	27	30
Full CATI interview	3,050	26	30
Partial CATI interview (productive)	51	<1	1
CATI Unproductive	1836	16	18
Partial CATI interview (unproductive)	138	1	1
Refusal	464	4	5
Unavailable during fieldwork	29	<1	<1
Not capable of telephone interview	22	<1	<1
Will complete on web (no web interview)	109	1	1
Already complete on web (no web interview)	3	<1	<1
Contact made but did not complete interview	415	4	4
Issued to telephone and non-contact	655	6	-
CATI ineligible	46	<1	-
Died	42	<1	-
No longer living in Great Britain	4	<1	-
Total productive interviews (CAWI and CATI)	8,958		
Response rate		78	
Co-operation rate			88

6.3 Overall response by sample type

Table 6.2 displays the survey contact and response by the different sample types (mixed mode sample group and the telephone only sample group). It also shows response between cases in Great Britain (referred to as 'GB' cases) and emigrant cases. The response rate was largely consistent between the GB

cases in the mixed mode sample (79%) and the telephone only sample¹⁶ (78%). The response rate was significantly lower among emigrants (58%) but this was to be expected as this group of cohort members were only approached to complete the CAWI version of the survey.

In order to make a like for like comparison between the mixed mode sample group and the telephone only sample group, the two sample groups should be compared amongst only cohort members who had a telephone number available on the sample; this is because the telephone only sample group consisted of just GB cohort members with a telephone number¹⁷. Therefore a breakdown of response amongst the mixed mode GB sample group with a telephone number available is included on Table 6.2. The response rate amongst this group was 83% which is considerably higher than amongst the telephone only sample group (78%), suggesting that the sequential mixed mode strategy had a positive impact on the survey response. In addition, the contact rate was also notably higher amongst this mixed mode sample group (94% compared to 84%).

As shown in Table 6.2, 21 cohort members allocated to the telephone only sample completed or partially completed the CAWI survey. This is because previous keep in touch mailings from CLS to cohort members prior to the Age 55 survey mentioned that the Age 55 survey would be able to be completed by online. If cohort members allocated to the telephone only sample were aware of this and asked the interviewer spontaneously if they could complete the CAWI survey instead of the CATI survey, interviewers provided details for them to do so.

¹⁶ Only GB cases were included in the telephone only sample.

¹⁷ Within the mixed mode GB sample group 94% of cohort members had a telephone number available. This compares to 100% of the telephone only sample group because only cohort members with a telephone number were eligible to be selected for this sample group.

Table 6.2: Full details of contact and survey response by sample group and GB/Emigrant status

	MIXED MODE								TELEPHONE ONLY		MIXED MODE AND TELEPHONE GB ONLY	
	ALL		GB only		Emigrant only		GB only with tel number					
	N	% of all	N	% of all	N	% of all	N	% of all	N	% of all	N	% of all
Total issued sample	10,054	100	9,687	100	367	100	9,126	100	1,499	100	11,186	100
Total contacted sample	8,804	88	8,603	88	201	97	8,542	94	1,390	84	9,993	88
Issued to the CAWI stage	10,054	100	9,687	100	367	100	9,126	100	1,499	100	11,186	100
CAWI productive interviews	5,836	58	5,642	58	194	53	5,612	61	22	1	5,664	51
Full CAWI interview	5,778	57	5,593	58	185	50	5,566	61	21	1	5,614	50
Partial CAWI interview (productive)	58	1	49	<1	9	2	46	1	1	<1	50	<1
CAWI unproductive	712	7	539	6	173	47	46	1	1	<1	540	5
Partial CAWI interview (unproductive)	54	1	47	1	7	2	46	1	1	<1	48	1
No web interview and emigrant case	166	2	-	-	166	45	-	-	-	-	-	-
No web interview and no telephone number	492	5	492	5	-	-	-	-	-	*	492	4
Issued to CATI stage	3,503	35	3,503	36			3,468	38	1,476	98	4,979	45
CATI productive interviews	1,952	19	1,952	20	-	-	1,938	21	1,149	77	3,101	28
Full CATI interview	1,908	19	1,908	20	-	-	1,895	21	1,142	76	3,050	27
Partial CATI interview (productive)	44	<1	44	<1	-	-	43	<1	7	<1	51	<1
CATI Unproductive	1,512	15	1,512	16	-	-	1,495	16	323	22	1,835	16
Partial CATI interview (unproductive)	124	1	124	1	-	-	121	1	14	<1	138	1
Refusal	373	4	373	4	-	-	361	4	91	6	464	4
Unavailable during fieldwork	22	<1	22	<1	-	-	21	<1	7	<1	29	<1
Not capable of telephone interview	17	<1	17	<1	-	-	17	<1	5	<1	22	<1
Will complete on web (no web interview)	99	1	99	1	-	-	99	1	10	1	109	1
Already complete on web (no web interview)	3	<1	3	<1	-	-	3	<1	-	-	3	<1
Contact made but did not complete interview	324	3	324	3	-	-	324	4	91	6	415	4
Issued to telephone and non-contact	550	5	550	6	-	-	549	6	105	7	655	6
CATI ineligible	42	<1	42	<1	-	-	35	1	4	<1	46	<1
Died	39	<1	39	<1	-	-	32	<1	3	<1	42	<1
No longer living in Great Britain	3	<1	3	<1	-	-	3	<1	1	<1	4	<1
Total productive interviews (All)	7,788	78	7,594	79	194	53	7,550	83	1,171	78	8,765	79

6.4 Overall response by last sweep of interview

Table 6.3 below shows a summary of survey contact response by survey by sweep of last interview. As shown in the table, contact and response rates varied according the last sweep of the survey the cohort last participated in.

Interestingly, there is a clear pattern showing that the co-operation rate increased the more recently the cohort member participated, with the exception of cohort members last interviewed in 2000 which had the lowest co-operation rate (43%).

Table 6.3: Summary of contact and survey response by last sweep of interview

N	1958	1965	1969	1974	1981	1991	2000	2004	2008	Total
Total issued sample	9	7	9	83	189	168	735	897	9,456	11,553
Total contacted sample	5	4	5	47	106	96	319	603	9,009	10,194
CAWI productive interviews	1	-	3	32	68	51	97	244	5,362	5,858
Partial CAWI interview (unproductive)	-	-	-	-	5	2	7	4	37	55
No web interview and emigrant case	-	1	2	18	43	19	38	37	8	166
No web interview and no telephone number	2	-	1	12	22	20	273	112	50	492
CATI productive interviews	1	2	1	3	4	12	65	167	2,846	3,101
Partial CATI interview (unproductive)	-	-	-	1	1	2	20	21	93	138
CATI Unproductive	5	4	2	16	45	60	231	304	1,030	1,697
<i>Non-contact</i>	2	2	1	5	17	31	101	137	359	655
<i>Refusals</i>	3	1	1	6	19	22	80	81	251	464
<i>Other</i>	-	1	-	5	9	7	50	86	420	578
CATI ineligible	-	-	-	1	1	2	4	8	30	46
Total productive interviews (All)	2	2	4	35	72	63	162	411	8207	8959
%										
Total issued sample	100	100	100	100	100	100	100	100	100	100
Total contacted sample	56	57	56	57	56	57	43	67	95	88
CAWI productive interviews	11	-	33	39	36	30	13	27	57	51
Partial CAWI interview (unproductive)	-	-	-	-	3	1	1	<1	<1	<1
No web interview and emigrant case	-	14	22	22	23	11	5	4	<1	1
No web interview and no telephone number	22	-	11	14	12	12	37	12	1	4
CATI productive interviews	11	29	11	4	2	7	9	19	30	27
Partial CATI interview (unproductive)	-	-	-	1	1	1	3	2	1	1
CATI Unproductive	56	57	22	19	24	36	31	34	11	15
<i>Non-contact</i>	22	29	11	6	10	18	14	15	4	6
<i>Refusals</i>	33	14	11	7	10	13	11	9	3	4
<i>Other</i>	-	14	-	6	5	4	7	10	4	5
CATI ineligible	-	-	-	1	1	1	1	1	<1	<1
Total productive interviews (All)	22	29	44	42	38	38	22	46	87	78

6.5 CAWI survey response

Charts 6.1 and 6.2 display the CAWI response on a daily basis and a cumulative daily basis from the start of the CAWI fieldwork until the start of the CATI fieldwork on day 33.

Chart 6.1 CAWI response by day

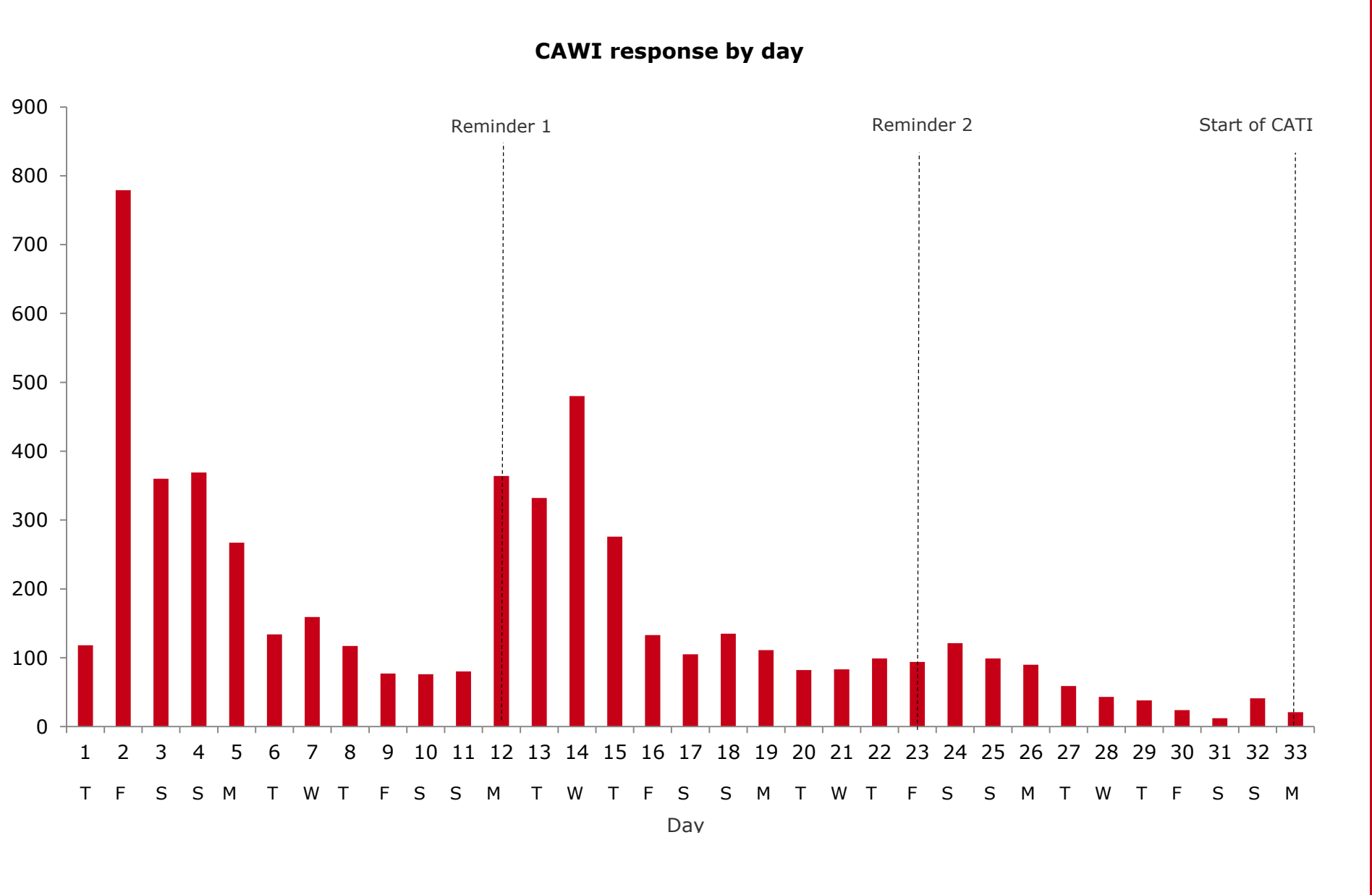
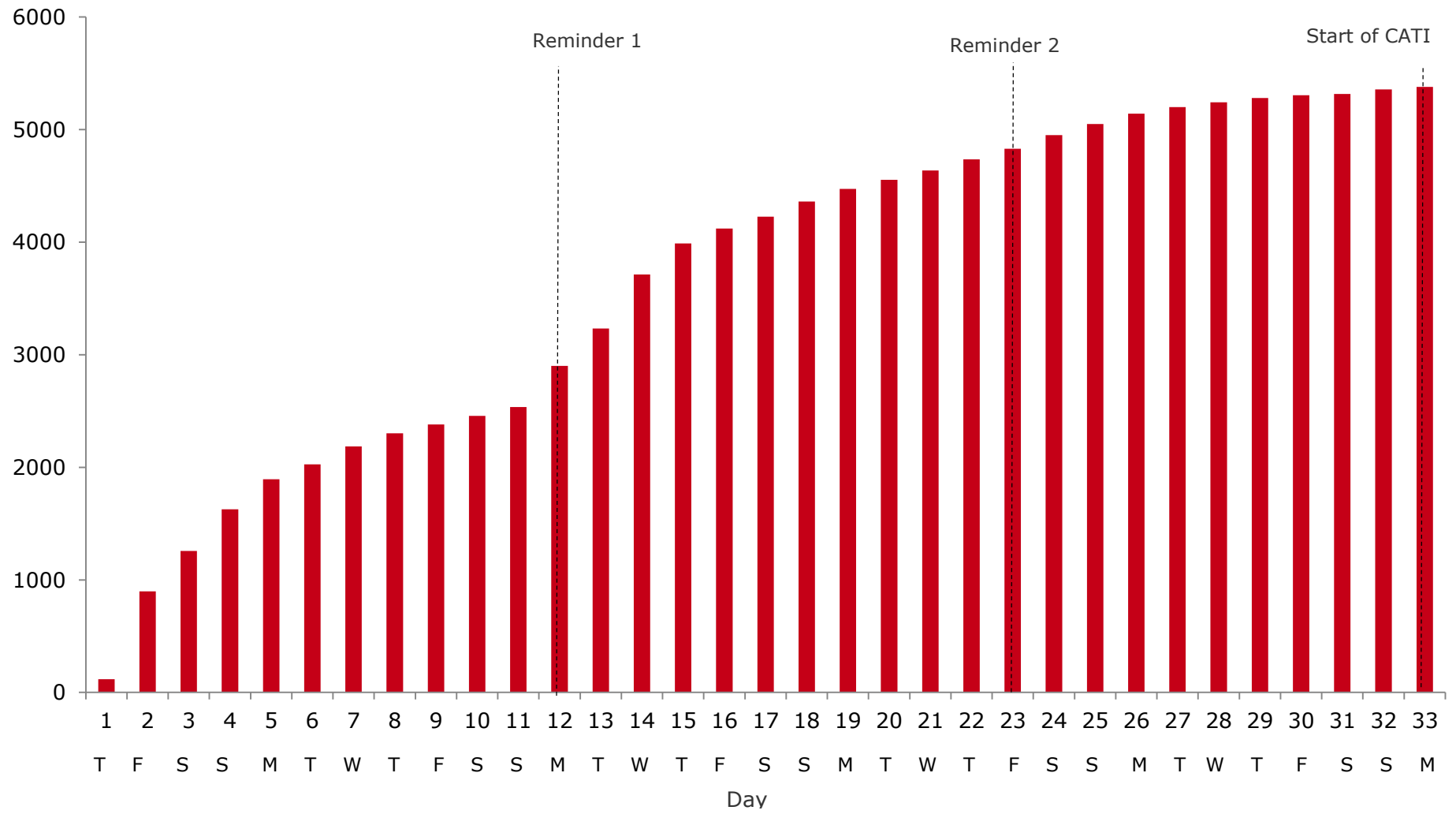


Chart 6.2 CAWI response by day (cumulative)



6.5.1 CAWI response at key milestones

Table 6.4. shows a breakdown of the fully productive CAWI completes from the mixed mode sample across the fieldwork period at key milestones: up to the point of the first reminder, up to the point of the second reminder and up to the start of the CATI stage.

Overall, 50% of the fully productive CAWI interviews were complete the before the first reminder was sent out, and 93% were complete before the start of the CATI stage.

Table 6.4 CAWI completes by milestone within the mixed mode sample group

	N	%
CAWI completed up to Reminder 1	2,900	50
CAWI completes following reminder 1 up to Reminder 2	1,836	32
CAWI completes following reminder 2 up to start of CATI	621	11
CAWI completed up to start of CATI	5,357	93
CAWI completes following the CATI	420	7
TOTAL CAWI COMPLETES	5,777	100

6.5.2 Number of sessions used to completed the CAWI survey

A breakdown of the number of sessions cohort members used to complete the CAWI survey¹⁸ is shown in Table 6.5 below.¹⁹

Table 6.5 Number of sessions used to complete the CAWI survey

	N	%
1	4,348	75
2	942	16
3	328	6
4	77	1
5	44	1
6	24	<1
7	-	-
8	3	<1
9	6	<1
10 +	6	<1

¹⁸ Based on the 5,778 fully productive CAWI interviews within the mixed mode sample group.

¹⁹ Based on the 5,778 fully productive CAWI interviews within the mixed mode sample group.

6.5.3 Devices the CAWI survey were completed on

All cohort members within the mixed mode sample group who completed the CAWI survey were asked what device they had used. The breakdown of the type of devices is as follows:

- 48% Laptop computer
- 32% Desktop computer
- 13% Tablet
- 1% Smart phone
- 1% Something else / not known

6.6 CATI survey response

As detailed in Section 6.2, 3,050 full productive CATI interviews were completed, and 51 partially productive interviews were completed. The average number of telephone calls required to completed a productive interview was 13.2. When examining this between the sample groups, the average number of calls to achieve an interview in the mixed mode sample group was 15.7, compared to 10.5 in the telephone only sample group.

6.7 Module timings

Estimating average interview lengths for CAWI surveys is very complex. Not only can respondents can complete interviews over multiple days, even when they are completed on one day, respondents can take breaks during completion or be carrying out other activities at the same time. Therefore time estimations have been calculated on completed CATI and CAWI interviews separately.

For the CATI survey the overall interview length was, on average, just over twenty seven minutes. The longest section was the employment and income section with an average length of eight and a half minutes. Table 6.6 shows the mean length of each module.

Table 6.6: Length of modules within CATI survey

<i>Base: 2710²⁰</i>	Mean time (minutes and seconds)
Contact information 1	1:46
Grids	3:24
Family	1:46
Housing	1:53
Employment and income	8:33
Lifelong learning	0:33
Health	6:56
Contact information 2	2:56
Total interview length	27:07

²⁰ A minority of CATI interviews were stopped and started again later, making the interview length appear artificially long. These cases have been excluded from this data.

For the CAWI survey the overall interview length was, on average, thirty five and a half minutes. In line with the CATI survey, the longest section was the employment and income section with an average length of 12 minutes. Table 6.7 shows the mean length of each module. However, the caveats around CAWI timings reported at the start of this section must be borne in mind when reviewing these module timings.

Table 6.7: Length of modules within CAWI survey

<i>Base: 4364²¹</i>	Mean time (minutes and seconds)
Contact information 1	3:10
Grids	5:17
Family	1:58
Housing	2:59
Employment and income	12:04
Lifelong learning	0:38
Health	6:29
Contact information 2	2:55
Total interview length	35:30

²¹ This is based on a CAWI interviews completed in one session.

7. Coding, editing and data preparation

7.1 Data checking and editing

The need for editing CAWI and CATI data was minimal as the route through the questionnaire was controlled by the script, so cohort members/interviewers were required to enter an answer before moving on to the next question. There were also consistency checks included in the script. In the CAWI script, the cohort member would be prompted to review their answer before moving on and in the CATI script, interviewers would be prompted to clarify and query data discrepancies directly with the cohort member during the interview. Consistency errors comprise of 'soft' and 'hard' checks. Hard checks must be resolved at the time of the interview, but soft checks can be suppressed by the interviewer or the cohort member. Due to inclusion of the CAWI mode within the current sweep, the majority of checks included in the script were soft checks.

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. This checking found some responses at questions where they should not be. This was a result of 'snapback': where a respondent gave a particular answer at one question that caused another question to be asked, answered this second question but then changed their mind and gave a different answer to the first question which meant the second question should not have been asked. In cases such as this the second questions was edited to be 'not applicable'.

7.2 Coding open-ended and 'other specify' questions

The interview included a number of questions where the responses were recorded verbatim and subsequently needed to be coded. These were questions where the cohort member/ interviewer was either unsure where to code a particular response within the existing code frame or the full range of responses could not be predicted before the interview.

Most of the questions that required coding were 'other-specify' questions, where the cohort member/interviewer entered an answer if they felt it was different to the answer codes in the pre-specified code frame. In many cases it was possible for these answers to be coded back into the existing code frame (back coding). However, in some cases back coding was not possible as new, distinct groups of responses emerged.

Before the data was passed on to TNS BMRB's coding team, early data was reviewed by researchers to identify where additional codes were needed, or in the case of fully open ended questions, to create a new code frame. In some cases it was still not possible for responses to be allocated to an existing code or any of the additional codes. In these instances, coders assigned these cases to an 'other' code. Researchers monitored the number of cases given an 'other' code and reviewed them in cases where there was a high number being allocated this code.

Code frames were devised by researchers at TNS BMRB, basing them wherever possible and appropriate on code frames that had been used in previous sweep of BCS70. CLS commented on and signed off the

code frames and agreement was reached in October 2013. A list of all questions that were coded is provided in Table 7.1.

Table 7.1: List of coded variables

Module	Variable names	Coding
Housing	HOMEG, HOMEA3	Other specify questions (for some questions no additional codes were added and backcoding only was conducted
Employment and Income	JTITLE, JDO, JQUAL, (CJFIRM) CLJTITLE, CLJDO, CLJQUAL, (CJFIRM) CJTITLECUR/CJTITLE, CJDO, CJQUAL, (CJFIRM)	Standard Occupation Coding (SOC) 2000 and 2010 and Standard Industrial Classification (SIC) ²² 2007.
	OTHERACT1, CLOTHACT1, CLJYOEND GROP3, GROP5, NETP3, NETP5 USLP3, USLP5, INCP2, INCP4	Other specify questions (for some questions no additional codes were added and backcoding only was conducted
	SEOTYPE	Fully open-ended question, but responses backcoded into SETYPE
Health	KHLOTH	Fully open-ended question, but responses backcoded into SETYPE
	CANCTYPE	Other specify questions (for some questions no additional codes were added and backcoding only was conducted
Updating contact information	SCR1RELA, DEVICE, PROXYREL	Other specify questions (for some questions no additional codes were added and backcoding only was conducted

7.3 Combining dress rehearsal data with the main stage data

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

Where questions were semantically the same (even if small changes had been made) then the data was merged. If questions had changed in meaning though, or response options had changed then the data could not be merged and a dress rehearsal version of the question was included in the combined dataset. Where a question was removed from the questionnaire after the dress rehearsal, the dress rehearsal data has not been included in the dataset.

²² SIC coding was only conducted for current employment.

7.4 Income question error – re-contact survey

In September 2013, shortly after the start of CAWI fieldwork, it was identified that there was a small question wording error in question INCAMT, with the word 'before' appearing instead of 'after' in the question text. This wording error was corrected on the 18th September 2013 and all interviews completed after this date were asked the correct version of the question.

1,863 cohort members completed the survey with the incorrect version of INCAMT in the survey. A short re-contact CAWI survey was set up and all cohort members who had completed the survey with the incorrect version of INCAMT (excluding those who refused at INCAMT or at the follow up 'un-folding' bracket questions). These cohort members were sent a letter and email (where an email address was available) explaining about the error, and asking them to re-confirm their answer to the question in a short CAWI survey. In total, 1,391 cohort members re-confirmed their survey answer in CAWI re-contact survey.

7.5 Survey outputs

Table 7.2 provides details of the survey outputs supplied to CLS

Table 7.2: Survey outputs

Output	Notes
CAWI / CATI data	The CAWI/CATI data was supplied as a number of files - a flat file and six hierarchical files:
Final data	Main data file (flat format) Household grid data file (hierarchical format) Relationship history data file (hierarchical format) Children who have died data file (hierarchical format) Housing history data file (hierarchical format) Economic activity history data file (hierarchical format) Qualifications data file (hierarchical format)
Contact information	Two contact sample information files were supplied. One file for productive cases, which included all cases where the at least the initial contact block of the interview had been completed. The unproductive contact sample included all remaining cases.
Productive contact sample file	
Unproductive contact sample file	
Paradata	Two files were supplied:
Flat paradata	The hierarchical paradata showed all contact attempts made by TNS BMRB for each respondent, with each contact attempt being a line of data.
Hierarchical paradata	The flat file contained case level information, including final outcome.

The hierarchical data files are a restructured form of the data as it has been captured in the survey. In the main flat format data file each record represents the responses of a cohort member, but in the

hierarchical files each record represents an event within a history or an individual in the cohort members life.