Ipsos MORI
Social Research Institute

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Millennium Cohort Study Sixth Sweep (MCS6)

Technical Report

Prepared for the Centre for Longitudinal Studies, UCL Institute of Education

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Version 1 (September 2016)

The first version of the technical report was released on the 27 September 2016.

Version 2 (February 2017)

The second version of the technical report was released on the 7 February 2017. Tables 8.23, 8.24 and 8.25 were updated to reflect the fact that three respondents requested that their saliva samples were destroyed after their household visit.

Acknowledgements

Ipsos MORI would like to thank all of the cohort members who generously gave their time to participate in this study and without whom this survey would not have been possible.

We would also like to thank all the interviewers who worked on this survey, and on whom so much of the success of the survey depended.

1 Introduction

1.1 Background to the study

The Millennium Cohort Study or MCS (also known as Child of the New Century to participants), is one of Britain's world famous national longitudinal birth cohort studies, four of which are run by the Centre for Longitudinal Studies (CLS) at the University College London Institute of Education, London.

Britain has a unique and world-renowned tradition of carrying out national birth cohort studies, which follow the same group of people from birth into and through adulthood. They provide a uniquely detailed picture of the lives of particular generations, and in this way help us to understand what matters for healthy and happy lives. There are five such studies and Child of the New Century (CNC) is the most recent one:

- National Survey of Health and Development (cohort born in 1946)
- National Child Development Study (cohort born in 1958)
- 1970 British Cohort Study (cohort born in 1970)
- Next Steps (cohort born in 1989/90[1])
- Child of the New Century (cohort born in 2000/01).

These studies allow us to see how things have changed for different generations: understanding the differences in growing up, and the circumstances that have become more or less important and relevant to people's lives, as times have changed.

The study is funded by the Economic and Social Research Council (ESRC) and selected government departments including for MCS6: the Department of Health, Department for Education, Department for Work and Pensions, Department for Transport, Home Office, Ministry of Justice, Welsh Government and the Northern Ireland Executive.

Following a competitive tendering process, the Centre for Longitudinal Studies commissioned Ipsos MORI to carry out the instrument development, data collection and initial data preparation for the sixth sweep of the Millennium Cohort Study (MCS6). Ipsos MORI were also responsible for delivering the fifth sweep of the study (MCS5). The National Centre for Social Research (NatCen) conducted three out of the four previous sweeps (MCS1, MCS3 and MCS4) and the first, third and fourth sweeps of fieldwork in Northern Ireland were subcontracted by NatCen to the Northern Ireland Statistics and Research Agency (NISRA). GfK NOP together with Millward Brown (in Northern Ireland) conducted the second sweep (MCS2).

[1] This cohort was recruited at age 13/14, rather than at birth or the first 9 months.

1.2 Key features

The Millennium Cohort Study follows over 19,000 young people born in the UK between September 2000 and January 2002[2]. It differs from the earlier birth cohort studies in a number of ways:

- It covers births over a full year rather than those that took place in a particular week. This means it can measure differences in young people's outcomes depending on the month they were born.
- It follows young people across all four countries of the UK. It oversamples from Scotland, Wales and Northern Ireland, so comparisons can be made across all four countries with each other, as well as to look at the UK as a whole.
- It oversamples young people from areas with higher concentrations of minority ethnic families and from disadvantaged backgrounds. There is evidence that these differences affect life chances. By including these oversamples, the study enables a much greater understanding of when and how differences emerge, and how they change over time.

1.3 Previous sweeps

The first sweep was conducted during 2001-2002 and laid the foundations for a major new longitudinal research resource. Information was collected from the main resident parent or carer and any co-resident partner of almost 19,000 babies aged 9 months. The first survey covered the circumstances of pregnancy and birth, as well as those of the all-important early months of life, and the social and economic background of the family into which the children were born. Parental consent to link to maternity hospital records was requested.

The second sweep took place during 2003-2004 when the children were aged 3. Interviews were conducted with the main resident parent or carer and any co-resident partner and included some additional questions about older siblings and (in England) a self-completion questionnaire for up to two siblings aged 10-15. The cohort members were also involved directly in the study for the first time. They were asked to complete two cognitive assessments and had their height and weight measured by interviewers. Interviewers were asked to record some observations about the home environment and the neighbourhood. Parental consent to link to health records and to education records (for older siblings) was sought.

The third sweep took place in 2006 when the children were aged 5 and had started school. Interviews were conducted with the main resident parent or carer and any co-resident partner, and, as in sweep 2, there were questions about older siblings. In England, there was a self-completion questionnaire for up to two siblings aged 10–15. The cohort members completed four cognitive assessments and had their height, weight and waist measurements taken. Information about the young person was also collected from class teachers in Scotland, Wales and Northern Ireland. This provided equivalent information to the 'Foundation Stage Profile' data collected through routine records in England. Parental consent to link to Foundation Stage Profile records was collected.

The fourth sweep was carried out in 2008 when the children were aged 7 and in their third year of primary schooling. Interviews were conducted with the main resident parent or carer and any co-resident partner. The cohort members were asked to participate in four cognitive assessments; had their height, weight, body fat and waist measurements taken and

[2] The date of birth range varies by country; November 2000-January 2002 in Scotland and Northern Ireland and September 2000-August 2001 in England and Wales.

filled in a paper self-completion questionnaire about their lives. Information about the cohort children was collected from their class teachers in each country. Parental consent to link to health (parents, cohort members and siblings), education (cohort members and siblings) and economic (parents) records was sought.

The fifth sweep took place during 2012-2013 when the children were aged 11 and in their last year of primary school. Interviews were conducted with the main resident parent or carer and any co-resident partners. The cohort members were asked to participate in three cognitive assessments; had their height, weight and body fat measurements taken and filled in a paper self-completion questionnaire. Information about the children was collected from the cohort member's teachers in England and Wales. Consent to link to economic records (Department for Work and Pensions) was sought from parents and partners.

In addition, parental permission was sought for the cohort members to take part in three further projects led by the Institute of Child Health (ICH) at UCL. At MCS2, a saliva sample was taken from the children in order to measure exposure to common childhood infections. The saliva was not used for DNA or genetic testing. At MCS4, physical activity monitoring was carried out, in which children's levels of physical activity during the course of a week were measured using an activity monitor worn by the children. A project called "Every tooth tells a story", involved the postal collection of children's shed milk teeth, starting at the time of the MCS4 mailing, in order to test them for exposure to lead in the environment.

1.4 Data deposits currently available

Data from the MCS surveys have been deposited with the UK Data Service. Details can be found in the appendices. Further information can be found at: https://discover.ukdataservice.ac.uk/series/?sn=2000031

1.5 The sixth sweep

The sixth sweep took place from January 2015 to April 2016 when the cohort members were aged 14, a key transitional stage between childhood and adulthood. To reflect this, cohort members were asked to provide more information than for previous sweeps. Interviews (including a short cognitive assessment) were conducted with the main resident parent or carer and any co-resident partner. Young people were asked to complete an extensive questionnaire on the interviewer's tablet; to participate in two cognitive assessments and to have their height, weight and body fat measurements taken. In addition, saliva samples were sought from resident natural (biological) parents and from the young people. Some young people were also asked to complete a time-use record and to wear an activity monitor for two 24 hour periods following the household visit.

This report contains details of the design and conduct of the sixth sweep of the Millennium Cohort Study (MCS6).

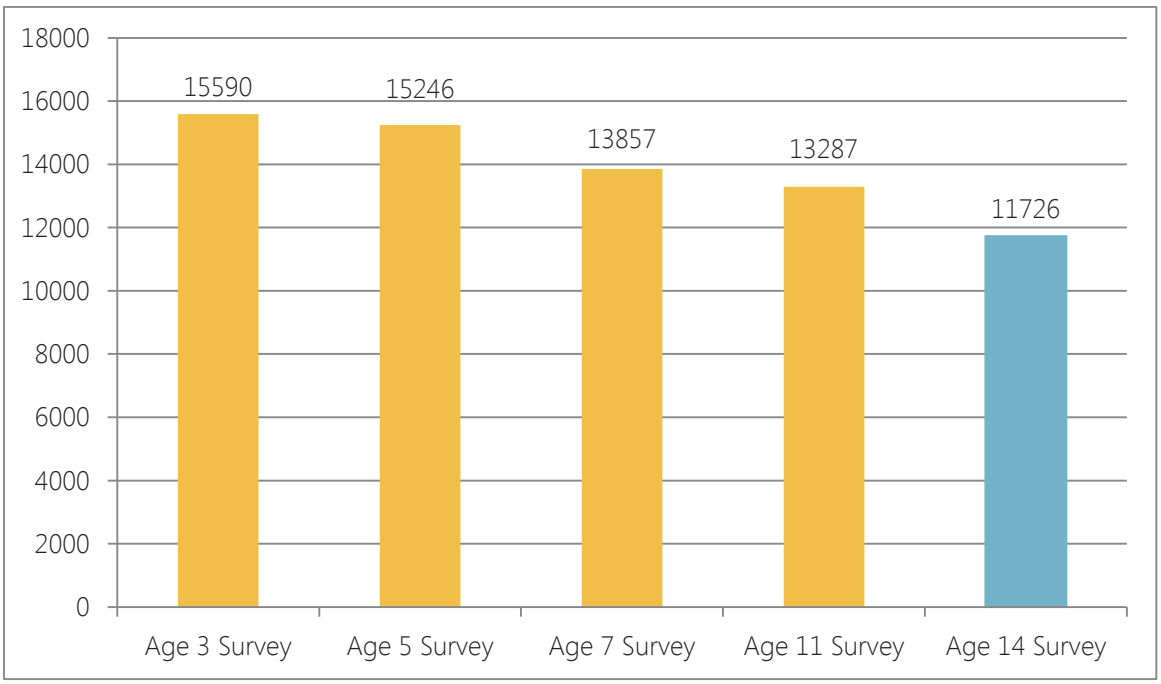
2 The sample

2.1 The original sample (from sweep 1)

Just over twenty four thousand (24,180) families were issued to the field for the first sweep of MCS and 18,552 families were recruited to the cohort at the age 9 month survey. An additional 692 families – referred to as new families - were recruited at the age 3 survey. These were families that were eligible, i.e. living in the selected wards when the child was 9 months old - but weren't picked up by the child benefit system at the time. They were mainly families who had recently moved or returned to the UK. The total cohort, therefore, amounts to 19,244 families. There are 253 pairs of twins and 11 sets of triplets, which makes 19,517 young people in total. There are no higher order multiple births. There are a very small number of families who have more than one child in the study which are not multiple births i.e. two births in the period covered by the sample from separate pregnancies.

Achieved sample sizes for the follow-up surveys at ages 3, 5, 7 and 11 are shown in Figure 2.1 (with the achieved sample size for wave 6 shown in blue for comparison purposes). Retention rates in the study are generally good. There was a larger drop-off at the first follow up survey at age 3, which is typical for longitudinal surveys after the baseline wave. The achieved sample size remained steady between MCS2 and MCS3 – around 15,000 – but dropped off by more than a 1,000 families to just under 14,000 families at age 7 and to around 13,250 at Age 11. The achieved sample size for sweep 6 is discussed more fully in section 8.1 (see Chapter 8: Survey response).

Figure 2.1: Productive sample size, by sweep



By the end of MCS5, around 10,500 families (54%) had taken part in all sweeps they were eligible for; approximately 4,000 (20%) had missed one or more of the sweeps they were eligible for and a further 5,000 (26%) had dropped out of the study and not re-joined.

The original sample was drawn in two stages: the first stage was the selection of electoral wards and the second stage the selection of families within those wards. All of the electoral wards in the UK were allocated into one of three types:

- "Ethnic": defined as wards in England in which 30% or more of the population were 'Black' or 'Asian' according the 1991 Census of the population
- "Disadvantaged": the poorest 25% of wards (not classified as Ethnic) as defined by the 1998 Child Poverty Index which is based on the proportion of children living in families in receipt of certain state benefits
- "Advantaged": all other wards not classified as 'Ethnic' or 'Disadvantaged'. These are not necessarily 'well-off' areas.

A total of 398 wards were chosen for the study with proportionally more chosen in Scotland, Wales, Northern Ireland and from those classified as 'Ethnic' and 'Disadvantaged'.

2.2 The issued sample (at MCS6)

The issued sample for MCS6 included all families: except those that were ineligible (where a cohort member had died or the family had emigrated outside of the UK) those that had permanently withdrawn from the study, and those that had been classified as 'permanent refusals' or 'permanently untraced' by CLS (unless they opted back into the study or CLS found new address details for them).

The final issued sample for MCS6 was 15,415 households. This figure represents the total issued sample size at the end of fieldwork and includes a number of cases that CLS traced during fieldwork. These cases were mostly families returning from living abroad, and in-care cases. They were added to the originally issued sample throughout fieldwork, meaning that the number increased slightly from the original sample size that was issued in January 2015.

2.3 The sample files

CLS was responsible for providing sample information for study families to Ipsos MORI and for ensuring that this information was as accurate and up-to-date as possible. CLS undertake regular cohort maintenance in between survey years, involving sending out 'Keeping in Touch' mailings that ask families to confirm or correct the contact information CLS has for them.

The sample information provided to Ipsos MORI 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 numbers
- Survey outcomes from previous sweeps
- Original sampling strata variables
- Information from previous sweeps
  - Date of last interview
  - Address at last interview

  - Previous sweep outcomes
  - Reason for refusal at previous sweeps (if applicable)
  - Element outcomes from MCS5
  - Details of main and partner (if applicable) respondents from last sweep participated in
  - Number of younger siblings in household (if any) at last sweep participated in
  - Secondary school the cohort member was intending to go to at MCS5
  - Whether interviews were translated, who translated and which language
  - Cohort member information such as whether they have poor vision, dyslexia, SEN (Special Educational Needs), ADHD (Attention Deficit Hyperactivity Disorder) or autism

CLS split the delivery of fixed sample data to Ipsos MORI into two batches. The first was for the data which fed into the CAI scripts or was needed to work out contact propensity for wave allocation purposes (e.g. previous sweep outcomes, date of last interview). The second contained contextual information which was provided to the interviewer nearer to the start of fieldwork to help them prepare for the household visit (e.g. number of younger siblings, SEN, ADHD etc.).

Live sample files were produced prior to fieldwork and were updated when necessary, and included the following information:

- Serial numbers
- Cohort young person details
  - Full name
  - Sex
  - Date of birth
  - School year
  - Whether currently in the household
  - Eligibility status
- Resident parent details
  - Title
  - Full name
  - Sex

  - Date of birth
  - Relationship to the cohort member
  - Contact details
- The last known address, telephone numbers and email addresses for the household
- Stable contact[3] details, one for each parent if possible (i.e. the contact details of another family member not resident in the household - these details could be used for tracing if required)
- Whether the family responded to the last feedback mailing
- Who was the main parent and who was the partner at the last interview
- Any 'useful information' memo to the interviewer and any 'sensitive information' memo to the interviewer

Two additional fields relating to the contact details were also provided: an address status, and the date this status was assigned. The address status was determined by CLS, and related to whether or not the household was confirmed as resident at the address provided, and the date at which this was confirmed. Prior to the start of fieldwork, it was estimated that in approximately 3.7% of the issued cases, CLS would know that the family was no longer resident at the address provided for them but had been unable to find a new address.

2.4 Sample updates

CLS continued to trace families until the start of each fieldwork wave and provided the most up to date information to Ipsos MORI before the sample was issued to interviewers. In some cases, CLS received updated information about cohort families after the sample had been issued. For these cases, CLS sent sample updates to Ipsos MORI on a weekly basis.

The weekly sample updates were typically:

- 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.

Actions taken as a result of the sample updates depended on the type of sample update and the progress of the case; that is, whether the case had been issued to an interviewer and whether the interviewer had started working on the case. Table 7.8 later in this report provides details of how Ipsos MORI handled and actioned sample updates.

Additionally, CLS provided Ipsos MORI with a full sample record for families, which became eligible after the start of fieldwork (e.g. they had recently returned from living abroad). More details on how the sample was kept up to date throughout fieldwork can be found in section 7.15.

[3] In previous sweeps, cohort families were asked to provide details for a 'stable contact' (a friend or relative) whom the study could contact if the family moved and who may know where the family had moved to.

3 Development work

3.1 Scope of the development work

MCS6 involved collecting considerably more data from young people than at previous sweeps and new challenges in terms of engaging teenagers in research. Therefore, an extensive programme of development work was carried out from spring 2013 to autumn 2014 before the mainstage to ensure all aspects of the study engaged 14 year olds.

The phases of development work are discussed below.

3.2 Developing an approach to participation and engagement

Prior to the start of Ipsos MORI's contract to deliver the data collection for MCS6, a number of studies were carried out to inform the study's approach to participation and engagement[4].These were:

- A study carried out by Ipsos MORI with young people aged 10-15 to inform participant engagement approaches on MCS6 and the youth panel of *Understanding Society:* The UK Household Longitudinal Study (UKHLS).[5] The main objective was to explore what encourages young people to take part in research to inform engagement approaches for both MCS6 and *Understanding Society*. Qualitative discussion groups and household depth interviews were carried out with young people aged 10-15 and parents of this age group across England, Wales, Scotland and Northern Ireland.

- A study carried out by the National Children's Bureau (NCB) with MCS cohort members and their parents. The study aimed to explore: what has driven or prevented involvement in MCS; the dynamics of family decision-making about participation; experiences of taking part; and views on respondent communications and preferences for the future. The study involved surveys and qualitative work with cohort members and their parents.

- Work carried out with NCB's Young Research Advisor (YRA) group to inform engagement approaches. Facilitators ran seven 45-90 minute discussion sessions with members of the YRA group: four sessions at a meeting in May 2013 and three at a meeting in June 2013.

The MCS6 development work also included a 're-branding' of the study to make it more relevant to 14 year olds. The re-branding was applied to all engagement materials and the study website. CLS commissioned a branding agency to develop possible designs. Ipsos MORI then carried out two focus groups with young people to test two preferred options in March 2014. The chosen design was then further examined in the materials testing phase and Dress Rehearsal, which are discussed below.

[4] The reports from these studies are available here: http://www.cls.ioe.ac.uk/page.aspx?&sitesectionid=1260&sitesectiontitle=MCS6+participant+engagement

[5] The *Understanding Society* survey is run by Institute for Social and Economic Research, University of Essex.

3.3 Pre-testing development work

3.3.1 Qualitative scoping exercise

Ipsos MORI conducted qualitative work in October and November 2013. The main objective of the work was to inform the content and processes of MCS6 to ensure that the survey was relevant and engaging for young people and parents. Specific objectives were:

- To build up a detailed picture of 14 year olds' lives and to understand what it was like to be a 14 year old in 2013;
- To understand how 14 year olds described themselves and how they saw their friends and peers;
- To understand whether any topics would discourage young people or parents from participating at Age 14 or future MCS waves;
- To explore the acceptability of new data collection elements (such as the activity monitor, time-use record and data linkage).

Qualitative research was carried out with young people in their third year of secondary school (aged 13-14) and their parents. Eight single sex focus groups took place in schools across England and Scotland. A range of schools were included according to the proportion of pupils receiving Free School Meals (FSM), attainment levels and whether they were located in urban or rural areas. Twelve in-depth interviews were conducted in home with a parent and their child from a range of ethnic backgrounds and socio-economic groups. An even split of boys and girls were included. Participants were not MCS cohort members.

A summary of the key findings and consequences for the survey design is provided below:

- This age group spent an increasing amount of time with friends rather than family
- Parents were still important, trusted figures for young people. Therefore, it was crucial to ensure parents were engaged in the study, for example through communication materials and the consent process.
- Overall, young people and parents felt that the potential topics for inclusion in the study were relevant to 14 year olds, although acknowledged that not all young people of this age would have direct experience of some of the issues.
- The topics were generally acceptable, although some were seen as sensitive.
- It was important that young people and parents trusted the study as a whole, including the interviewer, the tablet and the research company carrying out the research. Establishing trust was key to engagement.
- Data linkage was a hard concept for this age group to comprehend fully. It was important to provide young people and their parents with information that explained how the data would be linked, the usefulness to researchers and reassurances about anonymity.
- Young people did not like the term "time-use diary" as it was associated with writing about thoughts and feelings rather than being a log of activities. A recommendation that the name of this element be changed to help with

engagement was made. Parents also suggested their input would be useful to ensure young people completed this element after the household visit. Ensuring adequate explanation in the parent engagement materials would be important.

- The activity monitor was seen as an exciting prospect for young people although there were some uncertainties around the practicalities of wearing it, which would need to be addressed in communication materials. Young people were presented with two devices and showed a clear preference for the more discreet option (GENEactiv).

A detailed report on findings from this work was sent to CLS. The findings also informed a paper in the Social Research Association (SRA) journal[6] and two presentations at the European Survey Research Association (ESRA) conference in Reykjavik, July 2015.[7] [8]

3.3.2 Cognitive testing of the young person self-completion questionnaire

Selected sections of the young person questionnaire were cognitively tested by Ipsos MORI in October and November 2013. Specific objectives were to:

- Test question wording to ensure comprehension by 14 year olds;
- Explore how young people understood and interpreted the meaning of specific terms and words used in the questions;
- Understand the cognitive process young people went through to provide their answer (for example, how they retrieved, derived and reported their answers); and
- Provide recommendations for changes to the questions to aid understanding and help to improve data validity and reliability.

In total 19 interviews were conducted with young people in Year 9 at five different schools across England and Wales. The schools covered a mix of those with relatively deprived and more affluent intakes (measured by the proportion of pupils eligible for Free School Meals). The pupils had a range of ability levels and included a mix of boys and girls and ethnic minority groups.

In-depth interviewing and probing techniques were used to understand participants' cognitive processes. Participants were asked what they were thinking when responding to the questions. This allowed the interviewer to look at how questions and introductions were interpreted and whether this was as intended.

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[6] Calderwood, L., Smith, K., Gilbert, E., Rainsberry, M., Knibbs, S., and Burston, K. (2015). Securing participation and getting accurate answers from teenage children in surveys: lessons from the UK Millennium Cohort Study. *SRA*. 1

[7] Gilbert, E., Calderwood, L., Rainsberry, M., Knibbs, S., and Burston, K., (2015) *Tweets, branding and swag: engaging teenagers in research*, European Survey Research Association Conference, Reykjavik .

[8] Smith, K., Calderwood, L., Knibbs, S., and Burston, K. (2015) *Let's talk About sex: asking 14 year olds about their lives in a home setting*. European Survey Research Association Conference, Reykjavik

Participants were also asked to explain how they came to their answers, specifically whether they were based on recall of events or their general feelings, with the aim of testing the accuracy of answers. Answer codes were checked to test whether they were comprehensive. Questions were also checked for sensitivity.

A topic guide was developed by Ipsos MORI and approved by CLS. This outlined the key issues to explore at each question, and incorporated probes that the researcher could use to generate a full understanding of the issues.

As a result of the cognitive testing a number of changes were made to the young person questionnaire. These included:

- Questions were simplified and in some cases were removed entirely (particularly those where young people consistently misinterpreted the question or where they were unable to grasp the concept behind the question). Question cuts were also necessary to reduce the questionnaire length.
- Some scales were amended. For example, some 'write in' boxes were changed to frequency scales to aid recall. In other instances, frequency scales were added to generate more nuanced responses.
- Some questions and sections were re-ordered to assist understanding and to help to keep young people engaged.
- Terminology was clarified where it was frequently misunderstood by young people, to ensure consistent comprehension.
- Range checks were added to query responses above a certain threshold to ensure accuracy and consistency.
- Confidentiality was emphasised even more strongly (to encourage honest answers) by including 'sensitivity' and 'honesty' text at the start of specific questions as well as at the start of the questionnaire as a whole.
- A range of other minor changes to the wording of specific questions were made to help ensure accuracy and consistency of understanding, interpretation and response.

Ipsos MORI provided CLS with a detailed report on the cognitive testing findings, some of which helped to inform 'Let's talk about sex: asking 14 year olds about their lives in a home setting' (presented at the European Survey Research Association (ESRA) conference in Reykjavik, July 2015).

3.3.3 Development of the time-use record

The development of the MCS time-use record instruments was led by CLS in collaboration with Ipsos MORI and the Centre for Time Use Research (CTUR) at the University of Oxford. CLS oversaw and contributed to all aspects of the development. Ipsos MORI produced the time-use record instruments and leaflets and carried out the different testing phases. CTUR made a major contribution to the instrument development, regularly advising on key research design and implementation decisions[9].

The record was available in three modes: via an app (using the Ipsos Mobile survey app), online (programmed using HTML, CSS, JavaScript and PHP with an SQL database), or on paper.

[9] For further information, see Chatzitheochari, S., Fisher, K., Gilbert, E., Calderwood, L., Huskinson, T., Cleary, A. and Gershuny, J. (2015) *Measuring young people's time-use in the UK Millennium Cohort Study: A mixed-mode time diary approach*, CLS Working Paper

The following specific activities were conducted during the development stage to input into the final design of the time-use record.

Cognitive testing the activity codes

Young people were asked to complete a time-use record. The time-use record collected information about what activities they participated in over two 24 hour periods (one weekday and one weekend day, randomly chosen). Young people were required to code a main activity (known as a 'top level activity code') and also any activity that was being done in conjunction (known as a 'second level activity code'). For example, eating dinner (main activity) while texting (secondary activity). The time-use record also asked young people to code the time they were doing the activity, where they were, who they were with and how much they enjoyed what they were doing. Young people were able to complete the time-use record using one of three modes: online, app or paper.

Six cognitive interviews were conducted to test understanding and interpretation of the time-use record activity codes. The interviews were conducted with Year 9 pupils in a school setting and included an equal split of girls and boys, and a mix of ability levels.

As a result of the cognitive testing a number of changes were made to the time-use record activity codes, both at the top-level (activity code groups) and second-level (activity codes themselves). The changes included:

- Some of the top-level activity code phrasings were amended as the findings indicated that some of the code groups tested at the pilot stage did not stand alone and therefore young people found it difficult to know how to code their activity accurately. Some additional top-level codes (such as 'Eating and Drinking') were added.
- Minor changes were made to the second-level activity codes to account for any activities young people felt were missing, and wording tweaks were made to any codes that young people struggled to comprehend, including the addition and amendment of examples.

Usability testing

Ipsos MORI conducted two rounds of usability testing of the time-use records with young people (12 and 13 November 2013, 18 and 19 December 2013). Each session lasted 60 minutes, and involved young people testing one of the three mode instruments (online, app, paper), with one moderator assigned to each young person. A total of 22 fourteen year olds attended the sessions, recruited to quotas on gender, ethnicity and social class.

The objectives of the sessions were to assess the suitability of each of the three time-use record instruments and determine whether or not their design allowed young people to accurately record their activities and contextual information.

In advance of the sessions, young people were asked to note down their activities for one day, using a time-use record notebook provided during recruitment, and to bring this to the session to enter the information into the time-use record instrument (either the online, app or paper version). Young people attending the second session were also given an information leaflet about the time-use record during recruitment, to replicate planned use of advance materials in the survey.

Upon arrival, each moderator introduced the session to the young person, provided information about the study, explained what young people would need to do, informed participants about confidentiality, and obtained permission to audio-record the session and take notes. Moderators also introduced and demonstrated how the 'think aloud' technique that participants would be asked to use would work. This involved them describing what they were doing and thinking.

The moderator then asked questions about the recruitment materials – the information leaflet (a copy was used to aid their recall of it) and notebook.

The young person was then asked to begin filling in the record, in the following sequences, specific to the mode:

- For the paper record they were asked to read the instructions on the front page of the record and then transfer their activities from the notebook to the record.
- For the online and app records young people were provided with a mode-specific instruction leaflet, which contained instructions on filling in the records using words and screenshots. The leaflets were designed to equip young people with the information that cohort members would have during the survey. The young people were asked to first read the leaflet, and then begin filling in the record by transferring their notebook activities to it. Both the online and app instruments also began with an additional set of instructions/tutorial on how to fill the record in.
- The moderators observed the young people filling in the records and noted any difficulties. Young people were also asked to 'think aloud' during this process, and moderators used set probes to promote this.

A number of changes were made to the materials and time-use record instruments in response to findings from the usability sessions.

- The time-use notebook was simplified and shortened, to better reflect the level of detail young people would be asked to enter into the record. The activity code list was also printed on the back of the notebook so that young people would be able to see the activity choices they would have in the instrument itself.
- In the first round of sessions, young people had considerable difficulty completing the paper record. Improvements were made to the instrument for the second round, by simplifying and improving the instructions, and improving the layout of the instrument (more use of colour; additional time grids across the page and an additional set of activity codes on the right hand side of the page, to help young people navigate the instrument).
- The online record worked reasonably well in each of the sessions, although a number of changes were made before and after the sessions to improve the instrument. These changes aimed to do a number of things; to improve feedback when entering activities (a digital clock was added), to help young people keep track of what they had entered (the addition of an overall progress bar at the top of the page), to improve positioning of error messages on the page, to simplify the instrument instructions, and to add options for navigation around the page. However, changes made between sessions to promote use of secondary activities (an additional activity done during the main, primary activity), were not effective. As such, secondary activities were dropped before the main stage.
- The app version of the record was tested once, in the second session, as it was not ready in time for the first. Young people experienced very few difficulties with the app instrument, and only very minor changes were required to it.

3.3.4 Materials testing

In July 2014, Ipsos MORI conducted interviews with young people to test the young person engagement materials developed for the Dress Rehearsal.[10]

The objectives of the materials testing were to explore young people's:

- understanding of the language used, particularly in more complex sections (such as data linkage [which was subsequently dropped for the mainstage] and saliva)
- understanding of the images and associated connotations
- overall reactions to the materials (e.g. whether they liked them, length etc.)

In total 15 interviews were carried out with young people in Year 9 at three schools in England and Wales. A selection of schools with high, medium and low proportions of pupils eligible for Free School Meals (FSM), and with a high and low ethnic mix of pupils, were chosen to participate in the study. Materials were tested with a cross-section of young people, with socio-demographic quotas set according to the gender, ethnicity and academic ability of the young person.

Each interview lasted 45 minutes to an hour. Interviews were carried out by Ipsos MORI researchers using a discussion guide developed in consultation with CLS.

A summary of the main findings and consequences for the materials design is provided below.

Key findings and consequences for survey design:

- *Young person advance letter*. Young people generally liked it, found it easy to understand and felt it clearly explained the importance of the study. No significant changes were made for the main stage of the survey.
- *Young person advance booklet*.: Overall young people liked the design. Some suggested tweaks to the images or wording, which were incorporated in the final drafts (e.g. making sure voluntary participation and confidentiality were emphasised). However, there was some concern that the saliva and data linkage elements were not explained fully until the appointment stage, which left young people with unanswered questions and increased concern about these elements. Although data linkage was subsequently dropped, a decision was taken to explain saliva in full, in advance to allay such concerns. For the main stage, the booklet size was increased from 8 to 12 pages to allow all elements of the survey to be discussed up front.
- *Young person appointment booklet*.: This was generally seen to be too text heavy (especially the data linkage and time-use record sections). A decision was made to drop this booklet for the main stage and replace it with a leaflet explaining the activity monitor and time-use record, which was only sent to young people selected for those

[10] The following materials were tested: young person advance letter, young person advance booklet, young person appointment booklet, young person further information leaflet, young person thank you postcard.

elements. Detailed information on all other elements was provided in the 'Young person advance booklet' as outlined above.

- *Further information leaflet*:. Young people liked this leaflet; they found it clear and understood its purpose. No significant changes were made for the main stage.
- *Thank you postcard:* Young people liked being thanked. They were generally happy with the design, although they felt more colour could be used. The postcard was redesigned for the main stage to account for this, although the wording remained largely the same.

Detailed findings and recommendations were provided to CLS in a report in August 2014.

3.4 Pilot one and Pilot two (Dress Rehearsal)

3.4.1 Pilot one

The first pilot survey took place between 7 February and 2 March 2014 in five locations in England, Scotland and Wales.

An external agency recruited families with a child in Year 9 in England and Wales and Secondary 3 in Scotland and aged 13/14. The sample was split equally across the following five locations:

- London
- Glasgow
- Newcastle
- Cardiff/Bridgend
- Birmingham

Quotas were set to ensure a cross-section of families were included. In total, 50 families were interviewed, 10 in each area.

The aims of this first pilot were to test approaches to implementing MCS6, focussing on the following:

- Measuring the average length of each study element and the total time in household
- Assessing the methodological and practical implementation of each study element
- Assessing approaches for engaging respondents in each study element, in particular encouraging co-operation and gaining informed consent
- Assessing approaches for addressing ethical issues, such as achieving fully informed consent and supporting respondent safety and wellbeing.
- Assessing approaches to training interviewers to ensure successful implementation of all elements.
- Evaluating interviewer and respondent communication materials.

- Assessment of Electronic Contact Sheets (ECS).
- Assessing office procedures, particularly those relating to saliva sample collection, activity monitoring and time-use record data collection.

The following core elements were included at the first pilot.

- Household CAPI questionnaire
- Main respondent CAPI and CASI questionnaires
- Partner CAPI and CASI questionnaires
- Main parent and partner cognitive assessments
- Young person CASI questionnaire
- Young person cognitive assessments
- Young person physical measurements
- Saliva samples (parent, partner (if applicable) and young person)
- Permission for data linkage of young person data to Ministry of Justice (MoJ) and National Health Service (NHS) records
- Young person time-use record
- Young person activity monitor
- Parent and young person consents

As pilot families were not cohort families and were asked to participate in multiple data collection elements, they were given £100 for taking part. In addition, the young person was sent £20 after completing the time-use record and activity monitor and was given a small thank you gift on the day of the visit.

Five interviewers were briefed by Ipsos MORI, with extensive contributions from members of the CLS team. The interviewer briefing lasted three days and took place on 29, 30 January and 6 February 2014. Interviewers went through the young person CASI questionnaire and completed a paper time-use record before the first day of the briefing. Interviewers also carried out two practice sessions of the cognitive assessments, physical measurements and saliva sample collection between the second and third day of the briefing. Interviewers were accredited to carry out the physical measurements and saliva sample collection on the third day of the briefing.

A two-day pilot debrief took place on 4 and 5 March 2014. Interviewers provided feedback by completing an 'Interviewer feedback form', an 'Interviewer feedback form (CAPI)' and by recording outcomes in the ECS.

Respondents (both parents and young people) were asked if they would be willing to complete a 'Respondent feedback form' at the end of each visit. Young people also had the option of adding comments during, and completing some

feedback questions at the time of, their questionnaire. A feedback form was also given to young people asking about the time-use record and activity monitor.

In addition, five appointments were accompanied by individual members of the Ipsos MORI research team to gain additional feedback and record observations. Ten telephone follow-up interviews were also conducted a few weeks after the household visit with respondents who gave permission for re-contact.

3.4.2 Pilot two (Dress Rehearsal)

The Dress Rehearsal fieldwork took place between 4 July and 20 August 2014 in 13 locations across England, Scotland, Wales and Northern Ireland.

The sample comprised longitudinal sample previously recruited by CLS and used for the Dress Rehearsal piloting of previous waves of the study as well as a top-up sample sourced from the National Pupil Database (NPD) in England and via schools in Wales, Scotland and Northern Ireland. The sample was located in 13 areas:

- Preston
- Lincolnshire
- Crawley
- Bexleyheath
- Wembley
- Manchester
- Cheadle
- Rotherham
- Sunderland
- Bath
- Caerphilly
- Glasgow
- Belfast

In total, 200 addresses were issued. Of these, 152 were longitudinal sample and 48 were new families.

The main aim of the Dress Rehearsal was to test the whole survey process including:

- Contact procedures and approaches to gaining co-operation and consent
- Procedures for tracing movers
- Administration of all survey elements
- Approaches for addressing ethical issues, to achieve fully informed consent and support respondent and interviewer safety and wellbeing

- The consent booklet and other administrative paperwork
- Any issues associated with implementing the study tasks collectively in the household, including time in household, respondent burden and issues relating to the ordering and co-ordination of the different tasks among different household members
- The interviewer briefing and training approach.

The Dress Rehearsal included the same core elements as at the first pilot (for details see 3.4.1)

No incentives were used at the Dress Rehearsal in order to replicate the main stage conditions.

Twelve interviewers were briefed over three days on 25, 26 June and 3 July. As for the first pilot, prior to attending the briefing interviewers were required to complete some pre-tasks as well as additional homework between day two and three including a practice interview. On day three of the briefing, after their practice interviews had been completed, interviewers were accredited on the physical measurements and saliva sample elements.

A two day debrief took place on 5 and 6 August supplemented by interviewer feedback collected in the same way as at the first pilot. In addition, members of the research team accompanied five interviewers in Bexleyheath, Crawley, Manchester, Bath and Rotherham.

3.4.3 Key findings from the first pilot and Dress Rehearsal

Key findings from the first pilot and Dress Rehearsal are outlined below for each study element.

Main respondent/partner CAPI and CASI questionnaires

Interviewers conducted CAPI interviews with main respondents and partners. Respondents also completed a CASI section. Where the partner was not available for the fieldwork period, or was incapable of doing the interview themselves, the main respondent was asked to answer some questions on their behalf (referred to as the proxy partner interview).

Feedback from both the pilot and Dress Rehearsal was intended to provide useful information about the content of the questionnaires, but it was not designed, or able, to provide a thorough and complete assessment of the validity or reliability of specific modules of questions. The final choice of content was guided by the research team at CLS in consultation with funders and the scientific community.

Pilot 1 key findings

Interviewers reported that, on the whole, the questionnaire and the order of the modules worked well. However, some questions were identified as requiring minor changes to ensure accuracy and consistency. Interviewers also fed back that having two sets of showcards (one parent and one partner) was burdensome.

Key changes for the Dress Rehearsal:

- Minor changes were made to the question wording
- Parent and partner showcards were combined into one document

Dress Rehearsal key findings

As at the first pilot, the main and partner questionnaires worked well and no major queries were raised by any of the parents. However, parents and interviewers recommended a number of further amendments to the question wording or clarifications.

Key changes for the main stage:

- Further amendments and clarifications made to the question wording

Young person CASI questionnaire

Young people completed their own questionnaire on the interviewer's tablet. The questionnaire covered a range of topics relevant to the lives of young people. If young people were unable to complete the questionnaire on their own, the interviewer could administer it.

Pilot 1 key findings

Feedback received from interviewers was generally positive. Most young people found the questionnaire easy to complete on their own using the tablet, and enjoyed completing it. Overall, feedback from young people was that the content of the questionnaire was both interesting and relevant, with only some young people disliking some of the more 'personal' questions.

Parents were happy with the topics included and the majority were happy for their child to complete this element.

Although engagement with this element was high, the pilot timings data and feedback from young people and interviewers highlighted that the questionnaire was too long.

Key changes for the Dress Rehearsal:

- Additional 'honesty' and 'sensitivity' text was added to the questionnaire to reassure young people that their answers would remain confidential
- A number of questions were cut (particularly those that the young people had most difficulty understanding e.g. questions relating to probability)
- Minor question wording amendments were made

Dress Rehearsal key findings

Reflecting findings from the first pilot young people were happy to complete this element and response was high. On the whole, parents were also happy with the topics included and did not raise concerns about young people completing it.

However, the Dress Rehearsal data indicated that some questions might have been misunderstood by young people and some had a high number of 'don't know' responses. The questionnaire was also still too long (average time of completion was 54 minutes).

Key changes for the main stage:

- Further question wording amendments were made
- Some questions were removed to reduce respondent burden and assist with comprehension

Cognitive assessments

Young people completed the cognitive assessments on the interviewer's tablet. Parents and partners were also asked to complete their own assessment (Word Activity).

Three cognitive assessments were tested at the first pilot:

- Word Activity – Measured respondent's understanding of the meaning of words.
- Memory task – Measured young people's ability to retain spatial information and manipulate remembered items in working memory.
- Decision-making task – Assessed young people's decision-making and risk-taking behaviour outside a learning context.

All cognitive assessments were tested again at the Dress Rehearsal apart from the Memory task which was dropped following the first pilot.

Pilot 1 key findings

Young people and parents were happy to participate in the cognitive assessments and generally found them interesting. Both parents and young people found the Word Activity difficult but were still happy to complete it. Feedback from some young people was that the Memory task was a bit long and repetitive.

Feedback from the pilot showed that the interviewer laminated instructions worked well, but required some minor amendments. Interviewers also reported that the Word Activity instructions were too lengthy and duplicated information contained in the CAPI script.

Key changes for the Dress Rehearsal:

- The Memory task was removed due to time constraints
- Some minor changes were made to the interviewer laminated instructions for the cognitive assessments
- The Word Activity instructions in the CAPI script were pared down

Dress Rehearsal key findings

The majority of parents and young people completed the assessments and, for the most part, enjoyed them. However, some young people and parents commented on the difficulty of the Word Activity and needed additional reassurance and encouragement from the interviewer.

No significant issues were reported in relation to the Decision-making task. Most interviewers found the administration manageable using the updated laminated scripts provided but some felt that having a reference document to help them understand the 'geography' of the task would be beneficial.

Key changes for the main stage:

- Interviewers were provided with clear guidance on how to deal with embarrassed or reluctant respondents as part of the interviewer training
- A chart outlining how the Decision-making task worked was incorporated into the interviewer instructions and training and more emphasis was placed on ensuring interviewers practiced this element prior to the start of fieldwork

Young person physical measurements

Young people's height, weight and body fat percentage were measured. The procedures were the same as those used in MCS5.

Pilot 1 key findings

All young people were happy to have their height, weight and body fat percentage measured, and interviewers reported few problems. Some young people expressed embarrassment about being weighed.

Key changes for the Dress Rehearsal:

- Confidentiality was emphasised in the advance materials for young people and the interviewer training

Dress Rehearsal key findings

Findings from the Dress Rehearsal reflected those found at the first pilot (i.e. interviewers reported few problems taking the physical measurements, and young people mostly agreed to be measured). Most took part with little persuasion but interviewers did find that some young people were more self-conscious about the measurements at age 14.

Key changes for the main stage:

- Additional tips for reinforcing confidentiality were emphasised at the main stage interviewer briefing

Saliva samples (parent, partner (if applicable) and young person)

Young people and their resident, natural parents were asked to provide a saliva sample for DNA extraction, to be used in research about genes.

Pilot 1 key findings

A saliva sample was obtained from 88% of young people, 82% of main parents and 77% of eligible partners. Most families were happy to participate in this element, although some raised queries about how the sample would be used.

Overall interviewers reported finding the sample collection protocols easy to follow, although some had issues with spillage and other minor issues.

Key changes for the Dress Rehearsal:

- Further information about how the samples would be used was provided to interviewers during the briefings and in the interviewer instructions
- Further training was incorporated into the briefings to address issues with spillage

Dress Rehearsal key findings

Generally, the response rates were high and interviewers did not report significant problems with the collection procedures. Some interviewers felt they were still not adequately equipped to answer questions about the use of DNA.

Key changes for the main stage:

- Further attention was drawn to the saliva FAQ document in the main stage briefing

Data linkage

Parental permission was sought to access the young person's administrative records held by the National Health Service (NHS) and the Ministry of Justice (MoJ) and link them to the survey data. All young people whose parents consented to this element were asked if they were happy for their data to be linked in this way.

Pilot 1 key findings

Overall acceptability of this element was high, reflected by the high consent rates achieved. While parents and young people were happy with the information provided, interviewers felt that having an FAQ document on this element would be helpful to alleviate any concerns raised by respondents that were not incorporated in the advance materials.

On the whole, young people struggled to comprehend the concept of data linkage enough to provide their own fully informed consent.

Key changes for the Dress Rehearsal:

- FAQ sheet developed for interviewers to use at the Dress Rehearsal stage
- Data linkage retained to be tested again at the Dress Rehearsal stage

Dress Rehearsal key findings

Despite high numbers of both parents and young people consenting to data linkage, young people were still unable to fully understand the concept and implications of data linkage.

Key changes for the main stage:

- Data linkage consent collection dropped

Young person time-use record

Young people completed a time-use record on two days (one weekday, and one weekend day, randomly chosen by CAPI) after the interviewer's visit, in order to collect data on how the young person spent their time. Young people were able to choose to complete the time-use record either online or using an app. If they were unable to complete it using either of these modes, a paper version was provided. If respondents gave permission, text messages were sent to them and their parents to remind them to complete the tasks.

Pilot 1 key findings

Some young people had difficulties completing the time-use record, particularly using the app mode. The speed of the app was also a slight issue for some young people.

Key changes for the Dress Rehearsal:

- Instructions on how to complete the time-use record were revisited to ensure that young people fully understood how to access the app
- A system was put in place to respond to any text message queries received from young people regarding completion of the time-use record
- The app performance was improved to address the speed issues raised

Dress Rehearsal key findings

The placement rate was high (89%). However, the completion rate was lower (47% for the first day and 37% for the second day) than anticipated.

In general, interviewers felt that placing the time-use record was straightforward. However, interviewers sometimes offered the paper time-use record as an option immediately, rather than as a back-up when neither online or app mode was possible

They did not feel having immovable days was problematic. Some mentioned that their personal lack of knowledge about mobile apps and smartphones left them unsure about the time-use mode choices.

Key changes for the main stage:

- Although the paper records had the highest rates of return, it was decided not to offer the paper record at the same time as the online or app record due to the higher associated costs, and to instead give interviewers better training on the online and app modes
- Interviewers were briefed to only offer the paper record if the other modes were impossible to use
- Basic information about the app in particular was provided at the main stage briefing

Young person activity monitor

Young people wore an activity monitor on two days following the interviewers visit. The activity monitor task took place on the same days as the time-use record task. Two models of activity monitor were piloted – an Actigraph monitor and a GENEActiv monitor.

For the first pilot only, young people were offered a conditional £20 incentive to complete the time-use record and activity monitor elements.

Pilot 1 key findings

On the whole, young people were happy to wear the activity monitor and were enthusiastic about this element of the survey. There was mixed feedback about which model of activity monitor young people preferred. Additionally, compliance rates differed between the two devices.

Key changes for the Dress Rehearsal:

- Further exploration of the pros and cons of each device was explored with the device manufacturers, and a review of stock flow assumptions was conducted

Dress Rehearsal key findings

Young people agreed to wear an activity monitor in the majority of cases (86 out of an eligible 97 young people). Interviewers did not raise any significant concerns about the placement of the monitors. However, there were a couple of respondent queries that interviewers did not feel equipped to address. Interviewers also reported that having an explanation script for the placement of the activity monitor in the CAI module would be useful, to ensure all interviewers explained the activity accurately and consistently.

Feedback was that respondents preferred the discreetness and comfort of the GENEActiv model. A larger proportion of these were returned by respondents, and compliance rates (assessed through wear time) were better than for the ActiGraph model.

Findings highlighted the fact that the study did not have access to enough activity monitors to cover the entire cohort sample in the main stage.

A working paper has been produced detailing how activity monitors were implemented on MCS6.[11]

Key changes for the main stage:

- Respondent communication materials and interviewer instructions were improved to address respondent queries
- A standard explanation of the activity monitor task was added to the CAI script
- A decision was made to use the GENEActiv model for the main stage
- A decision was taken to subsample cohort members for the activity monitor and time-use record survey elements

Parent and young person consents

Parents were asked to give:

- Written consent for their own participation in the CASI/CAPI interviews, Word Activity and saliva sampling.
- Written consent for the interviewer to ask the young person if they would be willing to participate in the following young person elements: questionnaire, physical measurements, cognitive assessments, time-use record and activity monitor (legal parental responsibility not needed).

[11] Gilbert, Conolly and Tietz. (2015). *Developing an approach to activity monitor implementation on the Millennium Cohort Study Age 14 Survey.* Available: www.cls.ioe.ac.uk/shared/get-file.ashx?id=3098&itemtype=document.

- Written consent for the young person to provide a saliva sample and for their survey data to be linked to Department for Health and Ministry of Justice administrative data. Only parents with legal parental responsibility were able to provide consent for these elements.

Young people were asked to give:

- Verbal consent to their own participation in all young person elements. They were not required to sign or initial the forms. The interviewer signed to confirm consent was fully informed.

Pilot 1 key findings

All parental consents were collected via a pad of paper forms and parents were left with a carbon copy of the signed consent forms. Interviewers reported that the consent form pad (containing 5 individual consent forms gum-glued at the top) was not strong enough and often fell apart.

When providing consent, parents were asked to initial a 'yes' or 'no' box and sign to indicate whether consent had been provided. Parents often ticked the boxes instead of initialling.

In general, interviewers reported that the young person consent form worked well but was too text heavy which made it hard to read word for word.

Key changes for the Dress Rehearsal:

- The consent pad was redesigned into a booklet to ensure all forms remained intact
- A front page containing clearly labelled sticky barcode labels was incorporated to help interviewers administer non-CAI survey elements and barcodes were added to every page of the booklet
- The requirement to initial to confirm consent was amended so parents could either tick or initial and consent would still be valid
- Changes were made to reduce the amount of wording where possible on the young person consent form

Dress Rehearsal key findings

All consents were collected via paper forms in a booklet and parents were left a carbon copy of the signed consent forms.

Feedback from interviewers about the consent process was positive and interviewers found the consent booklet easy to administer. They liked the fact that the booklets were not pre-allocated to households, but emphasised the importance of ensuring that the barcode number was entered correctly into CAPI. This was reiterated in the training. The consent booklet worked well in conjunction with the respondent engagement materials but the findings were that they should be given more prominence.

Key changes for the main stage:

- The consent forms were amended so that attention was drawn to the respondent engagement materials when gaining consent

Other issues: Electronic Contact Sheet (ECS)

An ECS system was used to control interviewer's work on the sample.

Pilot 1 key findings

The overall ECS system worked well at the pilot, although many specific changes were requested by interviewers.

Key changes for the Dress Rehearsal:

- Many specific changes to all aspects of the ECS as outlined in the first pilot report

Dress Rehearsal key findings

All interviewers were able to use ECS; although some said they took longer to get to grips with it than others. A number of very specific changes to the ECS were suggested by interviewers and a paper record of the addresses and phone numbers in interviewers' assignments was requested.

Key changes for the main stage:

- A number of specific changes were made to the ECS
- Interviewers were provided with an additional sample list on paper (providing contact names, addresses and phone numbers)

Other issues: Briefings

Pilot 1 key findings

Interviewers reported that the briefing process generally worked well in instructing them about the background to the study, how to engage respondents and achieve informed consent, and how to administer individual study elements. They found the training films and the workbook exercises helpful in consolidating learning. However, a recommendation for improvement was to include more practical tasks.

Key changes for the Dress Rehearsal:

- More practical tasks were included at the Dress Rehearsal briefings

Dress Rehearsal key findings

Feedback about the briefing itself was largely very positive and interviewers appreciated the degree of planning and preparation involved. However, interviewers suggested that some elements were repetitive and that some of the detail could be cut.

Key changes for the main stage:

- Briefing content was reviewed and learning objectives for each session developed to help reduce repetition and unnecessary detail

Other issues: Young person thank you gift

Young people were given a small thank you gift at the end of the interviewers visit.

Pilot 1 key findings

For the first pilot, two gifts were tested (a highlighter pen and a keyring). Although young people seemed to appreciate the gesture, neither gift option was particularly appealing to them. Young people fed back that they would prefer something that could be used at school and with the study branding.

Key changes for the Dress Rehearsal:

- Alternative gift options which incorporated the study branding were tested at the Dress Rehearsal

Dress Rehearsal key findings

Three different CNC branded gift options were tested at the Dress Rehearsal stage (a calculator with post-it notes, a wallet and a USB stick). Interviewers reported that most young people were largely unenthusiastic about the gift options, however, the USB stick was by far the most popular gift choice. The black/silver colour with the discreet logo was appealing to the young people, and many said it would be useful for school and homework.

Key changes for the main stage:

- The branded USB was chosen as the young person gift for the main stage

3.5 Additional changes after the Dress Rehearsal pilot

Training films were used during piloting to support interviewer training. A decision was made after the Dress Rehearsal to improve the quality of the films and extend the scope of their use. The training films used at the Dress Rehearsal were reshot to account for inaccuracies and continuity issues that were picked up during piloting, and general improvements were made. The revised training films incorporated some of the briefing content to standardise protocol delivery and reduce the amount of time needed to brief these elements. Additional films were produced to help with the engagement of young people and to reiterate the importance of the study to interviewers.

4 Overview of MCS6 elements

4.1 Overview of survey elements

The content of the sixth sweep of the Millennium Cohort Study consisted of the following elements:

- Household questionnaire (CAPI)
- Main parent interview (CAPI, CASI and SDQ paper questionnaire)
- Partner interview (CAPI and CASI)
- Main parent and partner cognitive assessment
- Young person questionnaire (CASI)
- Young person cognitive assessments (including interviewer observations)
- Young person physical measurements (height, weight and body fat)
- Saliva samples (natural parent(s) and young person)
- Young person time-use record (some young people only)
- Young person activity monitor (some young people only)
- Final element (Interviewer CASI)

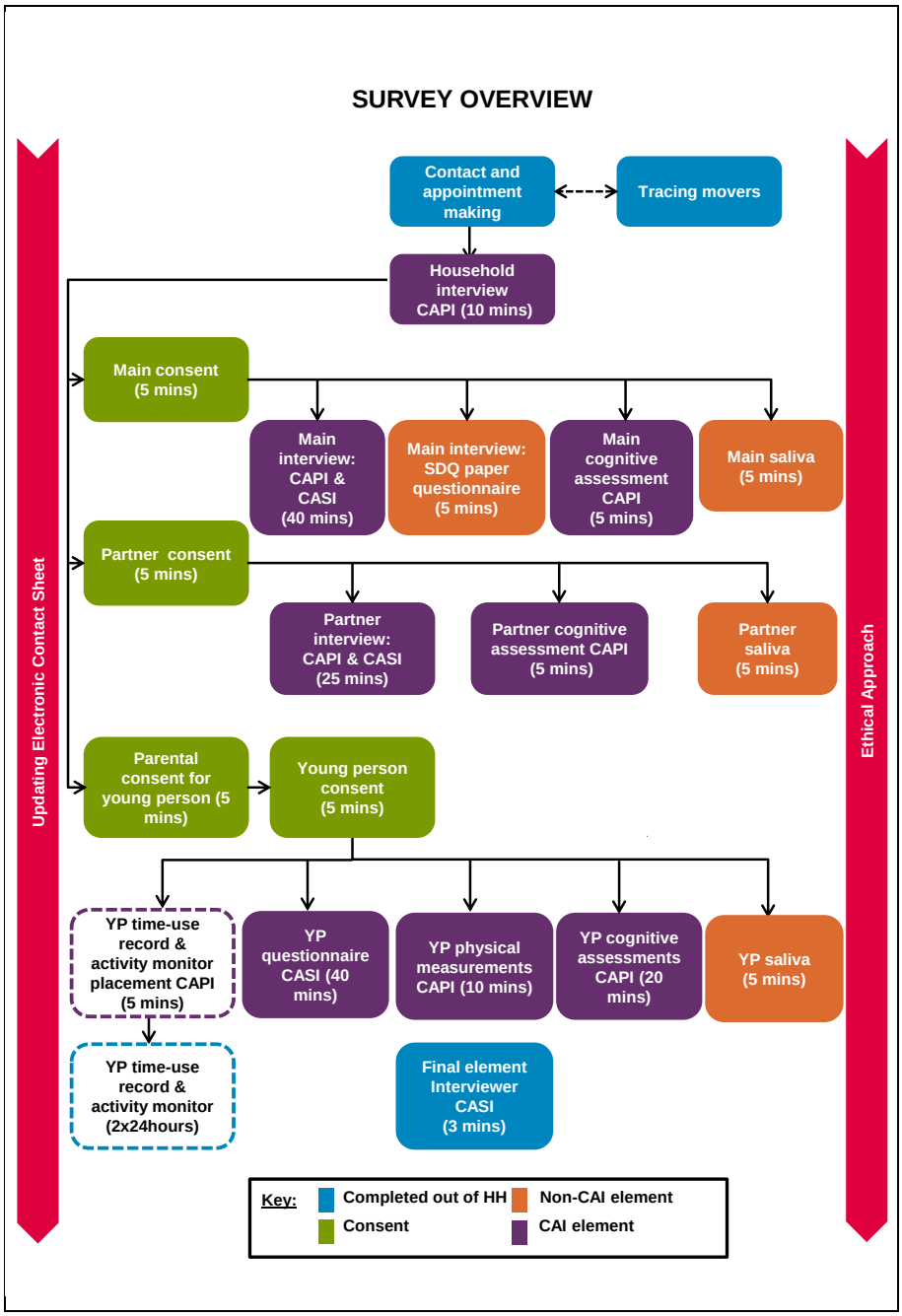
4.1.1 Administration of survey elements

Interviewers were firstly required to attempt to make contact with the families in the sample, and to encourage cooperation and participation in the study. If during these contact attempts it was established the family had moved address, interviewers were to make extensive efforts to find them (referred to throughout the rest of this report as 'tracing'. Full details of the tracing process can be found in section 7.11: Tracing cohort members).

Interviewers always completed the household interview first as this established who was living in the household, who to interview for the main and partner questionnaires and generated a summary of all the elements to be completed. The interviewers were also able to see a summary table of who could give consent for various elements. Each parent was required to give written consent before completing any of their own elements. Additionally, interviewers sought consent from a parent or guardian to *approach* the young person to ask them for their consent to take part in their own survey elements. Consent from a parent or guardian for their child to *provide* a saliva sample, i.e. not just to approach the young person to ask their consent, was also required. Full details of the consent process can be found in Chapter 5: Ethics and consent. Once the household interview was complete, interviewers were free to complete the other elements in whatever order they wished.

Once the interviewer had completed all household elements, they were required to complete the 'final element' in CASI, where they recorded administration details about the household visit. This element had to be completed before a case could be considered productive. Figure 4.1 provides an overview of the survey requirements. It also indicates average timings for each element, mode of administration, which consents were required (and when), and whether the element was to be completed during or outside of the household visit. This chart was used in the interviewer briefings to help interviewers to understand how each of the different household elements fitted together and to ensure that the visit was conducted in the most efficient way possible.

Figure 4.1: Overview of survey elements



The rest of this section contains a brief description of each element of the survey and the protocols developed for each.

4.2 Young person self-completion questionnaire

Young people were asked to complete a self-completion questionnaire using a tablet. The questionnaire was longer and more detailed than at ages 7 and 11, reflecting that the young people rather than their parents were the main focus of the household visit for the first time at age 14.

The questionnaire covered a variety of topics relevant to the lives of young people, including the following:

- How they spent their free time
- Their views about issues like gender roles
- How they felt about school and their future
- Their identity
- Their friends, family and relationships
- Things they might have experienced or done, such as smoking, drinking and bullying
- Their body, health and feelings
- Their personality

Parental written consent to approach the young person about completing their questionnaire (and other survey elements) was required first, and then the interviewer sought the young person's verbal consent to complete the questionnaire (and other survey elements). As with all elements, parents and young people were referred to the relevant sections of the engagement and consent materials when providing consent to complete this survey element (see section 5.5: 'Informed consent' for further details).

Although all young people were asked to complete the questionnaire on their own, interviewers were able to administer the questionnaire to those who were not able or were unwilling to complete it themselves (in these cases the script would skip the most sensitive questions).

As the questionnaire contained some more sensitive and personal questions, interviewers encouraged young people to complete the questionnaire somewhere privately where they would not need to worry about other household members seeing their responses. Parents were not allowed to see the questions being asked in the script. However, on request, interviewers were able to show them the 'What does the young person questionnaire cover?' showcard (a copy of which can be found in the appendices). Throughout the questionnaire, 'honesty' and 'sensitivity' text was added to the more sensitive questions to encourage young people to answer honestly and reassure them that their answers remained confidential.

At the end of the young person questionnaire interviewers asked young people to provide contact information to enable the study to keep in contact and for text message reminders to be sent for the activity monitor/time-use record (if applicable). Interviewers also gave young people a 'further information leaflet' ("I've helped – What now?") which provided further information about seeking help and advice about the topics covered in the questionnaire. A copy of this leaflet can be found in the appendices.

It was anticipated that the questionnaire would take 40 minutes to complete. However, this varied depending on the young person's ability and the amount of thought that they gave to the questions.

4.3 Young person physical measurements

All young people who consented and who could stand unaided were eligible for the young person physical measurements: height, weight and body fat percentage. They could consent to all, or just some of the measurements. Physical measurements have been carried out with the cohort members since the age of 3. It was necessary for a parent or other adult to be present since the measurements required some physical contact.

Height and weight are used to calculate the young person's Body Mass Index (BMI). BMI values can be compared with population reference data to identify young people who are overweight or obese, and therefore at risk of a number of short and long term physical and psychological consequences. Body fat percentage is a measure of fat distribution in the body, which adds further value to BMI measurements by providing an overall estimate of fat-free mass.

The following sections contain an overview of the measurement protocols. For detailed physical measurement procedures please see the Interviewer Instructions – Data Collection protocols.

4.3.1 Height measurement

The measurements were taken using a Leicester height measure stadiometer; a portable collapsible device with a sliding head plate, a base plate and four connecting rods marked with a measuring scale. All interviewers were trained to use this equipment during the briefing. Interviewers were also given a Frankfurt Plane card to assist with the measurements. Detailed instructions on how to use both the stadiometer and the Frankfurt Plane card, along with a Physical Measurements Summary sheet for quick reference in the field were given to interviewers. Copies of these materials are included in the appendices.

Interviewers were required to set up the equipment on a firm, ideally uncarpeted, surface and to ensure that the stadiometer was resting against a wall in order that it remained rigid while the measurement was taken. The young person was asked to remove their shoes and socks, glasses and any hair accessories or to let down any hairstyles that could affect the accuracy of the measurement. After explaining the procedure to young people interviewers carried out the measurement.

The measurement was read to the nearest completed millimetre, and entered into the CAPI program. Range checks were incorporated into the script to ensure accuracy. If the interviewer was not happy with the accuracy of the measurement, they could repeat it as long as the young person and parent or guardian was happy for them to do so.

Interviewers were also required to record any circumstances that may have impacted on the measurement, such as the young person's hairstyle, the presence of a turban or top-knot, their posture or whether they wore socks or shoes.

4.3.2 Weight and body fat measurement

The measurements were taken using Tanita scales (BF-522W), which have a hand-held console with a screen to display weight to the nearest 0.1kg, and body fat percentage to the nearest 0.1%. These scales were battery powered and were calibrated prior to being issued to interviewers. At the same time as measuring weight, the scales measured body fat percentage by sending a weak electrical current around the body from one foot to the other. The electrical current is safe;

however, it can cause medical devices such as pacemakers to malfunction. Although uncommon among 14 year olds, interviewers were required to check prior to carrying out the measurement whether the young person had a pacemaker.

As with the stadiometer, interviewers were required to place the scales on a firm uncarpeted surface. If this was not possible, interviewers had to record in CAPI whether only a soft surface was available. Interviewers were provided with detailed instructions on how to use the scales, and the Physical Measurements Summary sheet for quick reference (a copy of which can be found in the appendices).

The scales could also be used in 'weight only' mode in cases where the young person or their parent refused consent to the measurement of the body fat percentage, or in cases where it was not possible to take the measurement (e.g. if the young person had a pacemaker) as this mode did not involve an electrical current.

For this measurement, the young person was asked to remove their shoes and socks and remove items in their pockets. Interviewers were also asked to make sure that the young person was wearing light indoor clothing and removed bulky items such as watches and belts. Before taking the measurements interviewers were required to ensure that the scales were ready for use by checking that they were in the correct mode (kg) and that they had correctly entered the young person's age, gender and height in centimetres as given by CAPI, in order for the body fat percentage to be correctly calculated.

After explaining the procedure to young people interviewers carried out the measurements.

Once both measurements had been taken (or just the one if the scales were in 'weight only' mode) the young person was asked to step off the scales. If weight only was being measured, this would be shown on the display. If both weight and body fat percentage were being measured, the display rotated between the two measurements. In either case, the interviewer made an immediate note of the measures directly into CAPI. Range checks were incorporated into the script to ensure accuracy.

For both weight and body fat measurements interviewers were advised to repeat the measurement if they were unhappy with the first.

Interviewers were also required to record any circumstances that may have impacted on the measurement, such as whether the young person was wearing shoes, heavy clothing or a plaster cast.

4.3.3 Feeding back measurements to young people

In order to safeguard the young person's confidentiality, measurements were not read aloud at any point during the visit. After the readings had been taken, young people were offered a record of their measurements on the 'measurements postcard'. Parents were not offered a copy of this. A copy of the measurements postcard is in the appendices.

4.4 Cognitive assessments

Two cognitive assessments were included in the main stage of the survey. Young people were asked to complete both, and parents (both the main parent and the partner) were asked to complete one.

The assessments were adapted for use in a home survey setting.

The cognitive assessments included in the main stage were:

- Word Activity (parents and young people).
- Decision-making task (taken from CANTAB (Cambridge Neuropsychological Test Automated Battery) and officially named Cambridge Gambling Task) (young people only)

Both the Word Activity and the Decision-making task were carried out using the interviewers' tablets. The Word Activity was programmed as a self-completion instrument. A 'headless' version of the CANTAB software was loaded on to interviewers' tablets to capture data from the Decision-making task and to allow the software to load directly from the CAPI script.

Interviewers were told not to administer the assessments if the young person:

- had a learning disability or serious behavioural problem (e.g. severe ADHD, autism)
- was unable to respond to the stimuli in a typical fashion

Where possible the assessments were carried out in a quiet, well-lit, and properly ventilated room, away from distractions and disruptions to ensure the optimal performance of the respondent. It was also preferable to administer the assessments on a table where possible. Interviewers sat close to the young person, so that they could easily administer the prompts and instructions for the Decision-making task. For the Word Activity, both young people and parents were given the tablet and asked to complete it as a self-completion instrument.

The general rule to interviewers was to be reassuring and encouraging but not to provide feedback on respondents' performance even if asked to do so, except on practice questions or training items designated for that purpose. Neutral feedback could be used to encourage any respondents who found the assessment difficult.

4.4.1 Word Activity (young person, main parent and partner) overview

This task measured the ability of respondents to understand the meaning of words by choosing a word meaning the same or nearly the same from a list of five alternatives. Twenty words were included in the task and these got more difficult as the task progressed.

Different sets of words were used for the young person, main parent and partner. However, all had the same level of difficulty.

The Word Activity was unable to be translated into any other languages.

To begin the Word Activity, the interviewer read out an introduction to the respondent from a laminated card and then passed the tablet to the respondent to begin the task. The task itself was on two screens, with 10 words on one screen and 10 on the other. Figure 4.2 shows the first of these screens. Respondents selected their answer by touching the word on the screen with their index finger. If they changed their mind, they could deselect the word in the same way. The task lasted for four minutes, at which point the screen showed a message instructing the respondent to pass the tablet back to the interviewer.

Figure 4.2: Word Activity screen

4.4.2 Decision-making task overview

This task measured the young person's decision-making and risk-taking behaviour.

Instructions on how to complete the assessment were read to the young person by the interviewer using the 'laminated task admin script' to ensure all assessments were conducted consistently. Interviewers were briefed to familiarise themselves with the script prior to interviewing and to read it exactly as printed. A copy of the administration script can be found in the appendices. The assessment was administered in Welsh when the young person requested it, using a translated version of the laminated Decision-making administration script.

The young person was presented with a row of ten boxes across the top of the screen, some of which were red and some of which were blue. They had to decide whether a 'token' was hidden in a red box or a blue box. Initially, this was just a simple decision, but in the later phases of the task, the respondents were asked to 'bet' which box the token was behind from a bank of points that they had, with the aim of maximising the number of points they could have at the end of the task. They did this by stopping a counter when it reached the number of points that they wanted to risk. The counter showed either an increasing or a decreasing number of points, depending on the phase (these phases are described in more detail in the administration section below). When it reached the number that the young person was prepared to bet, they stopped the counter (using their finger) and bet that number. If they were correct about which colour box the counter was in, the amount they risked would be added to their running total. If they were wrong, the amount would be deducted.

Scoring

The young person's overall score was calculated from six different aspects of their performance:

- Quality of decision making: the number of times in total a young person decided that the token was hidden behind the 'more likely' colour.
- Deliberation time: the average time it took the young person to choose what colour the token was hidden behind after the coloured boxes were first presented for each young person,
- Risk-taking: the average proportion of points that the young person decided to risk.

- Risk adjustment: the extent to which the young person adjusted their risk taking depending on the proportion of boxes which were of their chosen colour.
- Delay aversion: was based on a young person's inability to wait for the points box to increase or decrease.
- Overall proportion risk: the average proportion of the current points total that the young person risked on each trial.

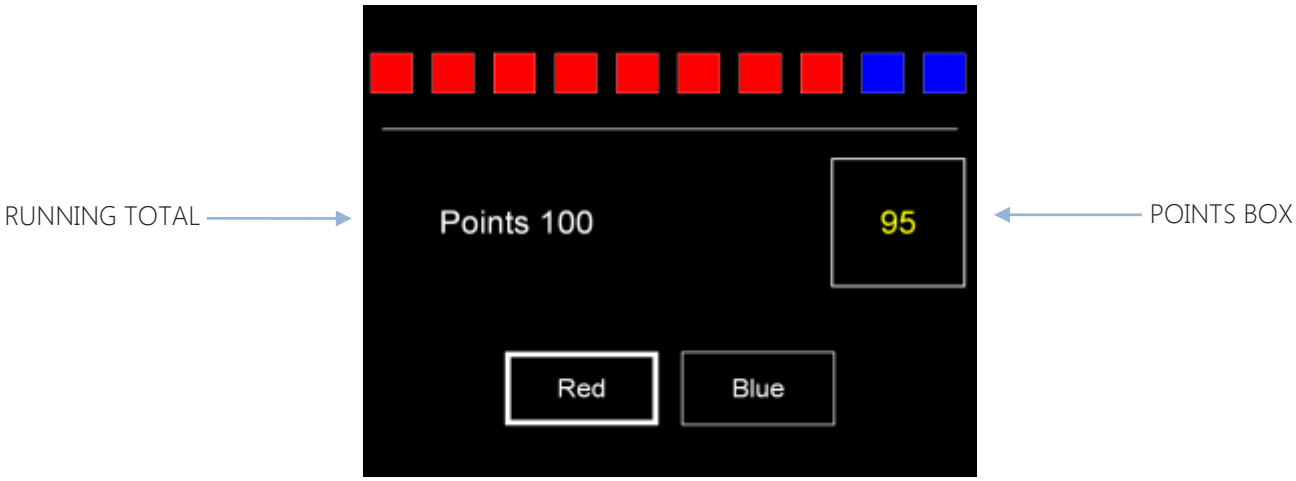
4.4.3 Decision-making task administration

To collect the data from the Decision-making task, a USB software key was plugged into the tablet prior to the commencement of every assessment. The task was then administered through a software package called 'CANTABeclipse' which was integrated into the interviewers' CAPI script.

There were five phases in the Decision-making task.

1. Decision only phase: 4 trials. The interviewer demonstrated one trial and the young person got 3 turns to practice. During this phase, the respondent only had to decide which colour the token was hidden behind. They were NOT asked to risk any points.
2. Ascending training phase: 4 trials. The interviewer demonstrated one trial and the young person got 3 turns to practice. In this phase, the number of points in the points box started low, at 5% of their total, and increased four times at intervals of two seconds. The size of the interval was determined as a fixed proportion of the running total. The young person had to first choose whether the token was hidden behind a red or a blue box, and then choose the number of points they wanted to risk by touching the points box when it reached the level they were prepared to risk. The later they touched the box, the more points they risked. During this training phase, their performance was not assessed.
3. Ascending assessed phase: 2 blocks of 9 trials. This phase worked in exactly the same way as the Ascending training phase, but this time the young person's performance was assessed.
4. Descending training phase: 4 trials. The interviewer explained; the young person practiced 3 times. In this phase, the number of points in the box started high, at 95% of their total, and decreased four time at intervals of two seconds. The earlier they touched the box, the more points they risked. During this training phase, their performance was not assessed.
5. Descending assessed phase: 2 blocks of 9 trials. This phase worked in exactly the same way as the Descending training phase, but this time the young person's performance was assessed.

Figure 4.3: A screen from the Decision-making task (risk-taking stage)



4.4.4 Cognitive observations

The cognitive observations consisted of a small number of questions that interviewers completed in CAPI concerning the circumstances under which the cognitive assessments were completed. They asked things such as whether or not anyone was present when the assessments were being completed, and whether there was any background noise or other disturbance. These questions were asked after the Word Activity for parents and after the Decision-making task for the young person. The interviewer had to complete the questions themselves, and were told that the young person and other households members should not be able to see their screen.

4.5 Saliva samples

Young people and their resident, natural parents were asked to provide a saliva sample in order to extract DNA to be used in research about genes. As children inherit their genes from their parents, saliva was only collected from biological parents of the young person. Natural parents were eligible to provide a saliva sample regardless of whether or not their child provided a sample.

In order to collect biological samples written consent was obtained. For young people, signed consent was obtained from an adult with legal parental responsibility[12] and the young person provided verbal consent. Parents were asked to provide signed consent for their own samples.

Interviewers administered the saliva sample collection using the Oragene DNA Self-Collection Kits OG-500. For detailed collection protocols please see the Interviewer Instructions – Data Collection protocols.

Samples were sent to Bristol Bioresource Laboratories at the University of Bristol for DNA extraction and storage.

4.5.1 Preparation

Respondents were asked not to eat, drink, smoke, or chew gum in the 30 minutes prior to saliva collection because sample contamination or dilution reduces the quality of the samples.

[12] Legal parental responsibility status was established in the household interview.

4.5.2 Sample collection

Respondents were asked to deposit a saliva sample into the collection tube until the amount of liquid saliva reached the fill line marked on the side of the tube – 2ml. This usually took about 5 minutes. The respondent was permitted to go into a private room while providing the sample. Interviewers were instructed to take proper sanitary precautions when dealing with saliva, including wearing disposable gloves and cleaning their hands with anti-bacterial hand gel.

4.5.3 Packaging and dispatch

Samples were packaged in accordance with the transportation of biological substances regulations in order that they could be sent to the laboratory at the University of Bristol in the post.

Interviewers placed the filled, sealed collection tube into a small plastic bag along with some absorbent material and then sealed the bag. Up to 15 samples were then placed in a pre-addressed jiffy bag with a dispatch form listing the enclosed samples. Jiffy bags were dispatched to the laboratory on a weekly basis, or when they contained 15 tubes (whichever occurred first). Samples were stored at room temperature prior to despatch.

4.5.4 Reconciling samples

Saliva samples were matched to respondents based on the barcode label that was attached to the tube. Each barcode and the corresponding number (6-digits) was printed twice on the front page of the consent booklet; once directly onto the booklet and once as a detachable label.

Interviewers were required to log the sample barcode numbers electronically in CAPI after the household visit and the paper consent booklets were sent to the office.

The laboratory logged received samples and sent Ipsos MORI a weekly log report containing the following details:

- Laboratory ID
- Barcode ID
- Interviewer number (from the despatch form)
- Date/time of receipt
- Received by
- Sample volume
- Sample colour
- Sample contamination (visual inspection)

When the Receipt of Consent booklets were received in the office, they were logged, along with confirmation that the appropriate signed consent had been obtained to collect saliva samples. Consent forms were then scanned.

Ipsos MORI provided the laboratory with a weekly file of samples with confirmed consent once the three sources of data were matched:

1. Sample receipt logged at laboratory
2. Barcode number recorded electronically by interviewer
3. Consent form received and consents checked

Discrepancies were investigated (where these three pieces of information were not present) and reconciled where possible. In cases where the consent was not recorded correctly (e.g. either the tick box or signature was not present) cohort families were sent a copy of the consent form and asked to complete and return it.

4.6 Activity monitoring

Young people were asked to wear an activity monitor on two days following the interviewer visit. This task was completed in conjunction with the time-use record task.

Activity monitors were worn on the respondent's wrist, like a watch, on their non-dominant hand. Young people were asked to wear the activity monitor for two randomly-selected days after the interviewers' visit – one day during the week and one day at the weekend. Each day lasted for 24 hours from 4am in the morning to 4am the following morning; times were chosen to coincide with the time-use record start and end times. Days were not able to be substituted.

With permission, young people and one of their parents were sent reminder text messages the day before, and the morning of, each selected day. Respondents were asked to post the monitors back to the office, in a pre-paid envelope, once they had completed the task.

For detailed activity monitor placement protocols please see the Interviewer Instructions – Data Collection protocols.

4.6.1 Equipment

Activity monitor data was collected using GENEActiv Original accelerometers. They are triaxial accelerometers which can be configured to collect data at various frequencies. They are robust, waterproof to 10 metres and do not provide any live feedback to respondents. The choice of activity monitor was based on findings from the two pilot studies where two devices were compared. Piloting demonstrated higher return rates and wear rates with the GENEActiv device.

In total, 4000 activity monitors were used in the survey and were re-used throughout fieldwork.

4.6.2 Eligibility

A sub-sample of young people were invited to complete the activity monitor task (and the time-use record). This was because the activity monitor stock would have depleted if all respondents were eligible, based on return rates and return times observed during piloting.

The activity monitor and time-use record eligibility were always the same (i.e. each young person was either eligible for both tasks or neither). Eligibility was indicated in the interviewer's Electronic Contact Sheet and it was only possible to access the CAI script needed to administer these elements for eligible households.

Overall, 88% of households were eligible for the activity monitor and time-use elements (100% of households in Scotland, Northern Ireland and Wales; 81% of households in England).

4.6.3 Activity monitor placement

Activity monitors were placed by interviewers during their visit to cohort families' homes.

The activity monitors were battery powered and were charged in the office before they were sent to interviewers. However, the devices had to be fully charged when placed with a respondent, therefore interviewers also charged them at home prior to placement.

The activity monitor placement could take place at any point during the interviewer visit (after the household interview was complete). We suggested that interviewers placed the activity monitor (and the time-use record) when a parent was present to listen in (based on pilot findings), however this was not mandatory.

Respondents were given an 'Activity monitor – More Information' leaflet which reminded them which days to wear it, how to wear it, and how to send it back. A teacher letter and a sports club letter were provided for respondents to give to schools/sports clubs. The letters contained an explanation of why the young person was wearing the device and a phone number to verify the study. Copies of these letters, along with all other activity monitor materials, can be found in the appendices.

If interviewers did not have a (working) activity monitor with them there was an option to code this in the script. In such instances the selected 'days' would be deferred by two weeks and an activity monitor would be sent from the office instead.

4.6.4 Reminders

To maximise compliance for the activity monitor and time-use record tasks, and to encourage the return of activity monitors to the office, a number of reminders were sent to cohort members and parents to remind them to complete the activities. These are detailed in Figure 4.4 below:

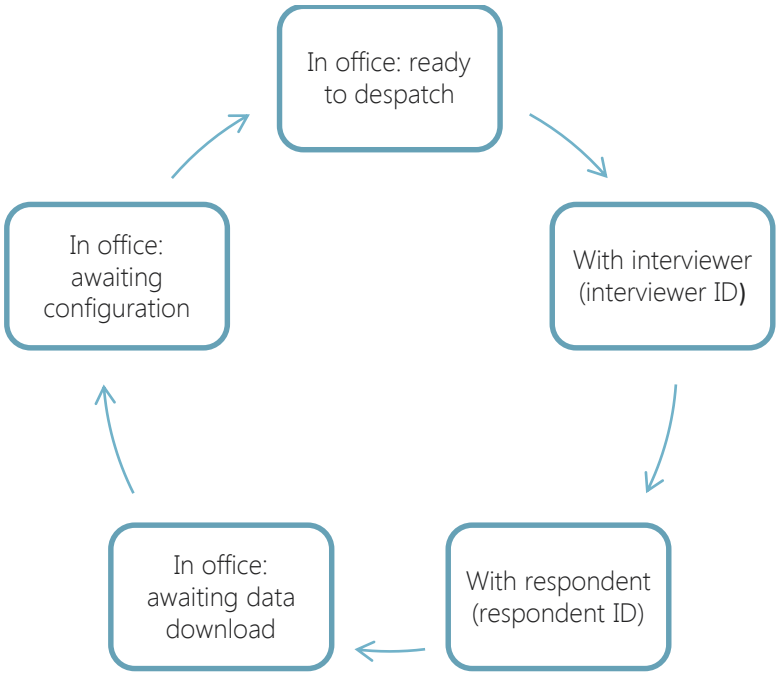
Figure 4.4: Activity monitor and time-use record reminders

	Mode and time	Content
1	SMS on the evening prior to each selected day	Reminder of tasks, request to put on monitor before going to bed
2	SMS on the morning of each selected day	Reminder to wear the monitor and complete the time-use record today
3	SMS on the morning following each selected day	Reminder to submit the time-use record
4	SMS one week after end of task (if activity monitor not returned)	Request to return the activity monitor
5	Paper slip included in thank-you mailing 2-3 weeks after end of task (if activity monitor not returned)	Request to return the activity monitor

4.6.5 Office procedures

A Device Management System (DMS) was set up to keep track of the activity monitors. Each device was allocated a status as illustrated in Figure 4.5.

Figure 4.5: Monitor Device Management System



Devices were charged and configured to the following specification prior to despatch:

- Measurement frequency: 40Hz
- Recording Start Mode: 'On button press'

A batch of devices were sent to interviewers in their project 'work packs' and they were able to request further devices as needed during fieldwork. When devices were received back in the office, they were logged on the DMS. The enclosed despatch slips were crossed-checked against the expected respondent ID for the device (and discrepancies flagged).

During fieldwork it was established that a number of devices were returned with no data on them. This was predominantly due to a loss of configuration settings (which happened when the device battery drained to 0%). The manufacturers were informed and a number of steps were taken to rectify the situation, including recalling devices that had been in field for over two months and instructing interviewers to charge the devices monthly. Any problem devices were isolated at this point and not sent back out to interviewers.

Activity monitor data was downloaded using the GENEActiv software. Given the file sizes, data was stored (and backed-up) on external hard drives. Code was run on the raw activity monitor data files to assess the validity of the data, establishing:

- whether the device was worn on each selected day
- the number of hours the device was worn on each selected day

A productive element outcome was assigned if the activity monitor was worn for at least 10 hours (partially productive for one day; fully productive both days).

4.7 Time-use records

Young people were asked to complete a time-use record for two 24 hour periods (one weekday, and one weekend day, randomly chosen) in the period immediately after the interviewer visit (within 10 days). This task was completed in conjunction with the activity monitoring task.

Young people were asked to provide a full record of what they did on the two days, from 4am to 4am the next day, as well as where they were, who they were with, and how much they liked each activity.

Not all cohort members were eligible to complete the time-use record due to limitations with the number of activity monitors available for the accompanying task (those living in England were therefore sub-sampled). See section 4.6.2 for additional detail.

4.7.1 Time-use record instruments

The time-use record could be completed via one of three modes:

- Online (for completion on a desktop, laptop, or netbook),
- Using an app (for completion on an Apple or Android smartphone or tablet),
- Or, on paper (for those unable or refusing to complete the record online or via the app).

4.7.2 Time-use record placement

Prior to the interviewer visit, cohort members were sent a leaflet about the activity monitor and time-use record tasks. This explained that they would be asked to complete a time-use record and could choose between an app and an online version. They were also told that a paper version would be available if they were unable to use one of the other modes.

During the interviewer visit placement could occur at any time following completion of the household interview. Written consent was first required from a parent/guardian to approach the young person about the task, and verbal consent was required from the young person. The record was usually placed together with the activity monitor, given that these tasks were 'linked' and shared selected days. It was recommended (but not mandatory) that placement was carried out with a parent present to listen to instructions so that, if necessary, they would be able to help the young person with completion of the record.

A CAPI module was completed by the interviewer during placement. In it, they recorded which mode the young person had chosen (online, app or paper). The CAPI module randomly selected one weekday, and one weekend day following the visit, and the interviewer wrote these on the placement materials. For those who chose to complete the time-use record online, the placement materials consisted of two time-use notebooks, and a leaflet which also contained their personal log-in details. Those who chose to complete the time-use record on paper were given two paper time-use records, with barcode stickers on to allow for reconciliation in the office. The placement materials were given to the young person inside a return-post envelope, which they were instructed to use to return the activity monitor and, if applicable, the paper time-use records.

A letter for teachers was provided to young people which explained the purpose of the time-use record and activity monitor activities. Copies of all time-use record materials can be found in the appendices.

4.7.3 Assistance with completion

Interviewers were not able to offer direct assistance with completion of the records, but answered any questions the young person had during placement. Additional help was provided in the form of instructions, provided on the paper documents left with cohort members; and further instructions contained within the instruments. They could also ask for help from the Ipsos MORI project team (via email, phone, or SMS).

To prompt completion of the records, young people and their parents were sent reminder text messages the day before, and the morning of, each day, if they consented to this (see Activity monitor section 4.6.4 for more detail on text message reminders.)

4.8 Parent interviews

4.8.1 Household interview

Interviewers were required to first complete a Household interview with any resident parent or guardian. The Household interview had to be completed first as it established who the household members were, and checked their availability for interview.

4.8.2 Selection of main and partner respondents

At the end of the Household interview the CAPI script determined which parent was to be the main respondent and which the partner respondent. The selection was carried out using a complex algorithm. Broadly speaking, the following principals were applied:

- If only one parent (including foster and adoptive parents) was in the household, that parent would be selected for the main interview and if they had a partner (including a same-sex partner), that parent would be selected to do the partner interview.
- If both parents were in the household, the CAPI usually selected the mother for the main interview and the father for the partner interview. The main exception was when the father was the natural parent of the young person and the mother not (in which case the father was selected for the main interview).
- If there were no parents living with the young person, the main carer and his/her partner were selected for interview.

Interviewers were able to overwrite the initial CAPI selection and complete the main interview with the person CAPI selected for the partner interview and vice-versa. This would be done if, for example, the father was the main carer of the young person or if the mother did not wish to take part.

Interviewers were only able to conduct the main and partner interviews with the people identified by CAPI as the main and partner respondents at the end of the Household interview. For example, if mother, grandmother and cohort member were the household members, the mother was selected even if the grandmother was the main carer (and no one would be eligible for the partner interview).

4.8.3 Main parent interview

The main respondent was asked a series of CAPI questions, supplemented with showcards where appropriate. The CAPI modules covered the following areas:

- Family context
- Education, schooling and childcare
- Parenting activities
- Young person's health
- Parent's health
- Employment, income and education
- Housing and local area
- Other matters
- Self-completion section
- Contact information

4.8.4 Partner and proxy partner interviews

Partner interview

The partner interview consisted of a series of CAPI questions, supplemented with showcards where appropriate. The questions for the partner were a subset of the main respondent questions, and covered the following areas:

- Family context
- Education, schooling and childcare
- Parenting activities
- Parent's health
- Employment, income and education
- Other matters
- Self-completion section
- Contact information

Proxy partner interview

If a household contained an eligible partner who was away for the entire fieldwork period or incapable of completing an interview themselves, then the main respondent was asked to complete a very short interview about their partner. However, a proxy interview could not be done if the partner simply did not want to take part in the survey. There were questions in the Household interview that determined whether or not a proxy partner interview should be done. The proxy partner interview covered the following topics:

- Family context
- Parent's health
- Employment, income and education

4.8.5 Strengths and Difficulties Questionnaire

The Strengths and Difficulties Questionnaire (SDQ) included sensitive questions about the cohort member and was answered by the main parent only on paper.

The SDQ is a brief behavioural screening questionnaire about 3-16 year olds developed by Robert Goodman. It exists in several versions to meet the needs of researchers, clinicians and educationalists… All versions of the SDQ ask about 25 attributes, some positive and others negative. [13] These can be categorised as emotional symptoms, conduct problems, hyperactivity/inattention, peer relationship problems and prosocial behaviour, with five questions in each category.

Interviewers could administer the SDQ at any point after the household interview, although they were encouraged to carry out the main parent interview first. The procedure for administering the SDQ was as follows:

- The relevant barcode sticker from the consent booklet was attached to the paper copy of the questionnaire
- The questionnaire was handed to the respondent together with an envelope
- The respondent was asked to complete it in private and then place it in the envelope and seal it
- For data protection reasons the SDQ forms were not sent back in the same envelope as the consent forms
- Upon reaching the office the forms were scanned and reconciled to the relevant cohort member by means of the barcode

[13] Source: *What is the SDQ?*. Available: http://www.sdqinfo.com/a0.html. Last accessed 08/09/2016.

5 Ethics and consent

5.1 Ethical approval

Ethical approval for the pilot surveys and the main stage was obtained by CLS. Ethical approval for the first pilot was obtained on 7th January 2014 from the National Research Ethics Service (NRES) Research Ethics Committee (REC) London – Central (REC ref: 13/LO/1786). For the Dress Rehearsal a substantial amendment was submitted and was approved on 11th April 2014 under the same reference number. A further two substantial amendments were submitted for the main stage of the survey and were approved on 6th October 2014 and 15th October 2014, again under the same reference.

5.2 Confidentiality issues

In order to maintain respondent confidentiality, a number of procedures were implemented:

- Interviewers were instructed to avoid mentioning the name of the study to anyone but the cohort member, their parents, stable contacts or schools
- Interviewers were required to check their sample prior to working to ensure that none of the respondents were known to them personally. If this occurred, the address was allocated to a different interviewer
- All respondents' answers were treated in strict confidence in accordance with the Data Protection Act. The advance letters, booklets and other survey documents highlighted that the information respondents provided as part of the survey would be anonymised, so nobody except those working on the study would have access to their names, addresses and other contact details
- Interviewers were briefed to ensure that everything that took place during the course of an interview remained confidential (including illegal activities)
- If a situation occurred whereby a respondent or other member of the household in a difficult personal situation appealed to the interviewer for help, interviewers were instructed to refer them to a friend, family member or other support network. Details of relevant support services were included on survey materials (see Respondent well-being section below)

A protocol was put in place to cover instances where an interviewer believed that someone might be at risk of harm but was not in a position to act on their own behalf. Interviewers were instructed to contact their Region Manager if they genuinely believed there was a serious risk that a member of the family was, or was at risk of, being harmed. Interviewers were required to complete an incident report form following a decision being made as to how best to proceed.

5.3 Respondent well-being

A number of measures were put in place to ensure that the research conducted was carried out in a non-harmful way that avoided impacting negatively on the safety, comfort and wellbeing of respondents. Achieving fully informed consent was essential to protect wellbeing (as discussed in section 5.5).

To help to ensure young people and parents had ongoing support if they had been affected by any of the issues in the survey, the following measures were put in place:

- The advance booklet for parents ('What would we like you and your child to do?") included information about sources of professional support and a helpline number. Interviewers were instructed to remind parents of this at the end of the visit, especially if it was felt that they had been upset by anything in the survey

- The advance booklet for parents ('What would we like you and your child to do?") also highlighted that parents might want to talk to young people about the interviewer visit to check if anything had distressed them. Interviewers were asked to draw parents' attention to this, especially if it was felt that the young person had been upset by anything

- At the end of the interviewer visit, all young people were provided with a 'further information leaflet' ("I've helped – what now?"). The leaflet suggested that young people talk to their parent(s), an adult family member or another adult they trust if the survey had made them upset or worried about anything. It also provided details of appropriate support services, including ChildLine, Get Connected and Talk to FRANK. Interviewers were required to specifically draw attention to the support information on the leaflet when handing this to the young person at the end of the visit

Copies of the booklets and leaflet mentioned above can be found in the appendices.

Interviewers were instructed to temporarily suspend or terminate interviewing if it was felt that a respondent was distressed by any aspect of the survey.

5.4 Respondent and interviewer safety protocols

Interviewers were given guidance on protecting both themselves and young people:

- Other than the thank you gift and the equipment required to carry out the survey, young people were not to be given anything else (sweets, food, etc.)

- Any unnecessary physical contact during the visit needed to be avoided

- For the physical measurements, given the involvement of physical contact, an adult had to always be present in the room. Interviewers were told to explain beforehand what was required and ensure the parent could see what was happening throughout the process where contact was necessary

- For the other young person elements, a minimum requirement was for an adult to be nearby (for example, in the next room – and the door should always be left open). However, if the interviewer, the parent or the young person felt more comfortable with an adult always being in the room, this approach was taken

5.5 Informed consent

Interviewers gained consent from parents and young people to participate in the survey.

All adult respondents had to give informed consent in writing to take part in the survey themselves. For cohort members, parents were asked for their written consent to allow the interviewer to speak to the young person and ask for their consent to participate in each element (parents were not asked to consent of behalf of the young person). The exception to this was the saliva sample collection, where parental consent for the young person's participation was a legal requirement.

Interviewers were also required to ensure that consent from the young person was as fully informed as possible. In order to do this, young people needed to understand the full details of processes/experience of participation (e.g. the burden/emotional impact), the reasons they were being asked to take part in each element, and the details around storage and use of data.

Administering the consent process

Consents were recorded in a consent booklet; a single booklet was used for each household.

As previously mentioned, all interviews started with the Household interview, which collected information about household composition and determined eligibility for each individual for each of the survey elements. Towards the end of the Household interview, the script generated details of which elements should be conducted in the household and by who, the consents required before proceeding with each element, and the relevant materials needed to gain consent. Interviewers assigned a consent booklet to a household at this point (by recording the consent booklet barcode number in CAI).

The following table summarises consents obtained, the consent forms involved, who had to complete each form, and the corresponding respondent communication materials to be referred to for each.

Figure 5.1: Summary of consents

Consent form	Completed by	Study elements covered	Relevant respondent communication materials
Main parent/guardian	Parent	Main parent interview, Word Activity and saliva sample	*'What would we like you and your child to do? - Information for parents'*
Young Person Elements 1	Parent or partner	Young person questionnaire, Word Activity, Decision-making task, measurements, provision of contact details, time-use record, activity monitor	*'What would we like you and your child to do? - Information for parents'* *'Wearing an activity monitor and completing a time-use record'*
Young Person Elements 2	Parent with legal parental responsibility	Saliva sample	*'What would we like you and your child to do? - Information for parents'*
Partner	Partner	Partner interview, Word Activity and saliva sample	*'What would we like you and your child to do?' - Information for parents'*
Young Person	Young person	Young person questionnaire, provision of contact details, Word Activity, decision-making task, measurements, saliva sample, time-use record, activity monitor.	*'What would we like you to do? - Information for study members'* *'Wearing an activity monitor and completing a time-use record - Information for study members'*

To administer the parent consent forms, interviewers were required to ensure that the parent had read all relevant leaflets and understood the key points. The respondent was then required to initial each element they consented to. Both the interviewer and the respondent then needed to sign each form as indicated.

Consent for the parent saliva samples was only sought from biological parents. Interviewers could see which parents were eligible for the saliva sample at the end of the household interview. Consent for the young person saliva sample (the young person elements 2 form) was only sought from parents with legal parental responsibility; again, this was established during the household interview and indicated to interviewers at the end of this part of the interview.

Verbal consent was obtained from young people. To administer the young person consent form, interviewers were instructed to read out key information word for word from the form. Interviewers completed the first section of the form in order to gain overall consent to participation and to make the young person aware of the purposes of the survey as a whole. It was essential that this first section was completed prior to any of the young person elements being conducted. The other sections of the form were used to gain young person consent to each of the individual young person elements.

All forms that were signed by respondents (main/partner/young person elements 1 & 2) were printed in duplicate on carbon-paper. The carbon copy was removed from the consent booklet and left with the respondent. A copy of the consent booklet can be found in the appendices.

Interviewers were instructed to follow some general rules regarding timing of consents:

- Consents for any individual element had to be obtained prior to that element being administered
- Parent consent to approach the young person about each of their elements had to always be obtained before consent from the young person was sought
- Consents had to be obtained after the household interview had been completed
- Consent to individual elements could be completed in any order, and at different times, to allow flexibility and enable respondents to absorb and consider the separate information about each one

For each element administered in CAI, interviewers were asked to confirm that the relevant consent had been obtained at the beginning of that element.

Any respondents whose first language was English but who could not read or understand the advance leaflets or consent forms for themselves because of literacy problems or poor vision had the information booklets and consent forms read out to them by the interviewer. Large-type copies of the booklets and consent forms were available on request.

Respondents were reminded throughout the consent process that consent could be withdrawn at any time. If a respondent requested that the data they provided as part of the survey was removed, all data along with any paperwork associated with it were destroyed. A confirmation letter was sent to the respondent to confirm this.

The consent form contained information about how to revoke consent for the ongoing storage of saliva or DNA samples.

6 Preparation, accreditation and quality control

6.1 Briefings

All interviewers attended a 3-day briefing before working on the survey. The briefings took place between December 2014 and July 2015.

The briefings were run by researchers from Ipsos MORI and CLS, members of the Ipsos MORI internal field team and Region Managers or Region Co-ordinators from Ipsos MORI's fieldforce. 'Train the Trainer' sessions were held before the first briefing, to ensure all trainers were equipped to deliver the survey-specific training.

In total, 291 interviewers completed all three days of the briefing. The size of the briefings varied between regions and attendance ranged from between 7 and 45 interviewers.

6.1.1 Briefing structure

The first two days of the briefing took place on consecutive days with a break before day three. During this break, interviewers were required to practice some of the non-standard interviewing tasks and complete some homework.

Days one and two of the briefings were conducted using a 'conference' style set-up, allowing more interviewers to be briefed in fewer sessions. These large-scale sessions, attended by up to 45 interviewers, aimed to provide high quality, consistent training. Key presentations took place in a central room, with the majority of training in 'break out' rooms of up to 15 interviewers and practical exercises/demonstrations in smaller groups.

The third day was briefed more traditionally, with a maximum of 18 interviewers attending; the rationale for smaller groups on day three was largely driven by the need to accommodate accreditations.

There were 13 day one and two briefings and 22 day three briefings.

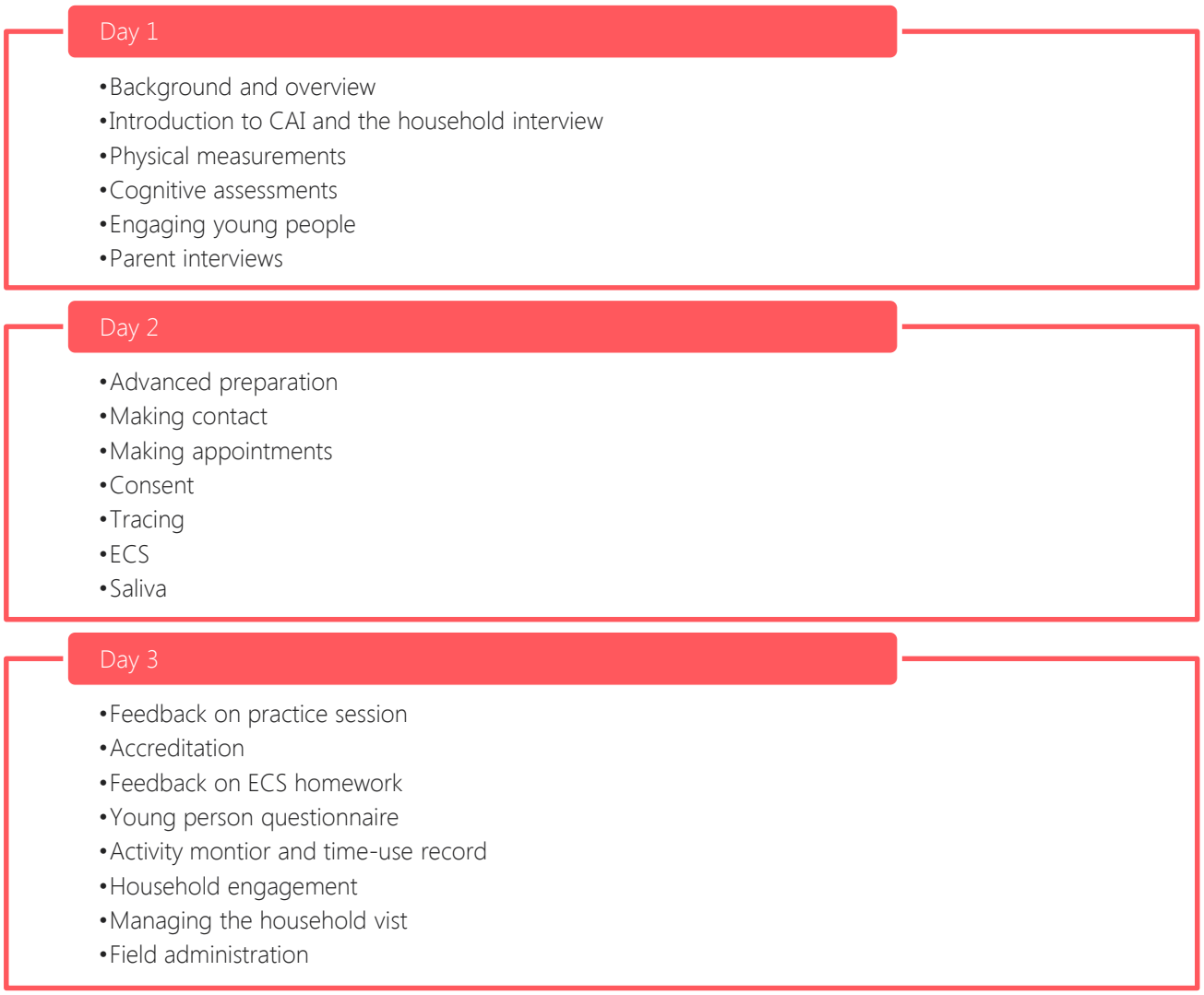
6.1.2 Briefing content

Before the briefing, interviewers were asked to complete two pre-tasks:

1. Recruit two 14 year olds for practice interviews
2. To familiarise themselves with some of the study materials (participant packs and the respondent website)

Figure 6.1 gives an overview of the briefing topics.

Figure 6.1: Briefing topics by day



6.1.3 Briefing materials

The briefing materials were presented in a lever-arch file containing all of the materials needed during the course of the three day briefing, organised by day, and clearly labelled for ease of reference.

Training films were used extensively throughout the briefings to ensure standardised delivery of protocols and for the delivery of client presentations across the country. Films were developed for the following sessions:

- Background
- Surveying 14 year-olds
- Physical measurements
- Cognitive assessments

- Gaining informed consent
- Saliva collection
- Activity monitor and time-use record

The films were made available on interviewer's tablets for future reference.

Practical exercises (e.g. group exercises and practice sessions) were used extensively throughout the briefing to ensure that interviewers were confident and competent in the procedures that they would be carrying out in the field. Throughout the briefings workbook exercises were used to consolidate learning.

6.1.4 Practice session and homework tasks

Between days two and three of the briefing, interviewers were required to complete a number of homework tasks:

1. Young person live practice: Conducting the physical measurements, cognitive assessments, and saliva sample elements with two young people aged 14.
2. Young person questionnaire practice: Familiarisation with the young person self-completion questionnaire.
3. Household, main and proxy partner interview practice: Familiarisation with the parent interviews.
4. Electronic Contact Sheet (ECS) exercise: Practice using the ECS for recording various types of household contact and tracing steps.

Interviewers were given a homework booklet containing instructions for these tasks.

6.2 Accreditation

During the third day of the briefing, all interviewers completed a competency-based assessment under test conditions on the physical measurements and saliva collection procedures. The purpose of these accreditations was to check that all interviewers were able to follow the protocols accurately.

Accreditation took place in groups of three with one accreditor and two interviewers per group. Interviewers carried out the physical measurements and saliva collection procedures on each other, whilst the accreditor observed and completed an accreditation booklet.

The accreditation booklet clearly set out the marking criteria for each measurement, with major and minor errors listed for each measurement as well as a script for the accreditor to administer the accreditation. In order to pass each part of the accreditation interviewers needed to:

- Make no major errors
- Make no more than 3 minor errors

A copy of the accreditation booklet can be found in the appendices.

At the end of the accreditation session, accreditors provided interviewers with feedback on their individual performance and informed them whether they had passed or failed (and if they had failed, specifically what they had failed on). All interviewers had to pass the accreditation prior to starting work. Re-accreditation was arranged for those who did not pass first time.

Accreditors were given detailed written instructions and training on the accreditation process.

6.3 Accompaniments

It is standard practice at Ipsos MORI for interviewers to be regularly appraised through supervision in the field, and for their work to be reviewed on an on-going basis. For MCS6, the majority of interviewers were accompanied within their first four weeks of starting work.

Interviewers were prioritised for accompaniment based on their experience, as well as those identified as less confident in the briefings, to ensure that appropriate support was provided in the early stages of fieldwork. A proportion of accompaniments fell outside the four week window due to broken appointments or illness.

For MCS6 a tailored accompaniment form was produced to ensure that supervisors were able to pick up and feedback on issues relevant to the survey. Supervisors attended a briefing session on the accompaniment process and, where possible, were asked to include visits where the young person elements were attempted.

On completion, each interviewer was given an overall score on a scale of 1-5 (1 being the highest/best score) and the form, signed by both parties, was passed to the Region Manager for review. The majority of interviewers scored 1 or 2; some of the few scoring 3 and all scoring 4 or 5 had a second accompaniment to provide additional supervised practice and support. Overall, eight interviewers had a second accompaniment. As a result of the accompaniments, one interviewer was removed from the interviewing panel for failing to meet the required standards.

Scores were crosschecked against interviewer performance via the validations and exception reporting, both of which are explained below.

6.4 Validation

In addition, standard Ipsos MORI validation procedures were applied: 10% of cohort families interviewed were re-contacted by telephone or letter by the dedicated Field Quality team. The validation script included a standard set of questions required by IQCS guidelines and some specific to MCS6. Some examples of questions asked included:

- Whether the interviewer showed the respondent their ID card
- Where the interview was conducted, how long it took and on what date it was completed
- Whether the respondent knew the interviewer socially or whether they had been interviewed by them before
- How the interviewer recorded the respondents' answers (i.e. tablet computer, pen and paper, etc.)
- Whether the interviewer was able to explain all the different elements of the survey clearly to the respondent and to the cohort member

- Whether the interviewer conducted the physical measurements
- Whether the interviewer provided the young person with their tablet to complete a questionnaire on their own
- Whether the respondent was asked to sign a consent form

Validators were also able to trigger an automated email to the Quality team if there was a serious issue to report. In total, 1,161 validations were completed. This was approximately 10% of the total number of interviews completed and covered the work of 123 interviewers. Over the course of MCS6 fieldwork, no assignments were flagged as being of potential concern.

A copy of the validation script can be found in the appendices.

6.5 Exception reporting

As a further check on the quality of completed interviewing, regular exception reporting was conducted. This involved analysing survey data and other background information recorded by CAPI at the interviewer level in order to identify any instances where interviewers were not implementing the survey appropriately and consistently. Findings for each interviewer were compared against the average and over time, in order to track performance.

For MCS6 an agreed set of checks were run on a monthly basis. SPSS syntax was written to check particular questions and key issues such as overall and individual response rates for each element, mode used for the time-use record, the length of the main interview, refusal rates for saliva collection, level of refusals and non-response on income questions, among others. Outliers and errors indicated where an individual interviewer's data needed further scrutiny.

This information was used to feed back to interviewers about performance, both individually and collectively. Feedback to interviewers as a whole was given via newsletters, memos or text messages. These served as useful reminders aimed at improving performance generally and resolving any apparent misconceptions. Feedback was also provided in a more targeted way, highlighting interviewers with issues of particular concern and seeking direct feedback. If necessary, interviewers were provided with further training.

6.6 Data Quality Reporting

A number of measures were put in place to ensure the quality of the data collected. A monthly report was provided to CLS during fieldwork detailing initial and ongoing checks on the data.

These checks included:

- Analysis of the 'soft' checks contained in the Main and Partner interviews, whereby interviewers were asked to either amend or confirm an answer that fell outside of an expected range
- Analysis of distributions and non-response rates for certain questions that might be considered sensitive across the Main, Partner and Young Person interviews, such as those relating to finances, or matters of a personal nature
- Physical measurements data were analysed in conjunction with interviewer comments for distribution and outliers
- Activity monitor data files were reconciled to the correct cohort member and checked for valid data

Other than a small number of edits to the Physical Measurements data (which are detailed in the element Edits log. This was supplied to CLS alongside the data, and includes details of cases where edits were made after fieldwork), no changes to either the scripts or the data were recommended as a result of these checks.

6.7 Fieldwork complaints and respondent queries

Although most of the calls received about any survey are straightforward enquiries, a small number of complaints are normal. Ipsos MORI interviewers are well briefed and experienced in engaging with respondents ethically and sensitively so that complaints are kept to a minimum. However, where a complaint did occur, the following principles applied.

All complaints, whether made directly to CLS or to Ipsos MORI were registered in a complaints log and passed to the most appropriate person to deal with them within a day of receipt. They were then acknowledged within two working days with a standard response explaining that the matter would be investigated fully. Complaints relating to the conduct of the interviewers were dealt with by Ipsos MORI. Complaints about the survey processes were dealt with by Ipsos MORI, in conjunction with CLS, where necessary. CLS took ownership of complaints about the study in general, a previous wave or themselves directly.

At Ipsos MORI, all complaints were allocated an 'owner' who had responsibility for investigating the issue and ensuring it was dealt with within two weeks. Once the standard follow-up response was sent to the complainant, an appropriate course of action was decided upon, if necessary in consultation with CLS.

Where a complaint against an interviewer was upheld, the interviewer was informed of this and given an opportunity to respond. Depending on the seriousness of the complaint, actions would range from a formal verbal or written warning, extra coaching or additional supervision, to dismissal from the interviewer panel.

All complaints received were acknowledged by email or phone, depending on how they were initially received. Following full investigation, a letter (by post) was sent to the complainant which addressed their concerns, offered an explanation and detailed any actions that had been undertaken as a result. All relevant details were logged on the complaints log. Anonymised copies of all letters were provided to CLS on an ongoing basis.

In total, 36 complaints were received by Ipsos MORI or CLS during MCS6 fieldwork. Twenty of these were about interviewers, 14 were about the survey processes (e.g. contact procedures / re-issues), five were about the content of the survey and two were about technical problems during the interview (these sum to more than 36 as some complaints covered more than one category). An additional eight respondent communications were flagged as being a potential cause for concern. One interviewer was removed from the interviewing panel following a complaint and another interviewer was temporarily suspended.

The complaints were only a small proportion of all calls received from respondents about the study. In total, around 600 calls were received (to Ipsos MORI and CLS). CLS sent through details of any calls received daily using a respondent communication spreadsheet. Ipsos MORI also received around 185 emails from respondents. These calls and emails from respondents included c.216 booking/changing appointments, c.209 refusals, c.153 questions about the activity monitor or time-use record tasks, c.64 changing contact/household details and c.46 messages for interviewers (among others). A further 328 items of returned mail were also logged. In total, just under 5,000 SMS replies were sent to Ipsos MORI by young people and their parents in response to the ACC/TUD reminder texts.

7 Conduct of fieldwork

7.1 Fieldwork period

Fieldwork was conducted between 15th January 2015 and 30th March 2016. Fieldwork was split into three phases and nine waves, as shown in the following table:

Table 7.1: Fieldwork phases and waves

	Wave	Start date	End date	Countries	Date of birth	Date due to start Year 9 (E&W) / Year S3 (S) / Year 10 (NI)
Phase 1	1	Jan 2015	Dec 2015	England, Wales	1 Sep 2000 – 31 Aug 2001 in England & Wales 24 Nov 2000 – 28 Feb 2001 in Scotland	September 2014 in E&W August 2014 in S
	2	Feb 2015	Feb 2016	England, Wales, Scotland, Northern Ireland		
	3	March 2015	Dec 2015	England, Wales, Scotland, Northern Ireland		
Phase 2	4	April 2015	Feb 2016	England, Wales, Scotland, Northern Ireland		
	5	May 2015	Dec 2015	England, Wales		
Phase 3	6	August 2015	Mar 2016	Scotland	24 Nov 2000 – 11 Jan 2002 in Scotland 2 Jul 2001 – 11 Jan 2002 in NI	August 2015 in S September 2015 in NI
	7	September 2015	Mar 2016	Scotland, Northern Ireland		
	8	October 2015	Mar 2016	Scotland, Northern Ireland		
	9	November 2015	Mar 2016	Scotland		

Interviews were scheduled to take place when the cohort members were in the same school year at the time of being interviewed (Year 9 in England and Wales, Year S3 in Scotland and Year 10 in Northern Ireland). To achieve this, fieldwork in England and Wales was scheduled for the 2014-15 academic year. However, to achieve the same thing in Scotland and Northern Ireland, fieldwork had to take place in both the 2014-15 and the 2015-16 academic years. This was partly because of the later and longer birth windows and partly due to differences in school starting years in these countries.

In order to manage the fieldwork effectively, it was divided into different phases. Phases 1&2 included all cohort members who were due to start Year 9 (England and Wales)/S3 (Scotland)/Year 10 (Northern Ireland) in Autumn 2014, and phase 3 included those who would start in Autumn 2015. Consideration was initially given to having just two fieldwork phases – one beginning in January 2015, and another beginning in August 2015, but it was decided that the first phase, containing the largest amount of fieldwork, should be split into two. CLS sent participant packs to all cohort members prior to the interviewer visit, and splitting the fieldwork into three phases rather than two allowed for greater control of these mailings,

and ensured that cohort members were not receiving their packs several months prior to the interviewer visit. Within each phase, fieldwork was split into waves for fieldwork management purposes, as described below in the interviewer assignment section,

Originally fieldwork for phases 1&2 was planned for January to August 2015 but in reality continued until December 2015. Phase 3 fieldwork was originally planned to take place between August and December 2015 but in reality continued until March 2016.

The following table shows the number of interviews achieved each month, with the interviews that took place later than originally planned highlighted.

Table 7.2: Interviews achieved, by month

	England	Wales	Scotland Phase 1&2	Northern Ireland Phase 1&2	Scotland Phase 3	Northern Ireland Phase 3
Jan 15	95	7	0	0	0	0
Feb 15	674	136	14	35	0	0
Mar 15	798	156	58	102	0	0
Apr 15	1150	261	99	109	0	0
May 15	1071	206	52	96	0	0
Jun 15	928	168	27	83	0	0
Jul 15	888	129	12	57	0	0
Aug 15	927	202	17	48	29	0
Sept 15	558	136	3	9	155	27
Oct 15	353	105	2	10	152	194
Nov 15	250	61	1	16	231	142
Dec 15	83	43	0	11	113	40
Jan 16	8	10	0	1	123	68
Feb 16	0	4	0	1	113	63
Mar 16	0	0	0	0	58	17
Total	**7,783**	**1,624**	**285**	**578**	**974**	**551**

As the plan was for interviews to take place when the cohort member was in a certain academic year, any delays during fieldwork had a greater impact if the interview for an individual was pushed into the subsequent academic year than if it took place in the originally scheduled academic year.

The following table shows the proportion of interviews that took place when originally planned, the proportion that were delayed but still took place within the intended academic year, and the proportion delayed into the following academic year.

Table 7.3: Proportion of interviews delayed

	England	Wales	Scotland Phase 1&2	Northern Ireland Phase 1&2	Scotland Phase 3	Northern Ireland Phase 3	Total
Within original timetable	72%	65%	92%	83%	70%	73%	**72%**
Delayed, but within intended academic year	12%	12%	0%	8%	30%	27%	**14%**
Delayed, pushed into next academic year	16%	22%	8%	8%	0%	0%	**14%**

Whilst the majority of interviews were conducted within the timetabled fieldwork periods, a sizeable minority of interviews were delayed into the next academic year. England and Wales were impacted by this the most, with 16% and 22% of interviews respectively being pushed into the following academic year. In both Scotland and Northern Ireland this happened in 8% of cases. The fieldwork delays were largely due to capacity problems, affecting the whole industry at the time when fieldwork was taking place. This was compounded by the fact that, due to the very complex nature of the survey, fewer interviewers worked on it than planned. A number of steps were taken throughout fieldwork in an effort to mitigate these delays, including very close management of interviewers and their workloads, the use of distance interviewers, and bonus payments.

7.2 Interviewer assignments

The sample was grouped into interviewer assignments, or points. In total there were 1,255 points, containing an average of 14 addresses. Where an MCS5 interviewer was available to work on MCS6 the assignment was left as similar to MCS5 as possible. Otherwise addresses were clustered into assignments based on geographical proximity.

Assignments were grouped into fieldwork waves. 'Priority' addresses were identified as those with a high non-contact propensity and were allocated to an assignment in the first possible wave of fieldwork. This was done to maximise the length of time interviewers had to establish contact with 'difficult to contact' addresses.

Interviewers were allocated to assignments primarily based on their proximity and availability. Additionally, in assignments where there was a high proportion of Asian families, an attempt was made to assign them to a female interviewer.

In total, 252 interviewers conducted interviewing. On average they each completed 47 interviews. Twelve percent of interviewers conducted 10 or fewer interviews; six percent of interviewers conducted 100 or more interviews.

Table 7.4: Productive interviews per interviewer

	N	% of interviewers
1 to 10	30	12%
11 to 20	26	10%
21 to 30	34	13%
31 to 40	41	16%
41 to 50	35	14%
51 to 60	25	10%
61 to 70	17	7%
71 to 80	14	6%
81 to 90	7	3%
91 to 100	7	3%
100+	16	6%
Total	252	100%
Median	47	
Mean	40	

7.3 Issuing sample to interviewers

Interviewers were issued their sample assignment at the beginning of each wave. They were able to access sample information through a fieldwork management system called the Electronic Contact Sheet (ECS). Section 7.9 provides full details on the ECS.

All interviewers were instructed to review their assignments when they received them in order to plan their work, considering the first contact method, address location and the response history of each family. Assignments contained a mixture of 'phone first' and 'face-to-face first' addresses. Interviewers were advised to make an appointment with a 'phone first' case and then to prioritise contacting the 'face-to-face first' cases whilst working in the local area.

7.4 Materials for interviewers

Interviewers were supplied with the following materials for use on the survey.

Table 7.5: Table of materials

	Document	Document included in appendices
Briefing materials	Interviewer instructions - Data Collection Instruments	Yes
	Interviewer instructions - Survey Information and Processes	Yes
	Homework booklet	No
	Briefing workbook, worksheets and practice scenarios	No
	Study elements chart	No
	Briefing agenda	No

	Document	Document included in appendices
Pre-fieldwork and live practice materials	Fieldwork preparation letter for interviewers	No
	Advance letter for parents- live practice	No
	Advance letter for young people - live practice	No
	Advance booklet for parents - live practice	No
	Advance booklet for young people - live practice	No
	Further information sheet – live practice	No
	Information sheet for young people – live practice	No
	Information sheet for parents – live practice	No
	Live practice quota sheet	No
	Live practice consent booklet	No
	Live practice interviewer instructions	No
Advance mailing	Advance letter for parents	No
	Advance letter for young people	No
	Advance booklet for parents (*'What would we like you and your child to do? – Information for parents'*)	Yes
	Advance booklet for young people (*'What would we like you to do? – Information for study members'*)	Yes
	Advance letter for parent – Generic	Yes
	Advance letter for young people - Generic	Yes
	Laminated advance booklets	No
	Spare copies of advance booklets	No
Appointment mailing	ACC/TUD appointment leaflet for parents (if applicable) (*'Wearing an activity monitor and completing a time-use record – Information for parents'*)	Yes
	ACC/TUD appointment leaflet for young people (if applicable) *'(Wearing an activity monitor and completing a time-use record – Information for study members'*	Yes
	Appointment card	Yes
	ACC/TUD appointment leaflet for parents (if applicable) – Other languages Laminated ACC/TUD appointment leaflets	Yes
	Spare copies of appointment leaflets and cards	No
Materials used in household	Calling cards	Yes
	Consent booklet	Yes
	Frankfurt Plane card	Yes
	Further information leaflet for young people *('I've helped – What now?')*	Yes
	Laminated Decision-making task admin script	Yes
	Laminated Word Activity instructions	Yes
	Language card	Yes
	Measurements postcard	Yes
	Partner letter	Yes
	Physical Measurements Summary sheet	Yes
	Respondent calendar	Yes
	Saliva despatch form	Yes

	Document	Document included in appendices
Materials used in household	Saliva despatch jiffy bags	No
	Showcards	Yes
	Study and saliva FAQs	Yes
	Strengths and Difficulties paper questionnaire and return envelopes	Yes
	Young person questionnaire topic list for parents	Yes
	ACC information letter for sports clubs (if applicable)	Yes
	ACC despatch slip (if applicable)	Yes
	ACC return jiffy bag (if applicable)	No
	ACC placement leaflet (if applicable)	Yes
	Multi birth ACC stickers (if applicable)	No
	Paper time-use record (if applicable)	Yes
	Time-use notebook (if applicable)	Yes
	TUD app explanation leaflet (if applicable)	Yes
	TUD online explanation leaflet (if applicable)	Yes
	TUD/ACC teacher explanation letter (if applicable)	Yes
Tracing materials	Change of address card	Yes
	Occupier letter	Yes
	School tracing letter	Yes
	Schools tracing letter for parents	Yes
	Stable contact letter	Yes
	Tracing letter	Yes
	Tracing letter envelopes and stamps	No
Reference documents and other materials	Document reference list	No
	Young person thank you gift (USB)	No
	Thank you postcard for young people	Yes
	CLS pre-notification booklet for young people	Yes
	CLS pre-notification booklet for parents	Yes
	Young person participant pack booklet	No

7.5 Welsh language materials

Respondents in Wales were provided with all main communication materials in both languages, and were also able to choose which language they participated in. This was to ensure equality was given to the English and Welsh languages.

Families in Wales were sent or given English and Welsh versions of all the following advance and appointment documents:

- Advance letter for parents
- Advance booklet for parents
- Advance letter for young people
- Advance booklet for young people
- Appointment card
- If applicable, activity monitor and time-use record appointment leaflet for parents

- If applicable, activity monitor and time-use record appointment leaflet for young people

All respondents could also have or use Welsh versions of the following materials if requested:

- Young person 'further information leaflet'
- Partner letter
- Showcards
- Consent booklet
- Measurement postcard
- Paper time-use record

7.6 Other language materials

To support participation of parents with limited English, other language materials were provided. These were not provided or required for young people because all cohort members were born in the UK and therefore have good spoken English. Parents' materials were provided in the seven languages most commonly needed at previous sweeps of the study:

- Urdu
- Punjabi (Gurmukhi script)
- Punjabi (Urdu script)
- Gujarati
- Bengali
- Hindi
- Arabic

Specifically, all of the materials required to secure survey participation and informed consent from parents were provided in another language (the advance letter and booklet, appointment card, where applicable the activity monitor and time-use record appointment leaflet, the partner letter and the parent consent forms).

Survey tools and other materials were not translated.

7.7 Pre-notification for cohort families

All cohort families were sent two mailings from CLS before the start of fieldwork.

The first mailing (a participant pack) was sent to young people in either autumn 2014 or spring 2015 depending on when they were to be interviewed. The pack contained a letter, some small gifts (a keyring, travel-card holder and a notebook)

and a booklet providing information about the study. The purpose of the mailing was to re-engage study members and to introduce them to the new study branding.

The second mailing (known as the pre-notification mailing) was sent to both parents and young people in advance of fieldwork. The mailing was sent in three phases, one at the end of 2014 and two during 2015, prior to the sample being issued. It contained a letter for parent(s), a letter for young people, a leaflet outlining some survey findings for parents, and a leaflet outlining some findings for young people. The purpose of the mailing was to inform families that fieldwork was commencing, and to tell them to expect an interviewer to be in contact. It also provided them with findings from the last survey when the young people were 11 years old.

Copies of the participant pack and pre-notification letters and leaflets can be found in the appendices.

7.8 Informing the police

All interviewers were instructed to inform the local police station that the study was taking place before starting work. They were asked to do this as it is reassuring for families, as well as other people the interviewer may come into contact with, to be told that the police are aware they are working in the area. It is also useful for the police to be aware of the study and the fact that an interviewer is in the area, so that they can reassure anyone who contacts them about it. To assist with this, interviewers were required to show the police a copy of the advance letter sent to study members.

Interviewers were also provided with a form (known as a 'police notification form') to provide to the police prior to starting work. The form contained information about the interviewer, such as where and when they would be working on the study. Procedures for the local police station recording the information contained in the form varied by country (e.g. in person/over the phone/online).

Interviewers were required to give Head Office details of the date, time and the person they had informed at the police station before they could start work.

7.9 The Electronic Contact Sheet (ECS)

The Electronic Contact Sheet (ECS) was used to control the fieldwork protocols and monitor interviewer progress during fieldwork. It replaced the paper contact sheets used at previous sweeps of the study. Interviewers used the application on touch-screen tablets, to access contact information and log progress (contact attempts) during fieldwork, and synchronised it with a central database every day. This meant that staff in the central office were able to monitor and report on progress as it happened in the field. The ECS:

- Provided interviewers with sample details
- Allowed interviewers to manage appointments
- Allowed interviewers to record contact attempt outcomes (including mover tracing steps)
- Allowed interviewers to review and monitor their progress and to view which interview elements had been completed and which were outstanding
- Allowed interviewers to record notes and comments, and to update contact information

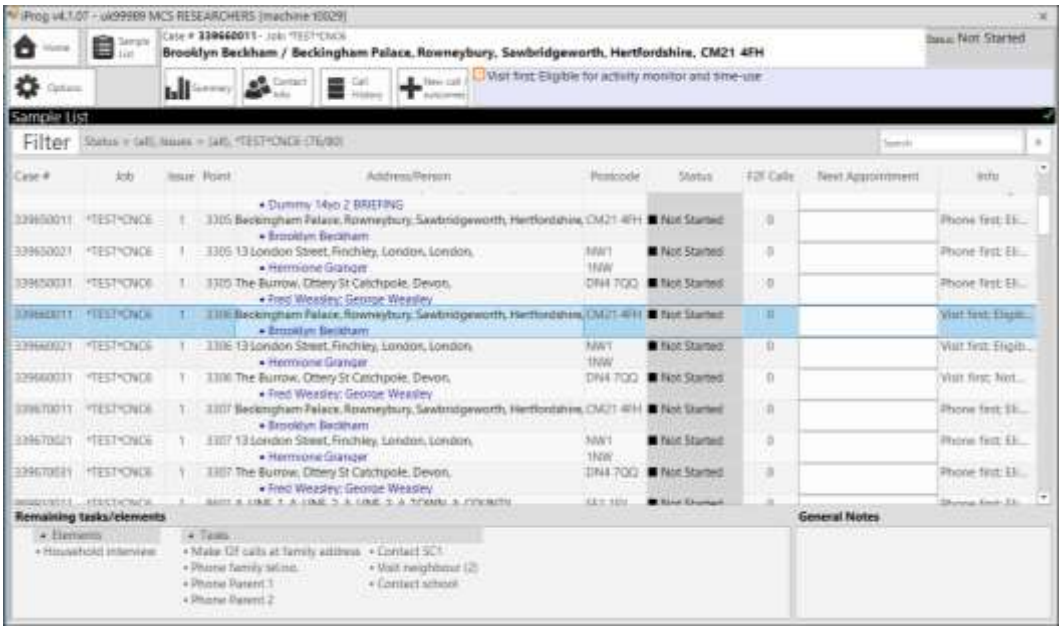
- Was used to launch Dimensions[14] interview scripts and conduct interviews
- Allowed interviewers to record the final outcome for each household
- Allowed interviewers to receive messages from Head Office about their cases and assignments

7.9.1 Sample details

The ECS included the following sample information:

- Serial number
- Issue number
- Status of case
- Whether the household was eligible for activity monitor and time-use record placement
- Contact information

Figure 7.1: Example of the sample list in ECS (fictitious example):



The ECS contained a substantial amount of information about each household in order to help interviewers plan their approach to contacting the cohort families and carrying out the interview. The contact information section of the ECS included the following:

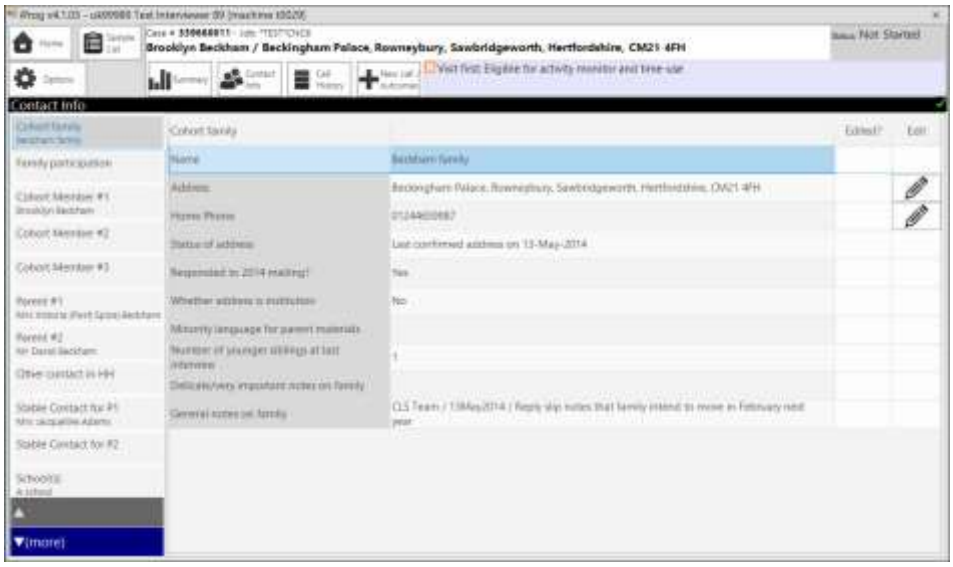
- Cohort family details for locating and contacting:
  - Address

[14] A survey scripting and data processing software package.

  - Telephone numbers
  - The status of address (CLS sample variable which indicated when last the case address details were confirmed)
  - Whether the family responded to a mailing sent in 2014
  - Whether the address provided is a care home or other form of institution
  - Whether any materials should be sent in one of the ethnic minority languages
  - Number of siblings at last interview
  - Delicate/important notes about the family
  - General notes on the family
- Information providing useful context about previous sweeps of the study:
  - The address and date of last interview
  - Last sweep completed and family outcomes
  - Main and partner respondents at the last sweep completed
  - Language of translated interviews (if applicable)
- Young person details:
  - Name
  - Gender and date of birth
  - Any special needs recorded
  - Outcomes for each survey element at last sweep
  - Whether cognitive assessments were conducted in English or Welsh at the last sweep
  - Word reading ability score
  - Activity monitor/time-use record days, mode and login details (if applicable) – updated after completion of the ACC CAPI module
- Parent details:
  - Name
  - Telephone numbers
  - Who completed the main or partner survey elements at the last sweep completed
  - Relationship to cohort member
  - Gender and date of birth

The ECS also contained information to assist mover tracing if required. For example, stable contact details and school information (if known).

Figure 7.2: Example of contact info section in ECS (fictitious example):



7.9.2 Appointments

The ECS showed the time and type (face to face or telephone) of appointment that the interviewer logged. It also allowed interviewers to record any notes they thought might be useful when setting up and managing their appointments. In addition, a calendar function allowed interviewers to view and manage all their appointments.

7.9.3 Contact attempt outcomes

Interviewers recorded details of all forms of contact made, including direct contact with the cohort family, and contact with others such as neighbours or stable contacts. For each contact attempt interviewers logged how, when and who they attempted to contact, and the outcome of the attempt.

7.9.4 Progress

The ECS helped interviewers manage their workload, providing a summary of progress with each case. For example, interviewers were able to keep track of the steps[15] that they were taking to trace a family. They were only able to declare that they could not locate a family once these steps had been carried out and logged. The ECS clearly displayed their progress, showing both interviewers, and head office which steps had been carried out and which remained.

In addition, the ECS showed which survey elements had been completed for each family and which were left to do.

7.9.5 Contact information

Interviewers added or edited the contact information in the ECS if they obtained new information about the family or family members. Interviewers were also able to add contact information for anyone who assisted with mover tracing (such as neighbours). This information was replicated in the CAPI interviews where applicable (for example, at the end of each interview, respondent contact details were checked) and similarly changes made in the CAPI interview were reflected in

[15] These steps are described in detail in section 7.11, below.

the ECS. Office staff were also able to change contact information if they received new information by telephone or letter. The ECS provided a full history of the changes made to each item.

7.9.6 Interviews

The CAPI questionnaire for all interviews was launched from the ECS. The first element to be completed was the household interview (initially only this element was available in the ECS). Once the interviewers had completed the household interview, the ECS showed a list containing every element available for that household, as well as who would need to complete it and what progress had been made on it. The interviewers could then use ECS to launch the appropriate script in the CAI. Completed elements were shown in red and were locked so that the interviewers could not access them anymore. If an element had been paused in Dimensions, the interviewer would see in the ECS that it was not completed and could relaunch that element and be taken to the correct place in the interview. Elements that had not been started were shown in green.

7.9.7 Final outcomes

Interviewers needed to record a final outcome for each household once they had finished working on a case. In productive households, an outcome for each survey element that the household members were eligible for was logged in ECS automatically, and once all elements were finalised a household-level outcome was automatically assigned. For unproductive households interviewers had to select a final outcome for the household before they could transmit the case back to head office.

7.9.8 Head Office messages

The ECS included an integrated messaging system used by the Head Office to pass on messages to interviewers. For example, if a respondent phoned the office to refuse to take part, a message appeared the next time the interviewer synchronised their tablet. Interviewers were required to acknowledge receipt of all messages received.

7.10 Who to contact

Interviewers were provided with details of who to contact and which contact method should be used in the first instance based on the respondent's participation status in previous sweeps of the study. Interviewers were provided with resident parent details (Parent 1 and Parent 2) in the ECS. If there were two parents listed on the ECS and both took part in MCS5, then interviewers were instructed to attempt to make initial contact with the person who was the main respondent in MCS5. If they were not able to contact this person, then they were to attempt to contact the person who was the partner respondent last time.

If the ECS indicated that only one parent took part in the last sweep, interviewers were instructed to first attempt contact with the parent who took part at the last sweep. If the ECS indicated that neither parent took part in the last sweep, interviewers were able to attempt to contact either parent. In cases where the cohort member's parents were no longer living together, interviewers were briefed to try to find out who the young person now lived with and to interview at that address. If the young person lived with both parents for some of the time, interviewers were asked to try to establish where they mainly lived and to interview at that address. If residence was shared equally between the two parents, then interviews were usually conducted in the household that contained the main respondent from last time.

7.11 Tracing young people

Interviewers were required to trace cohort families if:

- They were no longer living at the issued address
- It was not possible to establish whether they were living at the address, after multiple contacts
- The address was inaccessible or couldn't be found

Interviewers were required to follow a number of tracing actions in the hope of finding the young people. If all of these were unsuccessful they could then assign the outcome 'moved – unable to find follow-up address'. The tracing actions required were:

- Multiple phone calls to the cohort family – interviewers were required to try all telephone numbers provided in ECS for the cohort family and Parent 1 and Parent 2. A minimum of five phone calls to each of the telephone numbers were required. Interviewers were encouraged to make phone calls at different times of the day and on different days of the week.
- Making multiple visits to the cohort family's last known address. A minimum of eight face-to-face visits were required, with four in the evenings and at weekends.
- Speaking to current residents of the issued address or neighbours who might know the whereabouts of the cohort family.
- Contacting nominated stable contact(s)[16]. Contact details for stable contacts were provided on the ECS and interviewers were instructed to make contact either by telephone or face-to-face. If a face-to-face visit was not feasible and contact was not made over the telephone, then a stable contact letter was sent.
- Contacting the school that the young person was attending when last interviewed (if information was available).

Interviewers were required to record all contacting and tracing attempts. They recorded the outcome of each attempt on the ECS, including any new addresses established.

If interviewers were successful in finding a new address for a family that had moved, they would follow the contact procedures at the new address. If the new address was outside of the interviewer's area, the case would be coded as 'moved out of area' and would be reallocated to another interviewer.

Interviewers were also required to attempt to establish full addresses of any cohort families no longer living in the UK in order for CLS to maintain contact with emigrant families in case they return to the UK in the future (and would therefore be eligible to participate in the study again).

[16] In previous sweeps, cohort families were asked to provide details for a 'stable contact' (a friend or relative) whom the study could contact if the family moved and who may know where the family had moved to.

Where interviewers were unable to trace the family to a new address the case was passed to the CLS Cohort Maintenance Team for further tracing (see section 8.5 for details).

7.11.1 Tracing letter

In instances where interviewers made contact with someone who knew where the cohort family was living but was unwilling to provide this information to the interviewer, a tracing letter could be used. This letter was given to the contact to pass on to the cohort family, allowing the cohort family to decide for themselves whether they wanted to take part in the survey but without the contact feeling they had given away the cohort family's address.

This letter explained that MCS6 was taking place, and that an interviewer from Ipsos MORI had tried to contact the respondent unsuccessfully. The respondent was asked to send their new address details to Ipsos MORI. Interviewers completed these letters, and placed them in an envelope containing a post-paid envelope addressed to Ipsos MORI, and asked the person who knew the cohort family's whereabouts to post or pass on the letter to the cohort family.

The tracing letter mentioned the study name as it was for the cohort family. Interviewers sealed the envelope before giving it to the person passing it on in order to protect confidentiality.

7.11.2 Stable contact letter

If interviewers were unable to make contact by telephone or face-to-face with the stable contact(s) provided in ECS then a stable contact letter could be used.

The letter explained that MCS6 was taking place and that an interviewer had been unsuccessful making contact with the cohort family. The stable contact(s) were asked if they would be willing to provide new address details for the cohort family to Ipsos MORI. Interviewers completed the letters and placed them in an envelope containing a post-paid envelope addressed to Ipsos MORI, and sent them to the stable contact address.

The letter mentioned the study name as it was intended for the stable contact who would usually be aware that the family were part of the study.

7.11.3 Occupier letter

If interviewers were unable to make contact with anyone at the last known address of the cohort family and had not been able to establish their whereabouts from neighbours or the stable contact, then they were asked to leave an Occupier letter at the last known address.

This letter explained that CLS was trying to contact a person who was part of a very important research project, and that this was the last known address for that person. The letter asked the recipient to contact Ipsos MORI, or to forward the letter to the addressee, if their new address was known. The Interviewer completed the letter and placed it in an envelope containing a post-paid envelope addressed to Ipsos MORI, and posted them through the letterbox of the last known address.

The occupier letter did not mention the study name or cohort member's name as it was intended for the current occupiers who may not know that the family was involved in the study.

7.11.4 Contacting schools

For some families, interviewers were provided with the name and address of the secondary school the young person was intending to attend at the time of the last interview.

If the school was local to the interviewer, then they were asked to visit and enquire as to whether the young person was still attending the school. If so, interviewers asked if the school would be willing to forward a 'schools tracing letter for parents' to the family which, like the standard tracing letter, invited the family to contact Ipsos MORI to provide new contact details.

If making a visit to the school was not practical, interviewers were provided with a 'schools tracing letter' that could be sent to the head teacher explaining that a young person who attended their school is a member of the study and that the interviewer was attempting to contact their family. Interviewers enclosed a 'schools tracing letter for parents' and asked the head teacher if they would be willing to forward it on to the young person's family.

These letters mentioned the young person's name and the study name in order for the school to help with tracing.

Copies of all tracing letters can be found in the appendices.

7.11.5 Future changes of address

In order to help keep track of movers in the future, a change of address card was left at the end of every household visit (a copy can be found in the appendices). The purpose of the change of address card was for cohort families to inform CLS should they change their address in the future.

In addition to this, the CAPI script prompted interviewers to ask the main respondent whether the family were planning to move and if so, for details of where to (if known).

7.12 Making appointments

Interviewers were asked to bear in mind the length of the survey when making appointments and that more than one visit to a cohort family may be required, depending on the availability of the respondents.

If interviewers were successful in making an appointment, they were then required to give the cohort family an appointment mailing.

The appointment was confirmed in writing alongside leaflets explaining more about the activity monitor and time-use record tasks (for eligible families). Interviewers encouraged families to read the information in advance of the visit.

If interviewers contacted a respondent and made the appointment by telephone, then they were required to post the appointment mailing. If there was not enough time to post the leaflet to the respondent before the appointment, interviewers were asked to explain the content of the leaflets to the respondent, and to allow extra time during the interview for the respondent to read the leaflets fully.

The appointment mailing contained the following:

- Appointment card used as a record of the appointment time arranged and also containing interviewer contact details should the respondent need to cancel or rearrange the appointment

- Activity monitor and time-use record appointment leaflet for parents
- Activity monitor and time-use record appointment leaflet for young people

Copies of the appointment mailing materials can be found in the appendices.

7.12.1 Partner letter

A letter was designed specifically to try to engage partners in the study and encourage cooperation in order to achieve as high a response rate as possible, and ensure that a full picture of family life was obtained. The letter was developed with the intention of:

- Encouraging more partners to take part;
- Making it clear what participation involved and why their participation is important; and
- Giving them the option of arranging an appointment directly with the interviewer.

The letter was left at the household if the partner was not available at the time of the visit. The partner letter could only be provided after completion of the household questionnaire (as this was where the selection of the main and partner was carried out).

A copy of the partner letter is in the appendices.

7.13 Return of work

7.13.1 Electronic data

Interviewers were asked to keep their ECS up to date and to transmit this alongside their Dimensions (CAI questionnaire) data back to the office at the end of each working day

17.13.2 Consent booklets

Interviewers returned paper consent forms to the office by post regularly throughout their assignments. They sent multiple consent forms together, but never included Strengths and Difficulties Questionnaires in the same envelope so that no survey answers could be associated with identifiable details about the cohort families. On receipt these were booked in to an electronic database. The consent booklet barcode was scanned and the following checks were carried out:

- The case number written (by hand) on the front page corresponded with the case number connected to that form in the electronic data
- The young person name matched the electronic data
- That correct consents were obtained for the main, partner and young person saliva samples

Consent forms were then sent to Ipsos MORI's scanning department and scanned to create electronic image files.

7.13.3 Strengths and Difficulties Questionnaire (SDQ)

Interviewers also returned completed paper SDQs to the office by post at least every two weeks. Again they sent multiple SDQs together, but never included consent forms in the same envelope. On receipt, these were booked in by scanning the SDQ barcode and checking that the young person name on the form corresponded with the respondent connected to that form in the electronic data. Forms were then sent to Ipsos MORI's scanning department and for data capture.

7.13.4 Saliva samples

Interviewers sent saliva samples to the laboratory in Bristol at least once a week. See section 4.5.4 for details of the saliva recording and reconciliation procedures.

7.14 Sample management during fieldwork

7.14.1 Changes to the sample

Ipsos MORI received the initial sample file in December 2014, at which point CLS ceased active tracing of cohort members. However, for a number of different reasons, changes had to be made to the sample throughout fieldwork:

- Respondents sometimes contacted CLS directly and any time-sensitive information received was passed to Ipsos MORI on a daily basis (e.g. refusals and cancelled appointments). All other sample updates, like changes to contact details, were included into a weekly sample update (see section 7.14.3).
- Respondents sometimes contacted Ipsos MORI's Head Office with updated contact information (e.g. returned tracing letters). All information was logged and passed on to interviewers (see section 7.14.4).
- Interviewers updated the contact information that they gathered in the field in the Electronic Contact Sheet. This was transmitted back to the office regularly so that if a case had to be reissued to a different interviewer, the most up to date sample information was available.
- Movers: Interviewers sometimes discovered that cases had moved from their issued address but were not able to find a new address. These cases were passed to CLS for further tracing once a week (see section 7.14.2**)**. If CLS, found new contact details, then these would be passed back to Ipsos MORI as part of the weekly sample update.
- National Pupil Database (NPD) updates: CLS attempted to trace young people via the National Pupil Database if they were marked as 'gone away from issued address' or had been flagged as 'movers'. This one-off tracing attempt was carried out in September 2015 and any updated details were then passed to Ipsos MORI as part of a larger weekly update.
- In-care cases (see section 7.18 for details): CLS continued to attempt to trace a number of in-care cases throughout fieldwork. If no address was found or contact with social services could not be established, CLS would provide Ipsos MORI with detailed case notes as part of the weekly sample update. Interviewers would use this information to contact social services or suspected foster families.
- Additional cases: In some cases, CLS received correspondence during fieldwork from families who had emigrated (and therefore were not included in the original sample issued at the start of the Age 14 Survey) informing them of their return to the UK and of their wish to continue to participate in the study. These additional cases were given to

Ipsos MORI throughout fieldwork in the same format as the weekly sample updates. Ipsos MORI allocated these to interviewers as soon as possible.

- Cases were moved between waves to manage interviewers' workloads. This meant that some cases moved from phase 1 to phase 2 or vice versa (numbers provided as 'wave reallocations' in Table 7.6.

Table 7.6: Overview of changes to sample

Date	Description	Phase 1 (Wave 1-3)	Phase 2 (Wave 4-5)	Phase 3 (Wave 6-9)	Change (+/-)	Total sample
18/11/2014	Live sample					15,407
	Cases without full addresses				-7	15,400
	Channel Islands and Isle of Man cases (held back)				-8	15,392
06/01/2015	Wave allocations	8,064	5,237	2,091		15,392
	Issued sample	**8,064**	**5,237**	**2,091**		**15,392**
19/01/2015	Channel Islands and Isle of Man cases (issued)	8,072	5,237	2,091	+8	15,400
06/02/2015	Returning emigrants	8,073	5,238	2,092	+3	15,403
07/04/2015	Wave-reallocations	8,083	5,228	2,092		15,403
23/06/2015	Wave-reallocations	8,085	5,226	2,092		15,403
24/06/2015	In-care cases and returning emigrants	8,086	5,228	2,092	+3	15,406
12/08/2015	In-care cases	8,086	5,229	2,092	+1	15,407
02/11/2015	In-care cases	8,087	5,230	2,094	+4	15,411
01/12/2015	Wave re-allocation for re-issues	8,087	5,230	2,094		15,411
02/12/2015	In-care cases	8,088	5,233	2,094	+4	15,415
08/12/2015	Wave re-allocation for re-issues	8,088	5,233	2,094		15,415
	Final sample	**8,051**	**5,270**	**2,094**		**15,415**

The following table provides an overview of the number of cases that were sent to CLS as movers, and the number of mover cases sent to Ipsos MORI in the weekly sample update file. The first mover file was sent to CLS on the 6th March 2015 and the last one was sent on the 18th February 2016. The first sample update was received on the 18th December 2014 and the last one was received on the 23rd February 2016.

Table 7.7: Movers and updates passed between Ipsos MORI and CLS, by month

	Untraced movers sent to CLS	Sample updates received from CLS
Dec 2014		18
Jan 2015		84
Feb 2015		25
Mar 2015	20	57
Apr 2015	84	52
May 2015	64	34
Jun 2015	29	74
Jul 2015	53	107
Aug 2015	71	52
Sept 2015	82	78
Oct 2015	274	63
Nov 2015	38	192
Dec 2015	7	32
Jan 2016	20	15
Feb 2016	37	53
Total	779	936

7.14.2 Transferring mover cases to CLS

All cases that were assigned the 'untraced mover' outcome were reviewed at Ipsos MORI to check that interviewers had completed all required tracing steps (see section 7.11: Tracing young people). The case was returned to the interviewer to complete tracing in full if they had not done so.

If an interviewer had not located a family after completing the required in-field tracing steps, the case was transferred to the CLS Cohort Maintenance Team for further in-house tracing. The untraced movers were collated in a file (known as the 'mover file') and sent to CLS on a weekly basis. The mover file contained the ECS call log for each case, which detailed all contact attempts, tracing steps completed, interviewer notes, and messages sent from the office to interviewers (e.g. respondent communications).

7.14.3 Sample updates from CLS

CLS ceased active tracing of cohort members once the sample file was sent to Ipsos MORI However, CLS sometimes received updated information directly from cohort families once the sample had been sent to Ipsos MORI or while tracing movers. This information was passed to Ipsos MORI through a weekly sample update file at least two weeks before the case was due to be issued.

In addition, a respondent communication log was set up between CLS and Ipsos MORI so that any time-sensitive updates received by CLS (e.g. refusals) could be sent to Ipsos MORI on a daily basis if needed. This would include, complaints, refusals and appointment cancellations.

7.14.4 Actioning updates to the sample

The weekly sample updates from CLS were actioned depending on the type of information received (i.e. whether it was a change of eligibility, change of participation status or a change to contact information) and the status of the case (i.e.

whether the case had been issued to an interviewer and whether it had been worked). The actions taken are summarised in table Table 7.8.

Respondent communications directly received by Ipsos MORI's Head Office as well as any daily updates from CLS were processed in the same way as the sample updates from CLS.

Interviewers received updates to the sample each time they synchronised their Electronic Contact Sheet (which they were advised to do daily). They would receive an on-screen message and the sample information would be updated. Additionally, Ipsos MORI phoned or sent texts to interviewers in order to pass on urgent messages (such as complaints, refusals or broken appointments).

Table 7.8: Summary of actions taken as a result of sample update

Type of update	Status of case			
	Not issued to interviewer	Issued to interviewer and in progress	Issued to interviewer and finalised the case with a productive outcome	Issued to interviewer and finalised the case with an unproductive outcome
Change of eligibility status (i.e. cohort member died or emigrated)	Ipsos MORI updated the ECS sample, assigned the appropriate outcome code and the case was not issued to an interviewer.	Ipsos MORI notified the interviewer of the change, updated the ECS sample and assigned the appropriate outcome code via the ECS.	No action was taken.	Ipsos MORI updated the ECS sample and assigned the appropriate outcome code.
Change of participation status	As above	As above	As above	Ipsos MORI updated the ECS sample and ensured the case was not reissued.
Change of address status (e.g. cohort family no longer resident at address, but new address unknown)	Ipsos MORI updated the ECS sample and issued the case to an interviewer for tracing.	Ipsos MORI notified the interviewer of the change and updated the ECS sample.	As above	Ipsos MORI updated the ECS sample and took no further action.
Change to contact information	Ipsos MORI updated the ECS sample and issued the case to an interviewer.	As above	As above	Ipsos MORI updated the ECS sample and assessed if the case could be reissued.

7.15 Progress reporting

Fieldwork progress reports were sent to CLS weekly and more substantial progress reports were sent monthly.

The weekly report showed response at the household level by country, wave, phase and phase within country. Response was broadly split into categories of productive, non-productive, ineligible, and uncertain eligibility (i.e. movers and outstanding cases). The first weekly report was provided on 13th January 2015, and were sent throughout fieldwork until March 2016.

A number of monthly reports were provided to CLS during fieldwork, containing the following:

- Household response by country, wave, phase, phase within country, last sweep of participation, last sweep of participation within country, MCS5 outcome, MCS5 outcome within country, prior response history, prior response history within country, original stratum, activity monitor/time-use eligibility, activity monitor/time-use eligibility within country, activity monitor/time-use eligibility within priority status, activity monitor/time-use eligibility within wave, priority status
- Re-issue households response by phase
- Traced mover households response
- Movers by country and wave
- Individual element response for main interview, main cognitive assessment, main saliva, SDQ (completion in household), partner interview, partner cognitive assessment, partner saliva, young person questionnaire, young person cognitive assessments, young person physical measurements, young person activity monitor and time-use record (placement outcome), young person saliva.
- Office outcomes for main saliva, partner saliva and young person saliva (sample receipt at lab / consent confirmed), activity monitors (device receipt / wear data validity) and time-use records (completion) and SDQ (receipt).
- Translated interviews
- First contact method

Monthly reports were provided from February 2015 to March 2016.

7.16 Thank you mailing

All families that took part in the survey were sent a thank you letter for the parents and a thank you postcard for the young person. If the young person had been given an activity monitor to wear as part of the survey, or had agreed to complete the time-use record, and the monitor and/or time-use data had not yet been received back in the office, an activity monitor/time-use record (ACC/TUD) reminder slip was also included as part of this mailing.

The thank you postcard was designed using the study branding. All young people in Wales received the postcard in Welsh and English. All parents in Wales also received their thank you letter in Welsh and English. The thank you letter for parents

was also translated into the seven additional minority ethnic languages and was provided to parents who required other language materials during their interview.

An ACC/TUD reminder slip was sent to cohort families who had not returned their activity monitor or paper time-use record, as well as those who had not submitted their online/app time-use record. The reminder slip was personalised with the cohort member's name and tailored with what they needed to send back or submit. The reminder slip was translated into Welsh and the seven additional minority ethnic languages.

There was a minimum 2 weeks' delay from when an interview was completed (Final Element completed by the interviewer in ECS) before their sample details were submitted for the thank you mailing. Manual reconciliation was required to determine if activity monitors had been returned, and this meant that time between the interview and thank you mailing was longer than at MCS5.

A mop-up mailing was sent post-fieldwork to cohort families who had not yet received a thank you mailing.

The following table shows the number of thank you mailings dispatched over the fieldwork period, the date they were sent out and the number of households within each mailing.

Ipsos MORI realised at the end of fieldwork that a number of letters (1,406) had not been sent out that should have been. This was due to overdue activity monitors not always being flagged accurately for the thank you mailing sample.

Table 7.9: MCS6 thank you mailing

Mailing	Date of dispatch	Quantity
1	20 February 2015	113
2	06 March 2015	291
3	20 March 2015	720
4	03 April 2015	356
5	17 April 2015	323
6	01 May 2015	737
7	15 May 2015	598
8	01 June 2015	686
9	12 June 2015	591
10	26 June 2015	581
11	10 July 2015	516
12	24 July 2015	415
13	07 August 2015	430
14	21 August 2015	424
15	07 September 2015	459
16	18 September 2015	569

Mailing	Date of dispatch	Quantity
17	02 October 2015	305
18	16 October 2015	289
19	30th October 2015	235
20	13 November 2015	328
21	27 November 2015	330
22	11 December 2015	268
23	29 December 2015	289
24	11 January 2016	166
25	22 January 2016	33
26	05 February 2016	80
27	19 February 2016	79
28	4 March 2016	77
29	18 March 2016	67
30	1 April 2016	34
31	August 2016	1,406
Total		11,795

7.17 Translations

7.17.1 Welsh households

At the appointment making stage, families were asked if they would like any of the parent or young person elements to be administered in English or Welsh. If the family requested the interview to be conducted in Welsh, the address was reallocated to a Welsh speaking interviewer. The following elements were available in Welsh:

- The consent process
- Some of the young person cognitive assessments. The Decision-making task was available to be translated into Welsh, but the Word Activity was not. The paper version of the time-use record was available to complete in Welsh, but the online and app versions of the time-use record were not. Table 7.10 shows the number of young person cognitive assessments conducted in English and Welsh
- Young person questionnaire. Out of the 1,592 young person questionnaires completed in Wales (see Table 7.10) none used the Welsh language
- Parent interviews. Out of the 11,612 main respondent interviews completed, 24 used the Welsh language (1,598 respondent interviews were completed in Wales). 18 partner respondents completed their interview in Welsh (out of a total of 7,397 interviews with partners, 1,024 of which were completed in Wales). The number of parent interviews conducted in Welsh is shown in Table 7.11

Interviewers in Wales were asked to record in CAPI whether any of the young person cognitive assessments or young person questionnaires were completed in Welsh.

Table 7.10: Number of young person questionnaires and decision-making tasks in Wales conducted in English and Welsh

Language	CMs in productive households	Questionnaire	Decision-making task	Returned paper time-use record (day 1)
		N	N	N
Total productive	11,884	11,544	10,814	329
Total productive in Wales	1,636	1,590	1,444	55
English		11,544	10,793	328
Welsh		0	17	1
		%	%	%
English		100	100	100
Welsh		0	*	*
Welsh (in Wales)		0	1	*

7.17.2 Addressing other language support needs

The Electronic Contact Sheet indicated to interviewers whether the parent(s) required language interpretation at a previous wave. Interviewers were required to check with the cohort family whether this was still necessary and also establish if any other households had language needs using a 'Language card' provided (see appendices for a copy).

If spoken English was deemed insufficient for participation in English, interviewers were instructed to try to arrange for a 'household interpreter' or other informal interpreter to translate some of the elements (the consent process and parent questionnaire only). In order to meet the criteria a 'household interpreter' had to be:

- Another household member, or neighbour/friend/family member who the family felt comfortable with being present, and who was fluent in both English and the other language; and
- Aged 16+.

If a household interpreter was not available, the address was re-allocated to a bi-lingual interviewer to conduct the interview.

The nature of any language support given to respondents was recorded in the main parent questionnaire CAPI section. Specifically, whether either of the parent interviews were translated and if so, which language and who translated (including any interviews in Welsh), and whether any translated materials were used by the main and partner respondents and if so, which language.

The number of parent interviews conducted in languages other than English is shown in Table 7.11.

Table 7.11: Number of parent interviews conducted in languages other than English

Language	Main respondent	Partner respondent
	N	N
Total productive sample	11,612	7,397
Not translated	11,358	7,207
Translated	254	190
Welsh	24	18
Urdu	61	48
Punjabi	34	26
Gujarati	9	6
Hindi	9	7
Bengali	60	49
Sylheti	6	2
Cantonese	2	0
Somali	12	5
Tamil	6	2
Arabic	15	14
Other European language	1	0
Other African language	0	1
Other Asian language	6	3
Other	9	9
	%	%
Not translated	97.8	97.5
Translated	2.2	2.5

7.18 In care cases

A small proportion of young people were under local authority care. Every effort was made to facilitate the participation of looked after young people who were either living with a foster family or in a residential care home, including attempting to trace in-care cases throughout fieldwork (see section 7.14.1 Changes to the sample).

Overall, 19 interviews were conducted with young people living in foster care and eight interviews were conducted with young people living in residential care.

7.18.1 Identifying and locating young people in care

If it was known that the young person was in care the case was given an address status of **"Known (or reported) to be in care at care home since (DATE)"** in the sample file. This covered all cases where the young person was believed to be under the authority of social services but where we had not established that the young person was living with a foster family who had already agreed to take part in the study. For these in-care cases, the CLS Cohort Maintenance Team attempted to make contact, confirmed where the young person was living and checked that it was acceptable to approach them. Once these steps had been taken the case was issued to an interviewer with any appropriate notes.

When attempting to locate an in-care case, CLS would usually approach one of the following in the first instance:

- Foster parents (if their details were known)
- The social worker (if their details were known)
- The social care office closest to the last known address

As with all tracing, the process was frequently iterative and would follow a trail of contacts or leads until contact could be made with an appropriate carer or social worker.

If it was **not** known from the outset that the young person was in care, an interviewer might have discovered this was the case during their own contact attempts. When this happened, interviewers were asked to attempt to trace the young person's current address. If an interviewer successfully traced a young person and discovered that they were now living with foster parents, they were asked to make contact with the family and attempted to interview them (see below). If an interviewer discovered that a young person was now in residential care, they were instructed not to contact care homes or social workers directly but to pass the case back to the CLS Cohort Maintenance Team who would attempt to make contact.

7.18.2 Interviewing young people in foster care

Young people who were living with foster parents were treated in the same way as other cohort families. The foster parent(s) were eligible to participate in the parent elements of the survey and the young person was eligible to take part in their survey elements. If CLS already had full details of the foster family and the family had agreed to take part in previous waves, they would not generally have been marked as being 'in-care' in the sample.

Depending on how recently the young person had started living with their foster family, additional information and further explanation about the study was required (as foster parents may not have been involved previously). A letter written specifically for this purpose could be sent to foster parents, where necessary.

7.18.3 Interviewing young people in residential care

Some young people were living in residential care. The following steps were taken in these cases:

- Access was arranged through the social worker / key worker / care home manager or someone in a similar role.
- Interviewers were given a short pre-visit paper questionnaire to complete after making contact. The information in this questionnaire enabled the completion of the household interview prior to a visit.

- The household questionnaire was completed ahead of the visit (over the phone with a member of the Ipsos MORI research team). A specific, pre-defined, route was taken through the household interview.

During the visit the following survey elements were available:

- Main parent interview. The social worker (or other adult responsible for the young person) was invited to complete this element. The interview took a specific route and there was no self-completion section.
- Young person questionnaire
- Young person physical measurements
- Young person cognitive assessments
- Young person activity monitor and time-use record

8 Survey response

8.1 Household response

The issued sample comprised a total of 15,415 families. Of these, 46 were not eligible because the young person had died or emigrated. A further 432 were of uncertain eligibility.

A total of 11,726 families were successfully interviewed. Of these, 7,247 were fully productive and 4,479 were partially productive. Households were considered fully productive if all in-household elements that the family was eligible[17] for were either fully or partially productive. Partially productive households required the completion of at least one survey element other than the household interview or final element.

A survey response rate[18] of 76.3% was achieved (of the eligible sample), and a co-operation rate[19] of 78.5%. The survey response rate was lower than at MCS5 (81.4%).

Around one in six cohort families either refused to participate in the survey (15.8% compared to 12.4% at MCS5) or broke their appointment (2.7% compared to 1.0% at MCS5). Table 8.1 provides a detailed breakdown of the response to the survey.

[17] All households were eligible for the following elements: household interview, main interview, main cognitive assessment (if not in care home) Strength and Difficulties Questionnaire, young person interview, physical measurements and young person cognitive assessments. If the household questionnaire established that there was a partner present, that partner was eligible for a partner interview and cognitive assessment unless they were away for the entire fieldwork period, in which case they became eligible for a proxy partner interview (i.e. the main respondent completed a shortened questionnaire on their behalf). Only a sub-sample was eligible for the placement of activity monitors and time-use records. The collection of saliva samples from a parent was dependent on them being a natural parent of the cohort member, and collection from the young person was dependent on the presence of a legal parent/guardian (in order for them to provide consent). For a household to be fully productive, a saliva sample had to be fully or partially productive (providing the household was eligible to complete this element).

[18] Survey response rate = productive/(productive+unproductive+uncertain eligibility)

[19] Co-operation rate = productive/(productive+unproductive)

Table 8.1: Summary of contact and response

MCS6	No.	Survey response rate	Co-operation rate
Total sample	**15415**		
Total ineligible	**46**		
Died	1		
Emigrated	45		
Total eligible sample	**15369**	**100.0%**	
Uncertain eligibility	**432**	**2.8%**	
Untraced movers/ Other unknown eligibility	345	2.2%	
Traced movers/ ran out of time	87	0.6%	
Total sample traced and eligible	**14937**	**97.2%**	**100.0%**
Productive	**11726**	**76.3%**	**78.5%**
Fully productive	7247	47.2%	48.5%
Partially productive	4479	29.1%	30.0%
Refusals	**2423**	**15.8%**	**16.2%**
Office refusal	240	1.6%	1.6%
Refusal to interviewer	2183	14.2%	14.6%
Other unproductive	**788**	**5.1%**	**5.3%**
Non-contact	224	1.5%	1.5%
Broken appointment - no recontact	409	2.7%	2.7%
Ill during fieldwork period	30	0.2%	0.2%
Away/ in hospital during fieldwork period	14	0.1%	0.1%
Language difficulties	7	0.0%	0.0%
Data lost on tablet	3	0.0%	0.0%
Other reason	101	0.7%	0.7%
Productive - but respondent asked for data deletion	0	0.0%	0.0%

8.1.1 Refusals

As mentioned previously, the refusal rate at MCS6 was higher than at the last sweep. The most common reason coded for refusal was 'cohort member does not want to do it' (54% of refusing households). This was followed by 'too busy' (33% of refusing households) and 'respondent does not want to bother (29% of refusing households). Table 8.2 provides a breakdown of reasons for refusal.

Despite best efforts, engaging young people aged 14 proved challenging and more cohort members refused to participate than at previous sweeps. Interviewer feedback was that young people were less engaged than when they were age 11, were more inclined to say that they did not want to take part (sometimes as a result of having busier lives so had less time available) and were more likely to refuse as they were allowed to make their own decision regarding taking part (whereas previously the parent would have taken greater control). It was also established that some families were concerned about data protection given the increased number of elements they were being asked to partake in at this sweep which was felt to be more intrusive. Some families also had concerns about anonymity (especially in regard to the saliva element).

Table 8.2: Reasons for refusal

	N	% of reasons for refusal	% of refusing households
Cohort member does not want to do it	1324	26%	54%
Too busy	808	16%	33%
Respondent does not want to bother	694	14%	29%
Stressful family situation	328	7%	13%
Survey too long	262	5%	11%
Family member refuses on behalf of respondent	139	3%	6%
Questions too personal	108	2%	4%
Don't see the personal benefit	100	2%	4%
Looking after children	75	1%	3%
Survey not important	73	1%	3%
Other family member opposes participation	68	1%	3%
Nothing's changed since last time	68	1%	3%
Survey is a waste of time	65	1%	3%
Looking after ill/ elderly	56	1%	2%
Unhappy about confidentiality	36	1%	1%
Don't see the public benefit	34	1%	1%
Dislike interviewer	27	1%	1%
Someone outside household convinces respondent to refuse	7	0%	0%
No reason given	294	6%	12%
Other (specify)	469	9%	19%
Total reasons (multicode)	5035	100%	
Total households refusing	2433		
Ave. reasons per household	2.07		

8.1.2 Household response by response at prior sweeps

Table 8.3 shows a summary of response based on households' last participation status. As would be expected, co-operation rates were highest among families that had taken part at the last sweep (85.0%). Co-operation rates steadily dropped the longer ago the household last participated. The co-operation rate was 38.9% for families who participated in MCS4, 24.3% for MCS3, 26.5% for MCS2 and 20.2% for families who had only participated at the first sweep.

Table 8.3: Summary of response by sweep of last participation

	Sweep last participated at					
	Total	MCS5	MCS4	MCS3	MCS2	MCS1
	N	N	N	N	N	N
Total sample	**15415**	**13238**	**1291**	**516**	**192**	**178**
Total ineligible	**46**	**34**	**4**	**3**	**3**	**2**
Died	1	0	0	1	0	0
Emigrated	45	34	4	2	3	2
Uncertain eligibility	**432**	**147**	**118**	**76**	**34**	**57**
Untraced movers/ Other unknown eligibility	345	99	98	65	30	53
Traced movers/ ran out of time	87	48	20	11	4	4
Total sample traced and eligible	**14937**	**13057**	**1169**	**437**	**155**	**119**
Productive	**11726**	**11101**	**454**	**106**	**41**	**24**
Fully productive	7247	6970	203	47	20	7
Partially productive	4479	4131	251	59	21	17
Unproductive	**3211**	**1956**	**715**	**331**	**114**	**95**
Non-contact	224	104	62	29	10	19
Office refusal	240	150	52	19	12	7
Refusal to interviewer	2183	1293	510	250	73	57
Broken appointment - no recontact	409	311	61	23	10	4
Ill during fieldwork period	30	24	3	1	2	0
Away/ in hospital during fieldwork period	14	12	2	0	0	0
Language difficulties	7	6	0	0	0	1
Data lost on tablet	3	3	0	0	0	0
Other reason	101	53	25	9	7	7
Productive - but respondent asked for data deletion	0	0	0	0	0	0
	%	%	%	%	%	%
Sample traced and eligible	**96.9%**	**98.6%**	**90.5%**	**84.7%**	**80.7%**	**66.9%**
Survey response rate	**76.3%**	**84.1%**	**35.3%**	**20.7%**	**21.7%**	**13.6%**
Co-operation rate	**78.5%**	**85.0%**	**38.8%**	**24.3%**	**26.5%**	**20.2%**

Table 8.4 provides a more detailed overview of responses based on the full previous response history. Co-operation rates were highest among those families that had taken part in all previous sweeps and decreased as previous engagement decreased: 88.1 % for families that participated in all five sweeps. Households which had only participated in four (out of five possible) previous sweeps had a co-operation rate of 66.5% and those who had only participated in three previous sweeps had a co-operation rate of 45.6%. Families who had taken part in two or one out of the five previous sweeps proved to be the least cooperative with co-operation rates of 37.1% and 22.3%, respectively.

Table 8.4: Summary of response by prior response history

	Total	Participated in all five previous sweeps	Participated in four previous sweeps	Participated in three previous sweeps	Participated in two previous sweeps	Participated in one previous sweep
	N	N	N	N	N	N
Total sample	15415	10411	2970	1272	570	192
Total ineligible	46	24	10	4	6	2
Died	1	0	0	1	0	0
Emigrated	45	24	10	3	6	2
Uncertain eligibility	432	72	123	109	68	60
Untraced movers/ Other unknown eligibility	345	47	93	93	57	55
Traced movers/ ran out of time	87	25	30	16	11	5
Total sample traced and eligible	14937	10315	2837	1159	496	130
Productive	11726	9087	1887	539	184	29
Fully productive	7247	5903	998	256	81	9
Partially productive	4479	3184	889	283	103	20
Unproductive	3211	1228	950	620	312	101
Non-contact	224	60	72	46	26	20
Office refusal	240	111	65	35	21	8
Refusal to interviewer	2183	820	647	440	215	61
Broken appointment - no recontact	409	180	124	65	36	4
Ill during fieldwork period	30	16	5	7	2	0
Away/ in hospital during fieldwork period	14	5	5	3	1	0
Language difficulties	7	4	0	2	0	1
Data lost on tablet	3	2	1	0	0	0
Other reason	101	30	31	22	11	7
Productive - but respondent asked for data deletion	0	0	0	0	0	0
	%	%	%	%	%	%
Sample traced and eligible	96.9%	99.1%	95.5%	91.1%	87.0%	67.7%
Survey response rate	76.3%	87.5%	63.8%	42.5%	32.6%	15.3%
Co-operation rate	78.5%	88.1%	66.5%	46.5%	37.1%	22.3%

8.1.3 Household response by response at MCS5 outcome

Table 8.5 shows household response by outcome at MCS5. As might be expected, households which were productive at MCS5 were most likely to participate in MCS6 (85.0%) followed by ineligibles (77.8%), other unproductive outcomes (43.8%) and non-contacts (43.7%). Over a quarter (27.9%) of families who had refused at MCS5 participated in MCS6.

Table 8.5: Summary of response by MCS5 outcome

	Total	Productive	Ineligible	Non-contact	Refusal	Other unproductive
	N	N	N	N	N	N
Total sample	15415	13238	20	672	1367	118
Total ineligible	46	34	0	7	4	1
Died	1	0	0	0	1	0
Emigrated	45	34	0	7	3	1
Uncertain eligibility	432	147	2	184	78	21
Untraced movers/ Other unknown eligibility	345	99	1	166	63	16
Traced movers/ ran out of time	87	48	1	18	15	5
Total sample traced and eligible	14937	13057	18	481	1285	96
Productive	11726	11101	14	210	359	42
Fully productive	7247	6970	11	99	147	20
Partially productive	4479	4131	3	111	212	22
Unproductive	3211	1956	4	271	926	54
Non-contact	224	104	1	47	65	7
Office refusal	240	150	0	13	75	2
Refusal to interviewer	2183	1293	3	162	691	34
Broken appointment - no recontact	409	311	0	25	70	3
Ill during fieldwork period	30	24	0	2	1	3
Away/ in hospital during fieldwork period	14	12	0	0	2	0
Language difficulties	7	6	0	0	0	1
Data lost on tablet	3	3	0	0	0	0
Other reason	101	53	0	22	22	4
Productive - but respondent asked for data deletion	0	0	0	0	0	0
	%	%	%	%	%	%
Sample traced and eligible	96.9	98.6	90.0	71.6	94.0	81.4
Survey response rate	76.3	84.1	70.0	31.6	26.3	35.9
Co-operation rate	78.5	85.0	77.8	43.7	27.9	43.8

8.1.4 Household response by stratum

The sample was split into different strata for all countries: advantaged and disadvantaged wards. Families from the advantaged stratum were slightly more likely to participate in all countries. For example, in Wales 81.7% of families from advantaged wards participated compared to 75.2% from disadvantaged wards. Families from disadvantaged wards in Scotland were the least likely to co-operate (with a co-operation rate of 68.7% compared to 81.6% for advantaged wards). In England there was also an ethnic minority stratum. See section 2.1 for details on the stratification of the sample). Families from these wards were more likely to participate than families from disadvantaged wards (79.5%, of ethnic minority wards compared to 76.6% in disadvantaged wards in England) but less likely than families from advantaged wards (82.4% in England).

Table 8.6: Summary of response by stratum

	Total	England Advantaged	England Disadvantaged	England Ethnic	Wales Advantaged	Wales Disadvantaged	Scotland Advantaged	Scotland Disadvantaged	N Ireland Advantaged	N Ireland Disadvantaged
	N	N	N	N	N	N	N	N	N	N
Total sample	15415	3984	3863	2042	677	1580	879	909	558	923
Total ineligible	46	15	7	13	0	3	4	2	0	2
Died	1	0	0	0	0	1	0	0	0	0
Emigrated	45	15	7	13	0	2	4	2	0	2
Uncertain eligibility	432	35	102	64	14	78	32	70	4	33
Untraced movers/ Other unknown eligibility	345	21	76	47	13	68	29	59	2	30
Traced movers/ ran out of time	87	14	26	17	1	10	3	11	2	3
Total sample traced and eligible	14937	3934	3754	1965	663	1499	843	837	554	888
Productive	11726	3240	2876	1562	542	1127	688	575	458	658
Fully productive	7247	2182	1741	661	359	716	478	377	311	422
Partially productive	4479	1058	1135	901	183	411	210	198	147	236
Unproductive	3211	694	878	403	121	372	155	262	96	230
Non-contact	224	28	66	34	10	48	4	22	3	9
Office refusal	240	62	58	16	7	27	19	23	11	17
Refusal to interviewer	2183	510	575	277	82	200	111	176	77	175
Broken appointment - no recontact	409	71	136	51	15	66	17	28	4	21
Ill during fieldwork period	30	6	7	6	2	2	2	3	0	2
Away/ in hospital during fieldwork period	14	1	4	3	2	0	0	1	0	3
Language difficulties	7	0	1	6	0	0	0	0	0	0
Data lost on tablet	3	0	0	1	0	0	0	2	0	0
Other reason	101	16	31	9	3	29	2	7	1	3
Productive - but respondent asked for data deletion	0	0	0	0	0	0	0	0	0	0
	%	%	%	%	%	%	%	%	%	%
Sample traced and eligible	96.9	98.7	97.2	96.2	97.9	94.9	95.9	92.1	99.3	96.2
Survey response rate	76.3	81.6	74.6	77.0	80.1	71.5	78.6	63.4	82.1	71.4
Co-operation rate	78.5	82.4	76.6	79.5	81.7	75.2	81.6	68.7	82.7	74.1

8.1.5 Household response by priority cases within phase

Household response by priority case within phase is illustrated in Table 8.7. Priority cases (families with a low contact propensity – see section 7.2 for details on how these were defined) were allocated to an early fieldwork wave whenever possible to maximise the amount of time to work these cases. The co-operation rate for priority cases was significantly lower (with only half of the families participating in phase 1 (54.6%) compared to a co-operation rate of 81.1% for non-priority cases in phase 1).

Table 8.7: Summary of response by priority cases in phase

	Total	Total Priority	Total Other	Phase 1 Priority	Phase 1 Other	Phase 2 Priority	Phase 2 Other	Phase 3 Priority	Phase 3 Other
	N	N	N	N	N	N	N	N	N
Total sample	15415	1372	14043	1188	6898	4	5231	180	1914
Total ineligible	46	14	32	12	13	0	16	2	3
Died	1	0	1	0	0	0	1	0	0
Emigrated	45	14	31	12	13	0	15	2	3
Uncertain eligibility	432	249	183	181	99	0	58	68	26
Untraced movers/ Other unknown eligibility	345	213	132	151	76	0	37	62	19
Traced movers/ ran out of time	87	36	51	30	23	0	21	6	7
Total sample traced and eligible	14937	1109	13828	995	6786	4	5157	110	1885
Productive	11726	604	11122	543	5501	1	4163	60	1458
Fully productive	7247	304	6943	269	3427	1	2544	34	972
Partially productive	4479	300	4179	274	2074	0	1619	26	486
Unproductive	3211	505	2706	452	1285	3	994	50	427
Non-contact	224	73	151	64	76	1	50	8	25
Office refusal	240	25	215	23	101	0	70	2	44
Refusal to interviewer	2183	310	1873	276	868	2	695	32	310
Broken appointment - no recontact	409	59	350	55	175	0	140	4	35
Ill during fieldwork period	30	4	26	3	15	0	7	1	4
Away/ in hospital during fieldwork period	14	4	10	3	6	0	2	1	2
Language difficulties	7	2	5	2	4	0	1	0	0
Data lost on tablet	3	0	3	0	2	0	0	0	1
Other reason	101	28	73	26	38	0	29	2	6
Productive - but respondent asked for data deletion	0	0	0	0	0	0	0	0	0
	%	%	%	%	%	%	%	%	%
Sample traced and eligible	96.9	80.8	98.5	83.8	98.4	100.0	98.6	61.1	98.5
Survey response rate	76.3	44.5	79.4	46.2	79.9	25.0	79.8	33.7	76.3
Co-operation rate	78.5	54.5	80.4	54.6	81.1	25.0	80.7	54.5	77.3

8.1.6 Household response by country of issue

Response varied across countries as shown in Table 8.8. The highest co-operation rate was in England (79.5%), with the lowest in Scotland (75.1%). It is worth noting that Scotland continues to have the lowest number of addresses that weret I traced and eligible to take part (93.9% compared to 96.9% overall).

Table 8.8: Summary of response by country of issue

	Total	England	Wales	Scotland	N Ireland
	N	N	N	N	N
Total sample	15415	9974	2186	1782	1473
Total ineligible	46	34	4	6	2
Died	1	0	1	0	0
Emigrated	45	34	3	6	2
Uncertain eligibility	432	210	85	103	34
Untraced movers/ Other unknown eligibility	345	146	77	92	30
Traced movers/ ran out of time	87	64	8	11	4
Total sample traced and eligible	14937	9730	2097	1673	1437
Productive	11726	7739	1616	1256	1115
Fully productive	7247	4616	1043	858	730
Partially productive	4479	3123	573	398	385
Unproductive	3211	1991	481	417	322
Non-contact	224	129	58	26	11
Office refusal	240	138	32	42	28
Refusal to interviewer	2183	1375	272	286	250
Broken appointment - no recontact	409	256	82	47	24
Ill during fieldwork period	30	19	4	5	2
Away/ in hospital during fieldwork period	14	9	1	1	3
Language difficulties	7	7	0	0	0
Data lost on tablet	3	1	0	2	0
Other reason	101	57	32	8	4
Productive - but respondent asked for data deletion	0	0	0	0	0
	%	%	%	%	%
Sample traced and eligible	96.9	97.6	95.9	93.9	97.6
Survey response rate	76.3	77.9	74.1	70.7	75.8
Co-operation rate	78.5	79.5	77.1	75.1	77.6

8.2 Mode of contact

For each family, interviewers were instructed to make their initial contact attempt in one of two ways – either by telephone or with a face-to-face visit. A family could be considered hard to engage if they had refused or were unproductive for other reasons at a previous sweep. If this was the case or if the family contact records did not contain a telephone number, then interviewers were instructed to attempt to make first contact with them by means of a face-to-face visit as indicated in the ECS. Otherwise interviewers were instructed to attempt to make first contact by telephone.[20]

Across all phases there were 10,659 families (see figure 8.9, which were identified as needing telephone first contact (69% of sample), and interviewers fulfilled this requirement in 89.7% of cases. When split out by phase a slight drop off in fulfilment of this requirement can be seen (90.8% in phase 1, 88.7% in phase 2 and 88.0% in phase 3). The failure to adhere strictly to protocol in some cases is likely to be, largely, due to the fact that interviewers decided to make face-to-face contact with a telephone first household if they were already in the area.

The assigned first mode of contact was designed to maximise response rates. For example, where families had shown reluctance to participate in previous sweeps a face-to-face visit was thought more likely to re-engage them in the study. This instruction was given for 4,756 families (31%). However, despite the instruction to visit first, in 25.2% of these cases the interviewer telephoned first. Again this varied by phase, but without showing a pattern (22.9% in phase 1, 29.7% in phase 2 and 25.4% in phase 3). For some interviewers, the long distances involved in making a face-to-face visit first for certain households would have made the option to telephone first more attractive. For others, they might have preferred the option of telephoning.

As might be expected, the success rates for contacts made by telephone were lower if a face-to-face first contact had been initially advised than for those where telephone contact had been initially advised. (68% contact success compared with 87.2%). Even where contact was successfully made in these cases, it proved harder to make an appointment than it did for those who had been rightly contacted by phone. For this reason, the mode of contact was monitored on an ongoing basis at interviewer level, and interviewers who weren't adhering to the protocols were spoken to, and the importance of the protocols was reiterated.

[20] Visit first was assigned if any of the following applied:

Any of the three previous waves (MCS3, MCS4, MCS5) had an outcome of non-cooperative (refusal or other unproductive)
The family was productive at MCS5, but any of the child elements were refused or other unproductive
The family was productive at MCS5, but the partner outcome was refused or other unproductive
No phone number available for the family
The CLS sample status was 'known to have gone away from issued address' (in which case mover tracing from the last known address was required)

Besides the last two, which were assigned for practical reasons, these were the strongest predictors of a non-cooperation outcome, based on looking at what best predicted the MCS5 outcome.

Table 8.9: Summary of telephone contact by phase

	Total	Total Telephone advised	Total F2F advised	Phase 1 Telephone advised	Phase 1 F2F advised	Phase 1 Total	Phase 2 Telephone advised	Phase 2 F2F advised	Phase 2 Total	Phase 3 Telephone advised	Phase 3 F2F advised	Phase 3 Total
Total sample	15415	10659	4756	5398	2688	8086	3852	1383	5235	1409	685	2094
Telephone contact attempted	10760	9560	1200	4903	615	5518	3417	411	3828	1240	174	1414
% of total sample	69.8	89.7	25.2	90.8	22.9	68.2	88.7	29.7	73.1	88.0	25.4	67.5
Telephone contact made	9157	8341	816	4205	402	4607	3026	291	3317	1110	123	1233
% of telephone contact attempted	85.1	87.2	68.0	85.8	65.4	83.5	88.6	70.8	86.7	89.5	70.7	87.2
Appointment made by telephone	8037	7445	592	3702	285	3987	2734	219	2953	1009	88	1097
% of telephone contact made	87.8	89.3	72.5	88.0	70.9	86.5	90.4	75.3	89.0	90.9	71.5	89.0
% of total sample	52.1	69.8	12.4	68.6	10.6	49.3	71.0	15.8	56.4	71.6	12.8	52.4

8.3 Interviewer visits to productive households

Table 8.10 shows the total number of personal visits made by interviewers to each productive cohort family. Just over six in ten productive families were interviewed after one or two visits (62%). On average 2.7 personal visits were required to each productive household.

Table 8.10: Number of personal visits per productive family at MCS6

Number of personal visits	N	% of MCS6 productive families
1	4662	40%
2	2637	22%
3	1558	13%
4	995	8%
5	638	5%
6	418	4%
7	230	2%
8	191	2%
9	124	1%
10 or more	273	2%
Total	11726	100%
Median	4	
Mean	2.7	

8.4 Reissues

Cases were reissued if families refused to the interviewer, the interviewer was unable to make contact with the family after eight face-to-face visits and five phone calls, or for some other reasons (e.g. the respondent was busy or away from home). A total of 2,064 addresses were reissued to a new interviewer. A total of 551 reissued addresses resulted in a productive outcome (26.7%).

The majority of these cases (1,545 or 74.9%) were reissued after the family had refused to the original interviewer. 273 cases were non-contacts at the first issue and 246 households had an "other" outcome. This pattern was the same across all fieldwork phases.

39.6% of households which were unproductive due to an "other" reason co-operated at the reissue stage. The co-operation rate for families that were a non-contact at the first issue was 31.1%. Refusals to the interviewer at the first issue were only converted in 24.7% of cases. As indicated in Table 8.11 these response rates only vary slightly between fieldwork phases.

Where a case was reissued and multiple outcomes had been provided, the final household outcome was assigned by following a hierarchy devised by Peter Lynn et al.[21] The possible outcomes from highest to lowest precedence were:

- productive,

[21] Peter Lynn *et al.*, Recommended Standard Final Outcome Categories and Standard Definitions of Response Rate for Social Surveys, ISER Working Papers Series: 2001-23.

- data lost or deletion requested,
- cohort member died or emigrated,
- refusal by cohort family,
- refusal by other,
- contact made but information refused,
- office refusal,
- broken appointment,
- language difficulties,
- member of family away or ill,
- other reason,
- no (further) contact,
- untraced,
- traced and
- finally address inaccessible or can't locate.

It should be noted that all numbers quoted in this section of the report (Reissues), and the next (Movers), including Table 8.11 (Reissues) and Table 8.14 (Movers), do not have this hierarchy implemented, but instead use the outcome of the latest issue as the household outcome.

Table 8.11: Summary of final issue outcomes of reissued households

	Total Non Contacts	Total Refusals	Total Other	Phase 1 Non Contacts	Phase 1 Refusals	Phase 1 Other	Phase 2 Non Contacts	Phase 2 Refusals	Phase 2 Other	Phase 3 Non Contacts	Phase 3 Refusals	Phase 3 Other
	N	N	N	N	N	N	N	N	N	N	N	N
Total sample reissued	**273**	**1545**	**246**	**189**	**775**	**153**	**63**	**520**	**77**	**21**	**250**	**16**
Uncertain eligibility	**16**	**16**	**11**	**15**	**9**	**7**	**1**	**4**	**4**	**0**	**3**	**0**
Untraced movers/ Other unknown eligibility	8	8	3	8	5	3	0	2	0	0	1	0
Traced movers/ ran out of time	8	8	8	7	4	4	1	2	4	0	2	0
Total sample traced and eligible	**257**	**1529**	**235**	**174**	**766**	**146**	**62**	**516**	**73**	**21**	**247**	**16**
Productive	**80**	**378**	**93**	**54**	**203**	**57**	**21**	**128**	**29**	**5**	**47**	**7**
Fully productive	27	133	23	20	70	16	6	52	7	1	11	0
Partially productive	53	245	70	34	133	41	15	76	22	4	36	7
Unproductive	**177**	**1151**	**142**	**120**	**563**	**89**	**41**	**388**	**44**	**16**	**200**	**9**
Non-contact	70	173	46	50	101	28	14	46	16	6	26	2
Office refusal	3	24	2	2	11	0	1	8	0	0	5	2
Refusal to interviewer	80	837	66	48	388	41	23	288	22	9	161	3
Broken appointment - no recontact	15	45	22	12	20	17	2	20	4	1	5	1
Ill during fieldwork period	0	2	1	0	2	1	0	0	0	0	0	0
Away/ in hospital during fieldwork period	1	3	2	1	2	0	0	1	2	0	0	0
Language difficulties	0	0	0	0	0	0	0	0	0	0	0	0
Other reason	8	67	3	7	39	2	1	25	0	0	3	1
Data lost on tablet	0	0	0	0	0	0	0	0	0	0	0	0
Productive - but respondent asked for data deletion	0	0	0	0	0	0	0	0	0	0	0	0
	%	%	%	%	%	%	%	%	%	%	%	%
Survey response rate	**29.3**	**24.5**	**37.8**	**28.6**	**26.2**	**37.3**	**33.3**	**24.6**	**37.7**	**23.8**	**18.8**	**43.8**
Co-operation rate	**31.1**	**24.7**	**39.6**	**31.0**	**26.5**	**39.0**	**33.9**	**24.8**	**39.7**	**23.8**	**19.0**	**43.8**

8.5 Movers and tracing

Overall, 18.8% of cohort families were identified as movers (i.e. they no longer lived at the issued address). The highest proportion of families identified as movers was in Scotland (22.2%) and the lowest in Northern Ireland (13.7%). This is a higher proportion than at previous sweeps of MCS. It is likely that some of this increase was due to the introduction of Electronic Contact Sheets. They provided a very reliable, and interviewer-friendly, way of capturing information and allowed interviewers to flag households which had moved on a daily basis. Details of the steps interviewers took to trace respondents can be found in section 7.11.

Table 8.12: Proportion of sample that no longer lived at issued address

	Total	England	Wales	Scotland	N Ireland
	N	N	N	N	N
Total sample	15415	9974	2186	1782	1473
Non-movers	12517	8142	1718	1386	1271
Movers	2898	1832	468	396	202
	%	%	%	%	%
Non-movers	81.2	81.6	78.6	77.8	86.3
Movers	18.8	18.4	21.4	22.2	13.7

Over two thirds (67.6%) of those identified as movers were traced by interviewers, and the overwhelming majority of these cases still lived within the same interviewer area. Among traced movers who did not emigrate out of the UK, only 23 families moved out of their original country of issue as shown in Table 8.13.

Table 8.13: Movers between countries

Original country of issue	Total	Country moved to			
		England	Wales	Scotland	N Ireland
England	15	-	10	4	1
Wales	7	7	-	0	0
Scotland	1	1	0	-	0
N Ireland	0	0	0	0	-
Total	23	8	10	4	1

If interviewers were not able to trace the respondents, the case was sent to CLS for tracing. CLS successfully traced 15.7% of movers.

In total, eligibility was uncertain for 483 families at the end of fieldwork:

- 370 of these had been identified as movers by interviewers during fieldwork, but neither the interviewers, nor the tracing team at CLS, were able to establish a new address for the families.
- 113 families were identified as movers by interviewers, but there was not enough time for CLS to complete the tracing procedures for these families.

Prior to and during fieldwork, CLS made use of administrative data sources to trace families in England and Wales. This included using the National Pupil Database.

Table 8.14 shows a breakdown of movers, and the tracing outcomes, by country of issue.

Table 8.14: Tracing outcomes for movers

	Total	England	Wales	Scotland	N Ireland
	N	N	N	N	N
Total movers	2898	1832	468	396	202
Movers who were traced	2415	1598	364	291	162
Traced by interviewer	1960	1241	328	252	139
Address within own area	*1857*	*1164*	*315*	*241*	*137*
Address outside own area	*62*	*46*	*10*	*6*	*0*
Address overseas/ emigrated	*41*	*31*	*3*	*5*	*2*
Traced by CLS	455	357	36	39	23
New address/ information	*352*	*295*	*23*	*19*	*15*
Emigrated	*2*	*1*	*0*	*1*	*0*
Refusal/ ineligible	*101*	*61*	*13*	*19*	*8*
Untraced movers	370	160	87	93	30
Outstanding movers	113	74	17	12	10
	%	%	%	%	%
Traced by interviewer	67.6	67.7	70.1	63.6	68.8
Traced by CLS	15.7	19.5	7.7	9.8	11.4
Untraced	12.8	8.7	18.6	23.5	14.9
Outstanding	3.9	4.0	3.6	3.0	5.0

The survey response and co-operation rates for traced movers were lower in comparison to the whole sample. Movers traced by the interviewers were much more likely to participate than movers traced by CLS.

Table 8.15 shows a summary of household response for all traced movers by country of issue.

Table 8.15: Summary of response by country of issue for traced movers

	Total	Traced by IM				Traced by CLS			
		England	Wales	Scotland	N Ireland	England	Wales	Scotland	N Ireland
	N	N	N	N	N	N	N	N	N
Movers who were traced	**2415**	**1241**	**328**	**252**	**139**	**357**	**36**	**39**	**23**
Ineligible traced movers	**45**	**33**	**3**	**5**	**2**	**1**	**0**	**1**	**0**
Died	0	0	0	0	0	0	0	0	0
Emigrated	45	33	3	5	2	1	0	1	0
Uncertain eligibility	**25**	**17**	**3**	**3**	**1**	**0**	**1**	**0**	**0**
Traced movers/ ran out of time	25	17	3	3	1	0	1	0	0
Eligible traced movers	**2345**	**1191**	**322**	**244**	**136**	**356**	**35**	**38**	**23**
Productive	**1568**	**895**	**224**	**173**	**93**	**148**	**14**	**8**	**13**
Fully productive	902	511	127	108	60	74	10	5	7
Partially productive	666	384	97	65	33	74	4	3	6
Unproductive	**777**	**296**	**98**	**71**	**43**	**208**	**21**	**30**	**10**
Non-contact	122	30	17	12	0	58	2	3	0
Office refusal	117	8	2	2	3	61	13	19	9
Refusal to interviewer	379	184	49	40	30	66	4	6	0
Broken appointment - no recontact	114	58	18	13	7	14	2	1	1
Ill during fieldwork period	3	1	1	1	0	0	0	0	0
Away/ in hospital during fieldwork period	4	2	0	0	1	1	0	0	0
Language difficulties	1	1	0	0	0	0	0	0	0
Other reason	36	11	11	3	2	8	0	1	0
Data lost on tablet	1	1	0	0	0	0	0	0	0
Productive - but respondent asked for data deletion	0	0	0	0	0	0	0	0	0
	%	%	%	%	%	%	%	%	%
Survey response rate	**66.2**	**74.1**	**68.9**	**70.0**	**67.9**	**41.6**	**38.9**	**21.1**	**56.5**
Co-operation rate	**66.9**	**75.1**	**69.6**	**70.9**	**68.4**	**41.6**	**40.0**	**21.1**	**56.5**

8.6 Response to individual survey elements

As discussed previously, the interview consisted of several survey elements. For a household to be classified as fully productive, all in-household survey elements which the household was eligible for had to be either fully or partially complete[22]. For a household to be classified as partially productive, some of the elements of the study were unproductive.[23]

8.6.1 Young person interview

The 11,726 productive households contained a total of 11,884 cohort young people, including 142 sets of twins and eight sets of triplets.

The majority of cohort members completed the young person interview, which had a response rate of 97.1%. Table 8.16 shows the variation between response rates across the four countries of issue.

Table 8.16: Response – young person interview

	Total	England	Wales	Scotland	N Ireland
	N	N	N	N	N
Cohort members in productive households	**11884**	**7835**	**1636**	**1278**	**1135**
Ineligible	**0**	**0**	**0**	**0**	**0**
One of the twins/triplets deceased	0	0	0	0	0
Eligible cohort members	**11884**	**7835**	**1636**	**1278**	**1135**
Productive	**11535**	**7599**	**1590**	**1240**	**1106**
Fully productive	11520	7590	1588	1239	1103
Partially productive	15	9	2	1	3
Unproductive	**349**	**236**	**46**	**38**	**29**
Non-contact	13	11	1	1	0
Parent refused	44	31	6	5	2
Young person refused	221	135	37	27	22
Broken appointment - no recontact	17	15	1	1	0
Ill during fieldwork period	2	1	0	0	1
Away/ in hospital during fieldwork period	2	2	0	0	0
Physically or mentally incapable/ incompetent	27	22	1	2	2
Language difficulties	1	1	0	0	0
Data lost on tablet	6	4	0	1	1
Other reason/ Unknown	16	14	0	1	1
	%	%	%	%	%
Eligible cohort members	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Productive within eligible	**97.1**	**97.0**	**97.2**	**97.0**	**97.4**
Fully productive	96.9	96.9	97.1	96.9	97.2
Partially productive	0.1	0.1	0.1	0.1	0.3
Unproductive within eligible	**2.9**	**3.0**	**2.8**	**3.0**	**2.6**

[22] Including the collection of saliva samples.

[23] See section 8.1 for a full definition of fully and partially productive households.

The mean and median times for completion of the young person interview were 36.9 and 35.3 minutes respectively. Table 8.17 shows the individual module timings.

Table 8.17: Module timings – young person interview

Interview block	Mean time (decimal minutes)	Median time (decimal minutes)
Things That You Do	5.7	5.3
Your Views	1.9	1.7
School and Your Future	4.9	4.5
About You	1.2	1.0
Your Family	2.3	2.1
Your Friends	1.4	1.3
Relationships	1.8	1.7
Things You May Have Tried	2.0	1.9
Things You May Have Experienced	1.5	1.4
Things You May Have Done	2.2	2.1
Your Health	3.3	3.1
Your Body	1.8	1.6
How You Feel	2.4	2.2
More About You	0.6	0.6
Self-completion total	**36.9**	**35.3**

8.6.2 Young person physical measurements

The vast majority of cohort members also took part in the physical measurements (96.0%). Table 8.18 shows the breakdown of response for the physical measurements including by country of issue.

Table 8.18: Response – young person physical measurements

	Total	England	Wales	Scotland	N Ireland
	N	N	N	N	N
Cohort members in productive households	**11884**	**7835**	**1636**	**1278**	**1135**
Ineligible	**0**	**0**	**0**	**0**	**0**
One of the twins/triplets deceased	0	0	0	0	0
Eligible cohort members	**11884**	**7835**	**1636**	**1278**	**1135**
Productive	**11408**	**7506**	**1570**	**1233**	**1099**
Fully productive	10970	7204	1518	1175	1073
Partially productive	438	302	52	58	26
Unproductive	**476**	**329**	**66**	**45**	**36**
Non-contact	14	12	1	1	0
Parent refused	74	50	11	10	3
Young person refused	331	224	46	31	30
Broken appointment - no recontact	17	14	2	1	0
Ill during fieldwork period	3	1	1	0	1
Away/ in hospital during fieldwork period	3	3	0	0	0
Physically or mentally incapable/ incompetent	16	13	1	1	1
Language difficulties	0	0	0	0	0
Data lost on tablet	6	4	2	0	0
Other reason/ Unknown	12	8	2	1	1
	%	%	%	%	%
Eligible cohort members	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Productive within eligible	**96.0**	**95.8**	**96.0**	**96.5**	**96.8**
Fully productive	92.3	91.9	92.8	91.9	94.5
Partially productive	3.7	3.9	3.2	4.5	2.3
Unproductive within eligible	**4.0**	**4.2**	**4.0**	**3.5**	**3.2**

The mean and median times for the completion of the physical measurements script were 5.6 and 5.2 minutes respectively. This does not include the set up time of the physical measurement equipment.

8.6.3 Young person cognitive assessments

Table 8.19 shows the breakdown of response for the cognitive assessments including by country of issue. Most young people took part in the cognitive assessments (93.0%) of which 96.7% completed both the Decision-making task and the Word Activity.

Table 8.19: Response – young person cognitive assessments

	Total	England	Wales	Scotland	N Ireland
	N	N	N	N	N
Cohort members in productive households	11884	7835	1636	1278	1135
Ineligible	0	0	0	0	0
One of the twins/triplets deceased	0	0	0	0	0
Eligible cohort members	11884	7835	1636	1278	1135
Productive	11049	7289	1505	1185	1070
Fully productive	10687	7074	1429	1143	1041
Partially productive	362	215	76	42	29
Unproductive	835	546	131	93	65
Non-contact	35	30	4	1	0
Parent refused	72	44	15	10	3
Young person refused	292	186	46	29	31
Broken appointment - no recontact	19	16	1	1	1
Ill during fieldwork period	3	2	0	0	1
Away/ in hospital during fieldwork period	5	5	0	0	0
Physically or mentally incapable/ incompetent	28	21	1	2	4
Language difficulties	2	1	1	0	0
Data lost on tablet	8	3	3	2	0
Other reason/ Unknown	371	238	60	48	25
	%	%	%	%	%
Eligible cohort members	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Productive within eligible	93.0	93.0	92.0	92.7	94.3
Fully productive	89.9	90.3	87.3	89.4	91.7
Partially productive	3.0	2.7	4.6	3.3	2.6
Unproductive within eligible	7.0	7.0	8.0	7.3	5.7

The mean and median times for completion of the cognitive assessments were 17.9 and 17.4 minutes respectively.

8.6.4 Saliva sample collection

82.7% of eligible cohort members provided a saliva sample. In the majority of cases interviewers reported that a full sample (2ml) was obtained (96.9%). Table 8.20 shows the variation between response rates across the four countries of issue.

Table 8.20: Response – young person saliva sample collection

	Total	England	Wales	Scotland	N Ireland
	N	N	N	N	N
Cohort members in productive households	**11884**	**7835**	**1636**	**1278**	**1135**
Ineligible	**78**	**51**	**12**	**11**	**4**
Care home	8	6	0	2	0
One of the twins/triplets deceased	0	0	0	0	0
No legal guardian in household	70	45	12	9	4
Eligible cohort members	**11806**	**7784**	**1624**	**1267**	**1131**
Productive	**9758**	**6324**	**1374**	**1108**	**952**
Full saliva sample obtained	9461	6125	1338	1062	936
Partial saliva sample obtained	297	199	36	46	16
Unproductive	**2048**	**1460**	**250**	**159**	**179**
Non-contact	14	13	0	1	0
Parent refused	863	645	84	54	80
Young person refused	1067	716	162	96	93
Broken appointment - no recontact	20	17	1	1	1
Ill during fieldwork period	2	1	0	0	1
Away/ in hospital during fieldwork period	4	4	0	0	0
Physically or mentally incapable/ incompetent	31	25	1	2	3
Language difficulties	2	2	0	0	0
Data lost on tablet	0	0	0	0	0
Other reason/ Unknown	45	37	2	5	1
	%	%	%	%	%
Eligible cohort members	**99.3**	**99.3**	**99.3**	**99.1**	**99.6**
Productive within eligible	**82.7**	**81.2**	**84.6**	**87.5**	**84.2**
Full saliva sample obtained	80.1	78.7	82.4	83.8	82.8
Partial saliva sample obtained	2.5	2.6	2.2	3.6	1.4
Unproductive within eligible	**17.3**	**18.8**	**15.4**	**12.5**	**15.8**

Over three-quarters of main respondents provided a saliva sample, which had a response rate of 83.2%. In the majority of cases interviewers reported that a full sample was obtained (97.3%). 148 main respondents were not able to provide a sample of their saliva as they were not the cohort member's natural parent. Table 8.21 shows the variation between response rates across the four countries of issue.

Table 8.21: Response - main respondent saliva sample collection

	Total	England	Wales	Scotland	N Ireland
	N	N	N	N	N
Total productive households	11726	7739	1616	1256	1115
Ineligible	148	114	14	14	6
Care home interview	8	6	0	2	0
Not natural parent	140	108	14	12	6
Eligible main respondents	11578	7625	1602	1242	1109
Productive	9634	6233	1357	1106	938
Full saliva sample obtained	9378	6048	1322	1079	929
Partial saliva sample obtained	256	185	35	27	9
Unproductive	1944	1392	245	136	171
Non-contact	13	11	2	0	0
Refusal	1807	1282	234	129	162
Broken appointment - no recontact	24	20	3	1	0
Ill during fieldwork period	3	2	1	0	0
Away/ in hospital during fieldwork period	1	0	0	1	0
Physically or mentally incapable/ incompetent	10	9	1	0	0
Language difficulties	6	6	0	0	0
Data lost on tablet	0	0	0	0	0
Other reason/ Unknown	80	62	4	5	9
	%	%	%	%	%
Eligible main respondents	**98.7**	**98.5**	**99.1**	**98.9**	**99.5**
Productive within eligible	83.2	81.7	84.7	89.0	84.6
Full saliva sample obtained	81.0	79.3	82.5	86.9	83.8
Partial saliva sample obtained	2.2	2.4	2.2	2.2	0.8
Unproductive within eligible	16.8	18.3	15.3	11.0	15.4

Among all eligible households, response to the saliva element was the lowest among partners (who had a response rate of 72.1%). In the vast majority of cases a full sample was obtained (97.4%). 1,623 partners were ineligible for this element as they either weren't natural parents of the cohort member or were interviewed by proxy. Table 8.22 shows the variation between response rates across the four countries of issue.

Table 8.22: Response - partner saliva sample collection

	Total	England	Wales	Scotland	N Ireland
	N	N	N	N	N
Total productive households	11726	7739	1616	1256	1115
Ineligible	4511	3024	654	458	375
Partner interview by proxy	339	238	32	42	27
No partner in household	2886	1947	395	283	261
Care home interview	2	1	0	1	0
Not natural parent	1284	838	227	132	87
Eligible partners	7215	4715	962	798	740
Productive	5202	3358	695	623	526
Full saliva sample obtained	5067	3259	677	612	519
Partial saliva sample obtained	135	99	18	11	7
Unproductive	2013	1357	267	175	214
Non-contact	104	76	14	4	10
Refusal	1755	1164	241	155	195
Broken appointment - no recontact	39	34	0	4	1
Ill during fieldwork period	0	0	0	0	0
Away/ in hospital during fieldwork period	0	0	0	0	0
Physically or mentally incapable/ incompetent	0	0	0	0	0
Language difficulties	8	8	0	0	0
Data lost on tablet	0	0	0	0	0
Other reason/ Unknown	107	75	12	12	8
	%	%	%	%	%
Eligible partners	**61.5**	**60.9**	**59.5**	**63.5**	**66.4**
Productive within eligible	**72.1**	**71.2**	**72.2**	**78.1**	**71.1**
Full saliva sample obtained	70.2	69.1	70.4	76.7	70.1
Partial saliva sample obtained	1.9	2.1	1.9	1.4	0.9
Unproductive within eligible	**27.9**	**28.8**	**27.8**	**21.9**	**28.9**

8.6.5 Saliva sample return

A saliva sample and valid consent was received for 78.8% of eligible cohort members. 2.6% of received samples had to be destroyed as no valid consent was obtained either because the consent form was not fully completed, lost or consent was withdrawn after the household interview. For 1.2% of eligible cohort members no saliva sample was received even though the interviewer had recorded a collection.

Table 8.23 shows the variation between return rates across the four countries.

Table 8.23: Response - young person saliva sample return

	Total	England	Wales	Scotland	N Ireland
	N	N	N	N	N
Cohort members in productive households	**11884**	**7835**	**1636**	**1278**	**1135**
Ineligible	**78**	**51**	**12**	**11**	**4**
Care home	8	6	0	2	0
One of the twins/triplets deceased	0	0	0	0	0
No legal guardian in household	70	45	12	9	4
Eligible cohort members	**11806**	**7784**	**1624**	**1267**	**1131**
Productive	**9360**	**6094**	**1296**	**1070**	**900**
Full saliva sample received	9360	6094	1296	1070	900
Unproductive	**2446**	**1690**	**328**	**197**	**231**
Saliva sample received, but no valid consent	251	147	42	28	34
Saliva sample not received	147	83	36	10	18
Non-contact	14	13	0	1	0
Parent refused	863	645	84	54	80
Young person refused	1067	716	162	96	93
Broken appointment - no recontact	20	17	1	1	1
Ill during fieldwork period	2	1	0	0	1
Away/ in hospital during fieldwork period	4	4	0	0	0
Physically or mentally incapable/ incompetent	31	25	1	2	3
Language difficulties	2	2	0	0	0
Data lost on tablet	0	0	0	0	0
Other reason/ Unknown	45	37	2	5	1
	%	%	%	%	%
Eligible cohort members	**99.3**	**99.3**	**99.3**	**99.1**	**99.6**
Productive within eligible	**79.3**	**78.3**	**79.8**	**84.5**	**79.6**
Full saliva sample received	79.3	78.3	79.8	84.5	79.6
Unproductive within eligible	**20.7**	**21.7**	**20.2**	**15.5**	**20.4**

A saliva sample and valid consent was received for 79.3% of eligible main respondents while 3.2% of received samples had to be destroyed as no valid consent was obtained. For 1.2% of eligible main respondents no saliva sample was received even though the interviewer had recorded a collection.

Table 8.24 shows the variation between return rates across the four countries.

Table 8.24: Response - main saliva sample return

	Total	England	Wales	Scotland	N Ireland
	N	N	N	N	N
Total productive households	**11726**	**7739**	**1616**	**1256**	**1115**
Ineligible	**148**	**114**	**14**	**14**	**6**
Care home interview	8	6	0	2	0
Not natural parent	140	108	14	12	6
Eligible main respondents	**11578**	**7625**	**1602**	**1242**	**1109**
Productive	**9195**	**5975**	**1263**	**1071**	**886**
Saliva sample received	9195	5975	1263	1071	886
Unproductive	**2383**	**1650**	**339**	**171**	**223**
Saliva sample received, but no valid consent	301	179	59	29	34
Saliva sample not received	138	79	35	6	18
Non-contact	13	11	2	0	0
Refusal	1807	1282	234	129	162
Broken appointment - no recontact	24	20	3	1	0
Ill during fieldwork period	3	2	1	0	0
Away/ in hospital during fieldwork period	1	0	0	1	0
Physically or mentally incapable/ incompetent	10	9	1	0	0
Language difficulties	6	6	0	0	0
Data lost on tablet	0	0	0	0	0
Other reason/ Unknown	80	62	4	5	9
	%	%	%	%	%
Eligible main respondents	**98.7**	**98.5**	**99.1**	**98.9**	**99.5**
Productive within eligible	**79.4**	**78.4**	**78.8**	**86.2**	**79.9**
Saliva sample received	79.4	78.4	78.8	86.2	79.9
Unproductive within eligible	**20.6**	**21.6**	**21.2**	**13.8**	**20.1**

A saliva sample and valid consent was received for 68.4% of eligible partners while 3.5% of received samples had to be destroyed as no valid consent was obtained. For 1.7% of eligible partners no saliva sample was received even though the interviewer had recorded a collection.

Table 8.25 shows the variation between return rates across the four countries.

Table 8.25: Response - partner saliva sample return

	Total	England	Wales	Scotland	N Ireland
	N	N	N	N	N
Total productive households	**11726**	**7739**	**1616**	**1256**	**1115**
Ineligible	**4511**	**3024**	**654**	**458**	**375**
Partner interview by proxy	339	238	32	42	27
No partner in household	2886	1947	395	283	261
Care home interview	2	1	0	1	0
Not natural parent	1284	838	227	132	87
Eligible partners	**7215**	**4715**	**962**	**798**	**740**
Productive	**4936**	**3182**	**657**	**599**	**498**
Full saliva sample received	4936	3182	657	599	498
Unproductive	**2279**	**1533**	**305**	**199**	**242**
Saliva sample received, but no valid consent	181	127	19	16	19
Saliva sample not received	85	49	19	8	9
Non-contact	104	76	14	4	10
Refusal	1755	1164	241	155	195
Broken appointment - no recontact	39	34	0	4	1
Ill during fieldwork period	0	0	0	0	0
Away/ in hospital during fieldwork period	0	0	0	0	0
Physically or mentally incapable/ incompetent	0	0	0	0	0
Language difficulties	8	8	0	0	0
Data lost on tablet	0	0	0	0	0
Other reason/ Unknown	107	75	12	12	8
	%	%	%	%	%
Eligible partners	**61.5**	**60.9**	**59.5**	**63.5**	**66.4**
Productive within eligible	**68.4**	**67.5**	**68.3**	**75.1**	**67.3**
Saliva sample received	68.4	67.5	68.3	75.1	67.3
Unproductive within eligible	**31.6**	**32.5**	**31.7**	**24.9**	**32.7**

8.6.6 Activity monitor and time-use record placement

87.0% of cohort members in productive households were eligible for the activity monitor and time-use record and for 89.9% of these cohort members the activity monitor and/or time-use record was placed. Table 8.26 shows the variation between response rates across the four countries of issue. Of the 175 partial productive placements, 59 cohort members 34%) refused the time-use diary (only activity monitor placed) and 116 (66%) refused the activity monitor (only time-used diary placed).

Table 8.26: Response – activity monitor and time-use record placement

	Total	England	Wales	Scotland	N Ireland
	N	N	N	N	N
Cohort members in productive households	**11884**	**7835**	**1636**	**1278**	**1135**
Ineligible	**1547**	**1545**	**0**	**1**	**1**
One of the twins/triplets deceased	0	0	0	0	0
Not in ACC/TUD subsample	1547	1545	0	1	1
Eligible cohort members	**10337**	**6290**	**1636**	**1277**	**1134**
Productive	**9297**	**5613**	**1481**	**1159**	**1044**
Fully productive	9122	5499	1453	1132	1038
Partially productive	175	114	28	27	6
Unproductive	**1040**	**677**	**155**	**118**	**90**
Non-contact	17	15	1	1	0
Parent refused	210	150	25	23	12
Young person refused	681	421	105	83	72
Broken appointment - no recontact	15	12	2	1	0
Ill during fieldwork period	3	2	0	0	1
Away/ in hospital during fieldwork period	11	11	0	0	0
Physically or mentally incapable/ incompetent	22	15	3	1	3
Language difficulties	2	2	0	0	0
Data lost on tablet	5	3	1	1	0
Other reason/ Unknown	74	46	18	8	2
	%	%	%	%	%
Eligible cohort members	**87.0**	**80.3**	**100.0**	**99.9**	**99.9**
Productive within eligible	**89.9**	**89.2**	**90.5**	**90.8**	**92.1**
Fully productive	88.2	87.4	88.8	88.6	91.5
Partially productive	1.7	1.8	1.7	2.1	0.5
Unproductive within eligible	**10.1**	**10.8**	**9.5**	**9.2**	**7.9**

The mean and median times for the completion of the activity and time-use record placement script were 7.2 and 6.8 minutes respectively.

8.6.7 Activity monitor return

A total of 9184 activity monitors were placed of which 6736 (73.3%) were returned and 4970 (54.1%) contained valid data. This means 48.1% of eligible cohort members returned an activity monitor, which was worn for at least 10 hours on at least one of the selected days. 85% of these activity monitors were worn on both of the selected days for more than 10 hours each. Table 8.26 shows the variation between response rates across the four countries of issue.

Table 8.27: Response – activity monitor return

	Total	England	Wales	Scotland	N Ireland
	N	N	N	N	N
Cohort members in productive households	**11884**	**7835**	**1636**	**1278**	**1135**
Ineligible	**1547**	**1545**	**0**	**1**	**1**
One of the twins/triplets deceased	0	0	0	0	0
Not in ACC/TUD subsample	1547	1545	0	1	1
Eligible cohort members	**10337**	**6290**	**1636**	**1277**	**1134**
Productive	**4970**	**2965**	**748**	**680**	**577**
Fully productive	4221	2536	633	580	472
Partially productive	749	429	115	100	105
Unproductive	**5367**	**3325**	**888**	**597**	**557**
Device returned, but data insufficient	956	645	147	88	76
Device returned, but broken or no data	810	522	120	90	78
Device not returned	2448	1410	448	281	309
Non-contact	17	15	1	1	0
Refusal - only time-use diary placed	116	72	19	21	4
Parent refused	210	150	25	23	12
Young person refused	681	421	105	83	72
Broken appointment - no recontact	15	12	2	1	0
Ill during fieldwork period	3	2	0	0	1
Away/ in hospital during fieldwork period	11	11	0	0	0
Physically or mentally incapable/ incompetent	22	15	3	1	3
Language difficulties	2	2	0	0	0
Data lost on tablet	2	2	0	0	0
Other reason/ Unknown	74	46	18	8	2
Total number of devices placed[24]	**9184**	**5542**	**1463**	**1139**	**1040**
Total number of devices returned	**6736**	**4132**	**1015**	**858**	**731**
	%	%	%	%	%
Eligible cohort members	**87.0**	**80.3**	**100.0**	**99.9**	**99.9**
Productive within eligible	**48.1**	**47.1**	**45.7**	**53.2**	**50.9**
Fully productive	40.8	40.3	38.7	45.4	41.6
Partially productive	7.2	6.8	7.0	7.8	9.3
Productive within placed	**54.1**	**53.5**	**51.1**	**59.7**	**55.5**
Fully productive	46.0	45.8	43.3	50.9	45.4
Partially productive	8.2	7.7	7.9	8.8	10.1
Productive within returned	**73.8**	**71.8**	**73.7**	**79.3**	**78.9**
Fully productive	62.7	61.4	62.4	67.6	64.6
Partially productive	11.1	10.4	11.3	11.7	14.4
Unproductive within eligible	**51.9**	**52.9**	**54.3**	**46.8**	**49.1**

[24] The total number of returned devices is the sum of all productives plus devices which were returned, but they were broken or contained no or insufficient data. The total number of placed devices is the sum of returned devices and any device which was not returned.

8.6.8 Time-use record return

47.6% of eligible cohort members completed their time-use record for day 1 which is 47.6% of all placed records. 74.8% of all returned records were fully filled in. Table 8.28 shows the variation between response rates across the four countries of issue. Table 8.29 shows the variation between return rates for day 1 across the chosen mode. 66.7% of productive time-use records were completed via the app, 26.6% online and 6.7% on paper. Time-use records for day 1 were completed for 55.3% of app placements (of which 83.5% were fully filled in), 48.8% of online placements (of which 68.8% were fully filled in) and 54.3% of paper placements (of which only 13.1% were fully filled in).

Table 8.28: Response – day 1 time-use record return within country

	Total	England	Wales	Scotland	N Ireland
	N	N	N	N	N
Cohort members in productive households	**11884**	**7835**	**1636**	**1278**	**1135**
Ineligible	**1547**	**1545**	**0**	**1**	**1**
One of the twins/triplets deceased	0	0	0	0	0
Not in ACC/TUD subsample	1547	1545	0	1	1
Eligible cohort members	**10337**	**6290**	**1636**	**1277**	**1134**
Productive	**4916**	**3050**	**724**	**626**	**516**
Fully productive	3679	2256	534	491	398
Partially productive	1237	794	190	135	118
Unproductive	**5421**	**3240**	**912**	**651**	**618**
Time-use record not received	4324	2523	748	527	526
Non-contact	17	15	1	1	0
Refusal - only activity monitor placed	59	42	9	6	2
Parent refused	210	150	25	23	12
Young person refused	681	421	105	83	72
Broken appointment - no recontact	15	12	2	1	0
Ill during fieldwork period	3	2	0	0	1
Away/ in hospital during fieldwork period	11	11	0	0	0
Physically or mentally incapable/ incompetent	22	15	3	1	3
Language difficulties	2	2	0	0	0
Data lost on tablet	3	1	1	1	0
Other reason/ Unknown	74	46	18	8	2
	%	%	%	%	%
Eligible cohort members	**87.0**	**80.3**	**100.0**	**99.9**	**99.9**
Productive within eligible	**47.6**	**48.5**	**44.3**	**49.0**	**45.5**
Fully productive	35.6	35.9	32.6	38.4	35.1
Partially productive	12.0	12.6	11.6	10.6	10.4
Productive within placed	**53.2**	**54.7**	**49.2**	**54.3**	**49.5**
Fully productive	39.8	40.5	36.3	42.6	38.2
Partially productive	13.4	14.2	12.9	11.7	11.3
Unproductive within eligible	**52.4**	**51.5**	**55.7**	**51.0**	**54.5**

Table 8.29: Response – day 1 time-use record return by mode

	Total	App	Online	Paper	N/A
	N	N	N	N	N
Cohort members in productive households	**11884**	**5928**	**2709**	**606**	**2641**
Ineligible	**1547**	**-**	**-**	**-**	**1547**
One of the twins/triplets deceased	0	-	-	-	0
Not in ACC/TUD subsample	1547	-	-	-	1547
Eligible cohort members	**10337**	**5928**	**2709**	**606**	**1094**
Productive	**4916**	**3278**	**1309**	**329**	**-**
Fully productive	3679	2736	900	43	-
Partially productive	1237	542	409	286	-
Unproductive	**5421**	**2650**	**1400**	**277**	**1094**
Time-use record not received	4324	2649	1398	277	-
Non-contact	17	-	-	-	17
Refusal - only activity monitor placed	59	-	-	-	59
Parent refused	210	-	-	-	210
Young person refused	681	-	-	-	681
Broken appointment - no recontact	15	-	-	-	15
Ill during fieldwork period	3	-	-	-	3
Away/ in hospital during fieldwork period	11	-	-	-	11
Physically or mentally incapable/ incompetent	22	-	-	-	22
Language difficulties	2	-	-	-	2
Data lost on tablet	3	1	2	0	0
Other reason/ Unknown	74	-	-	-	74
	%	%	%	%	%
Eligible cohort members	**87.0**	**100.0**	**100.0**	**100.0**	**41.4**
Productive within eligible	**47.6**	**-**	**-**	**-**	**-**
Fully productive	35.6	-	-	-	-
Partially productive	12.0	-	-	-	-
Productive within placed	**53.2**	**55.3**	**48.4**	**54.3**	**-**
Fully productive	39.8	46.2	33.2	7.1	-
Partially productive	13.4	9.1	15.1	47.2	-
Unproductive within eligible	**52.4**	**44.7**	**51.7**	**45.7**	**-**

40.6% of eligible cohort members completed their time-use record for day 2 which is 45.4% (a slight decrease from day 1) of all placed records. 80.5% of all returned records were fully filled in (a slight increase compared to day 1). Table 8.30 shows the variation between response rates across the four countries of issue. Table 8.10 shows the variation between return rates for day 2 across the chosen mode. The completion rates across different modes for day 2 was very similar to day 1.

Table 8.30: Response – day 2 time-use record return within country

	Total	England	Wales	Scotland	N Ireland
	N	N	N	N	N
Cohort members in productive households	**11884**	**7835**	**1636**	**1278**	**1135**
Ineligible	**1547**	**1545**	**0**	**1**	**1**
One of the twins/triplets deceased	0	0	0	0	0
Not in ACC/TUD subsample	1547	1545	0	1	1
Eligible cohort members	**10337**	**6290**	**1636**	**1277**	**1134**
Productive	**4197**	**2599**	**623**	**540**	**435**
Fully productive	3380	2061	495	465	359
Partially productive	817	538	128	75	76
Unproductive	**6140**	**3691**	**1013**	**737**	**699**
Time-use record not received	5042	2973	849	613	607
Non-contact	17	15	1	1	0
Refusal - only activity monitor placed	59	42	9	6	2
Parent refused	210	150	25	23	12
Young person refused	681	421	105	83	72
Broken appointment - no recontact	15	12	2	1	0
Ill during fieldwork period	3	2	0	0	1
Away/ in hospital during fieldwork period	11	11	0	0	0
Physically or mentally incapable/ incompetent	22	15	3	1	3
Language difficulties	2	2	0	0	0
Data lost on tablet	4	2	1	1	0
Other reason/ Unknown	74	46	18	8	2
	%	%	%	%	%
Eligible cohort members	**87.0**	**80.3**	**100.0**	**99.9**	**99.9**
Productive within eligible	**40.6**	**41.3**	**38.1**	**42.3**	**38.4**
Fully productive	32.7	32.8	30.3	36.4	31.7
Partially productive	7.9	8.6	7.8	5.9	6.7
Productive within placed	**45.4**	**46.6**	**42.3**	**46.8**	**41.7**
Fully productive	36.6	37.0	33.6	40.3	34.5
Partially productive	8.8	9.7	8.7	6.5	7.3
Unproductive within eligible	**59.4**	**58.7**	**61.9**	**57.7**	**61.6**

Table 8.31: Response – day 2 time-use record return by mode

	Total	App	Online	Paper	N/A
	N	N	N	N	N
Cohort members in productive households	11884	5928	2709	606	2641
Ineligible	1547	-	-	-	1547
One of the twins/triplets deceased	0	-	-	-	0
Not in ACC/TUD subsample	1547	-	-	-	1547
Eligible cohort members	10337	5928	2709	606	1094
Productive	4197	2843	1064	290	-
Fully productive	3380	2534	801	45	-
Partially productive	817	309	263	245	-
Unproductive	6140	3085	1645	316	1094
Time-use record not received	5042	3084	1642	316	-
Non-contact	17	-	-	-	17
Refusal - only activity monitor placed	59	-	-	-	59
Parent refused	210	-	-	-	210
Young person refused	681	-	-	-	681
Broken appointment - no recontact	15	-	-	-	15
Ill during fieldwork period	3	-	-	-	3
Away/ in hospital during fieldwork period	11	-	-	-	11
Physically or mentally incapable/ incompetent	22	-	-	-	22
Language difficulties	2	-	-	-	2
Data lost on tablet	4	1	3	0	0
Other reason/ Unknown	74	-	-	-	74
	%	%	%	%	%
Eligible cohort members	**87.0**	**100.0**	**100.0**	**100.0**	**41.4**
Productive within eligible	40.6	-	-	-	-
Fully productive	32.7	-	-	-	-
Partially productive	7.9	-	-	-	-
Productive within placed	45.4	48.0	39.3	47.9	-
Fully productive	36.6	42.8	29.6	7.4	-
Partially productive	8.8	5.2	9.7	40.4	-
Unproductive within eligible	59.4	52.0	60.7	52.1	-

8.6.9 Main respondent interview

Main respondent interviews were completed with 11,595 respondents, and the vast majority of interviews were fully productive (98.9%). There were only slight variations in response by country as illustrated in Table 8.32 below.

Table 8.32: Response - main respondent interview

	Total	England	Wales	Scotland	N Ireland
	N	N	N	N	N
Total productive households	11726	7739	1616	1256	1115
Productive	11595	7646	1595	1251	1103
Fully productive	11587	7639	1594	1251	1103
Partially productive	8	7	1	0	0
Unproductive	131	93	21	5	12
Non-contact	8	8	0	0	0
Refusal	83	56	13	4	10
Broken appointment - no recontact	16	12	1	1	2
Ill during fieldwork period	1	1	0	0	0
Away/ in hospital during fieldwork period	0	0	0	0	0
Physically or mentally incapable/ incompetent	0	0	0	0	0
Language difficulties	6	5	1	0	0
Data lost on tablet	7	3	4	0	0
Other reason/ Unknown	10	8	2	0	0
	%	%	%	%	%
Productive within eligible	98.9	98.8	98.7	99.6	98.9
Fully productive	98.8	98.7	98.6	99.6	98.9
Partially productive	0.1	0.1	0.1	0.0	0.0
Unproductive within eligible	1.1	1.2	1.3	0.4	1.1

The mean and median times for the main respondent interview were 35.5 and 34.0 minutes respectively. Table 8.33 shows the individual module timings. The main and median time for the completion of the household questionnaire, which was usually completed with the main respondent, were 8.7 and 7.1 minutes respectively.

Table 8.33: Module timings - main respondent

Interview block	Mean time (decimal minutes)	Median time (decimal minute)
Household questionnaire	8.7	7.1
Family Context and Parental Situation	1.8	1.3
Early Education and Schooling	5.3	4.8
Parenting Activities	1.3	1.2
Young Person Health	2.8	2.5
Parent's Health	1.1	0.9
Employment, income and education/job history	10.7	10.0
Housing and Local Area	2.1	1.8
Other Matters	0.5	0.4
Self-completion	7.2	6.7
Check contact information	2.3	1.8
Main respondent interview total	35.5	34.0

8.6.10 Strengths and Difficulties questionnaire

Table 8.34 shows the breakdown of placement for the Strengths and Difficulties questionnaire (SDQ) including by country of issue. Most parents initially agreed to take part in this survey element (99.1%).

Table 8.34: Response - Strengths and difficulties questionnaire (placement)

	Total	England	Wales	Scotland	N Ireland
	N	N	N	N	N
Cohort members in productive households	11884	7835	1636	1278	1135
Ineligible	0	0	0	0	0
One of the twins/triplets deceased	0	0	0	0	0
Eligible cohort members	11884	7835	1636	1278	1135
Productive	11753	7730	1625	1269	1129
Unproductive	131	105	11	9	6
Non-contact	6	5	1	0	0
Refusal	64	45	8	6	5
Broken appointment - no recontact	10	8	1	1	0
Ill during fieldwork period	0	0	0	0	0
Away/ in hospital during fieldwork period	0	0	0	0	0
Physically or mentally incapable/ incompetent	4	4	0	0	0
Language difficulties	32	31	0	1	0
Data lost on tablet	0	0	0	0	0
Other reason/ Unknown	15	12	1	1	1
	%	%	%	%	%
Eligible cohort members	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Productive within eligible	99.1	98.8	99.4	99.6	99.5
Unproductive within eligible	0.9	1.2	0.6	0.4	0.5

Table 8.35 shows the breakdown of returns for the Strengths and Difficulties questionnaire (SDQ) including by country of issue. Most forms were returned and were included in the final data (96.8%).

Table 8.35: Response - Strengths and difficulties questionnaire (Returns)

	Total	England	Wales	Scotland	N Ireland
	N	N	N	N	N
Cohort members in productive households	**11884**	**7835**	**1636**	**1278**	**1135**
Ineligible	**0**	**0**	**0**	**0**	**0**
One of the twins/triplets deceased	0	0	0	0	0
Eligible cohort members	**11884**	**7835**	**1636**	**1278**	**1135**
Productive	**11507**	**7588**	**1584**	**1247**	**1088**
Fully productive	10348	6754	1462	1164	968
Partially productive	1159	834	122	83	120
Unproductive	**377**	**247**	**52**	**31**	**47**
SDQ not returned	266	156	43	26	41
Non-contact	5	4	1	0	0
Refusal	53	37	7	4	5
Broken appointment - no recontact	9	8	1	0	0
Ill during fieldwork period	0	0	0	0	0
Away/ in hospital during fieldwork period	0	0	0	0	0
Physically or mentally incapable/ incompetent	4	4	0	0	0
Language difficulties	29	28	0	1	0
Data lost on tablet	0	0	0	0	0
Other reason/ Unknown	11	10	0	0	1
	%	%	%	%	%
Eligible cohort members	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Productive within eligible	**96.8**	**96.8**	**96.8**	**97.6**	**95.9**
Unproductive within eligible	**3.2**	**3.2**	**3.2**	**2.4**	**4.1**

8.6.11 Main respondent cognitive assessment (Word Activity)

The main respondent cognitive assessment (Word Activity) was completed with 11,068 respondents (94.5%). There were slight variations in response by country as illustrated in Table 8.36, with response highest in Scotland and Northern Ireland and lowest in England.

Table 8.36: Response - main respondent cognitive assessment (Word Activity)

	Total	England	Wales	Scotland	N Ireland
	N	N	N	N	N
Total productive households	11726	7739	1616	1256	1115
Ineligible	8	6	0	2	0
Care home interview	8	6	0	2	0
Eligible main respondents	11718	7733	1616	1254	1115
Productive	11068	7219	1547	1219	1083
Fully productive	11068	7219	1547	1219	1083
Partially productive	0	0	0	0	0
Unproductive	650	514	69	35	32
Non-contact	13	11	1	1	0
Refusal	305	205	54	26	20
Broken appointment - no recontact	18	13	2	1	2
Ill during fieldwork period	3	3	0	0	0
Away/ in hospital during fieldwork period	0	0	0	0	0
Physically or mentally incapable/ incompetent	12	11	0	0	1
Language difficulties	237	230	4	2	1
Data lost on tablet	5	3	1	0	1
Other reason/ Unknown	57	38	7	5	7
	%	%	%	%	%
Eligible main respondents	**99.9**	**99.9**	**100.0**	**99.8**	**100.0**
Productive within eligible	94.5	93.4	95.7	97.2	97.1
Fully productive	94.5	93.4	95.7	97.2	97.1
Partially productive	0.0	0.0	0.0	0.0	0.0
Unproductive within eligible	5.5	6.6	4.3	2.8	2.9

The mean and median times for the main respondent Word Activity were 6.2 and 5.7 minutes respectively.

8.6.12 Partner interview

Overall, two-thirds of households (75.4%) contained an eligible partner respondent, and interviews were conducted with partners in 82.2% of these households. A further 3.4% of eligible households completed the partner interview by proxy. Details of the response to the partner interview by country can be found in Table 8.37.

Table 8.37: Response - partner interview

	Total	England	Wales	Scotland	N Ireland
	N	N	N	N	N
Total productive households	11726	7739	1616	1256	1115
Ineligible	2886	1947	395	283	261
No partner in household	2886	1947	395	283	261
Care home interview	0	0	0	0	0
Eligible partners	8840	5792	1221	973	854
Productive	7268	4755	999	818	696
Fully productive	7263	4750	999	818	696
Partially productive	5	5	0	0	0
Proxy interviews	299	216	26	34	23
Unproductive	1273	821	196	121	135
Non-contact	116	81	17	8	10
Refusal	958	593	154	97	114
Broken appointment - no recontact	47	38	3	4	2
Ill during fieldwork period	0	0	0	0	0
Away/ in hospital during fieldwork period	0	0	0	0	0
Physically or mentally incapable/ incompetent	0	0	0	0	0
Language difficulties	22	21	1	0	0
Data lost on tablet	2	0	2	0	0
Other reason/ Unknown	128	88	19	12	9
	%	%	%	%	%
Eligible partners	**75.4**	**74.8**	**75.6**	**77.5**	**76.6**
Productive within eligible	**82.2**	**82.1**	**81.8**	**84.1**	**81.5**
Fully productive	82.2	82.0	81.8	84.1	81.5
Partially productive	0.1	0.1	0.0	0.0	0.0
Proxy interviews within eligible	**3.4**	**3.7**	**2.1**	**3.5**	**2.7**
Unproductive within eligible	**14.4**	**14.2**	**16.1**	**12.4**	**15.8**

Table 8.38 shows the individual module timings. The mean and median times for the partner interview were 19.6 and 18.7 minutes respectively. The mean and median times for the proxy partner interview were 7.3 and 4.8 minutes respectively.

Table 8.38: Module timings – partner respondent

Interview block	Mean time (decimal minutes)	Median time (decimal minutes)
Family Context and Parental Situation	1.3	0.8
Early Education and Schooling	0.8	0.7
Parenting Activities	0.3	0.2
Parent's Health	1.0	0.8
Employment, income and education/job history	6.2	5.7
Other Matters	0.6	0.6
Self-Completion	7.3	6.8
Check contact information	1.9	1.3
Partner respondent interview total	19.6	18.7
Proxy partner interview	7.3	4.8

8.6.13 Partner cognitive assessment (Word Activity)

Among all eligible households, response to the Word Activity was the lowest among partners (81.0%). Table 8.39 shows the breakdown of response for the partner cognitive assessment (Word Activity) including by country of issue

Table 8.39: Response - partner cognitive assessment (Word Activity)

	Total	England	Wales	Scotland	N Ireland
	N	N	N	N	N
Total productive households	11726	7739	1616	1256	1115
Ineligible	3225	2185	427	325	288
Partner interview by proxy	339	238	32	42	27
No partner in household	2886	1947	395	283	261
Care home interview	0	0	0	0	0
Eligible partners	8501	5554	1189	931	827
Productive	6890	4416	978	812	684
Fully productive	6890	4416	978	812	684
Partially productive	0	0	0	0	0
Unproductive	1611	1138	211	119	143
Non-contact	134	98	19	7	10
Refusal	1066	686	170	94	116
Broken appointment - no recontact	53	44	3	4	2
Ill during fieldwork period	0	0	0	0	0
Away/ in hospital during fieldwork period	0	0	0	0	0
Physically or mentally incapable/ incompetent	0	0	0	0	0
Language difficulties	212	210	2	0	0
Data lost on tablet	2	1	1	0	0
Other reason/ Unknown	144	99	16	14	15
	%	%	%	%	%
Eligible partners	**72.5**	**71.8**	**73.6**	**74.1**	**74.2**
Productive within eligible	**81.0**	**79.5**	**82.3**	**87.2**	**82.7**
Fully productive	81.0	79.5	82.3	87.2	82.7
Partially productive	0.0	0.0	0.0	0.0	0.0
Unproductive within eligible	**19.0**	**20.5**	**17.7**	**12.8**	**17.3**

The mean and median times for the partner Word Activity were 6.0 and 5.6 minutes respectively.

9 Coding, editing and data preparation

9.1 Issuing the CAPI script and script updates

Version 101 of each of the CAPI scripts were issued to interviewers before the start of fieldwork, and then updated and reissued whenever necessary during the fieldwork period. The main reasons for releasing new scripts were as follows:

- If an error in in routing became obvious (this happened for some particularly complex areas of code, although this did not impact many cases)
- If interviewer instructions needed to be added because interviewers were miscoding questions or needed clarification. Note that most interviewer queries mainly related to protocols for families with unusual circumstances and there was the occasional issue with disputed feed forward data.
- If range checks needed to be updated due to either the extended fieldwork period or other factors that made the range checks inappropriate

Full details of changes made to scripts are outlined in the appendices.

Some changes made to the scripts affect the data. Questions that were asked when they should not have been have been flagged within the final data sets using a predefined set of variables. All such flags are shown in Figure 9.1 below.

Figure 9.1: Flags for routing errors due to new script versions

Variable (flag) name	Variable (flag) label	Response options
YPINT data files		
FLAG_routing_RLQM	YP should not have been asked questions (MAAB, COMO, SEMA, STMA, PHMA) about their mother (said at RLQM that they did not have a mother)	Yes/No
FLAG_routing_RLQF	YP should not have been asked questions (PAAB, COFA, SEFA, STPA, PHPA) about their father (said at RLQF that they did not have a father)	Yes/No

9.2 Lost data

On very rare occasions Dimensions data was captured by the interviewer but either became corrupted or was deleted before it was sent back to the office. Given the ECS used a separate process to transmit data these occurrences were flagged, and were clearly marked in the paradata. All elements where data was lost were given the outcome code of 140.

There were two periods during fieldwork where the response rate for CANTAB dipped due to technical problems. The first occurred when some of the licence keys were not working correctly, and the second when McAfee released an anti-virus security update which temporarily prevented the software from launching. Not all technical issues were reported by interviewers, but we estimate that the overall response rate to the Decision-making task was reduced by approximately 2-3 percentage points due to these issues. Additionally, 10 CANTAB files were collected but lost on the tablet before being returned to Head Office.

9.3 Coding

9.3.1 Coding open-ended and 'other-specify' questions

In MCS6, as in most CAPI surveys, the majority of answers given by respondents were coded during the interview into pre-specified code frames. Many questions had fully closed code frames – that is the interviewer had to code the respondent's answer to one of the existing response categories. However, there were a number of questions where an option was included in the code frame to allow the interviewer to enter an answer that they were not confident coding into the pre-specified options, or to record an answer which was truly an 'other' answer. In these cases, the interviewer simply transcribed the answer given by the respondent. Questions of this type are called 'other-specify' questions. In addition, there were some questions where a code frame was deliberately not included in the CAPI program and interviewers were asked to transcribe all the answers to these questions. This type of question is called an 'open-ended' question.

9.3.2 The codebook

A codebook from MCS5 was provided by CLS to help try and keep variable names and coding consistent with the previous sweep, where appropriate. This was adapted to include any questions that were new to this sweep and, if appropriate, to either make an improvement or to reflect different responses given at MCS6. The codebook was then passed to Ipsos MORI's coding team to give them a framework to code all other-specify and open-ended verbatim responses.

9.3.3 Other-specify questions

Most of the questions that required coding were 'other-specify' questions. In many cases it was possible for coders to code 'other-specify' answers back into the existing code frame (back coding). If the coder was unable to back code the answer then they would attempt to code within the extra codes provided in the code frame. If the coder was neither able to back code nor code into the specified code frame they would look for distinct groups of responses and raise a new code for these. All these new codes would have to be approved by CLS before they could be finalised by the coding department.

However, in some cases it was still not possible for responses to be allocated an existing code or any of the additional codes. In these instances, answers were either left within the 'Other' code or coded as 'Vague irrelevant answer'. 'Other' was used for most of the responses that could not be coded using the existing/additional codes in the code frames. 'Vague irrelevant answer' was only used for responses that did not answer the question.

9.3.4 Open questions

Open questions required the interviewer to record the respondent's responses verbatim, i.e. it was intentional that a code frame was not provided in the CAPI.

As with the other-specify questions, if coders were not able to allocate the responses to a code specified in the code frame, then an 'Other' code was allocated.

9.3.5 Quality control

During fieldwork, Ipsos MORI carried out blind double-coding of 5% of all coders' work (randomly chosen) to verify the coding. This verification was carried out by a different person to the original coder. If the original code was incorrect it was corrected and the original coder informed.

9.3.6 SIC coding, SOC Coding, Ethnic Group and ISO 3166

Some of the questions used pre-existing classification schemes: UK Standard Industrial Classification of Economic Activities 2007 (UK SIC 2007), Standard Occupational Classification (SOC2010), Ethnic Group coding from the ONS 2011 Census classification and harmonisation guidelines, and Alpha-3 ISO 3166 country coding from the International Organization for Standardization.

SIC and SOC coding were applied to both the main parent's and partner's occupations and SOC coding was also applied to the career aspirations question asked of the young person in the self-completion questionnaire. With the cohort member self-completion, many young people chose to give multiple answers, which required each aspiration to be coded individually.

9.4 Editing CAPI data

Interviewers carried out most of the data editing in the field where inconsistencies were highlighted through soft and hard checks. 'Hard' checks did not allow entries outside a given range (and had to be resolved by the interviewer at the time of the interview), and 'soft' checks asked the interviewer to confirm what he or she had entered. These enabled interviewers to clarify and query data discrepancies directly with the respondent during the interview.

Interviewers recorded in the Final Element module where they believed further amendments to the data would be needed, and, in a few instances, interviewers notified Head Office where other amendments to the data were necessary. These reports were reviewed and, if required, an edit was proposed. The proposed edits were then signed off by CLS. If an edit to a variable had routing implications, then the following approach was taken:

- In most cases where questions had been answered that, after applying the edit, should not have been answered, the data contained in those variables was cleared. However, there were cases where this was not done due to complexity and the risk of introducing further problems. All such cases were agreed with CLS.
- In cases where questions would have been asked but were not, the response was left as -1 'Not applicable'. However, in some places in the script it was beneficial to complete these variables. Again, all such cases were agreed with CLS.

Some edits were made to body fat and height measurements based on comments interviewers had made within the physical measurements module. Additionally, edits were made in cases where the body fat value and the weight value were identical; this was deemed to be interviewer error and both values were deleted. All such edits were agreed with CLS.

All cases which were edited were flagged within the final data sets using a predefined set of variables, along with any cases where data was not edited but there may be issues. All such flags are shown in Figure 9.2.

Figure 9.2: Flags for data edits or issues

Variable (flag) name	Variable (flag) label	Response options
HHINT data files		
FLAG_edit	Was any edit made to this row of data?	Yes/No
FLAG_MainPartner_wrong	Main or Partner interview may contain responses relating to a different person	Yes/No
FLAG_incorrectHH_historyFF	Respondent disputes FF household composition history	Yes/No
FLAG_date_out_of_range	A date check within the script has not been triggered and subsequent checks reveal a date that should be considered out of range	Yes/No
FLAG_BDC_check_not_triggered	The check associated with BDC was not triggered and subsequent checks reveal a date which may have been considered out of range	Yes/No
FLAG_PSP_check_not_triggered	The check associated with PSP was not triggered and subsequent checks reveal a date which may have been considered out of range	Yes/No
FLAG_PST_check_not_triggered	The check associated with PST was not triggered and subsequent checks reveal a date which may have been considered out of range	Yes/No
PARENT data files		
FLAG_edit	Was any edit made to this row of data?	Yes/No
FLAG_MainPartner_wrong	Main or Partner interview may contain responses relating to a different person	Yes/No
FLAG_incorrectHH_historyFF	Respondent disputes Feed Forward household composition history	Yes/No
FLAG_date_out_of_range	A date check within the script has not been triggered and subsequent checks reveal a date that should be considered out of range	Yes/No
FLAG_incorrectJobFF	Respondent disputes Feed Forward job history.	Yes/No
FLAG_non_resident_father	The data are from a non_resident father.	Yes/No
FLAG_FFemployment_copy_error	It appears that the Feed Forward data has been copied from the wrong person in the HouseHold.	Yes/No
FLAG_STW_check_not_triggered	The check associated with STW was not triggered and subsequent checks reveal a date which may have been considered out of range.	Yes/No
FLAG_LWK_check_not_triggered	The check associated with LWK was not triggered and subsequent checks reveal a date which may have been considered out of range.	Yes/No
FLAG_STJ_check_not_triggered	The check associated with STJ was not triggered and subsequent checks reveal a date which may have been considered out of range.	Yes/No
FLAG_JBS_check_not_triggered	The check associated with JBS was not triggered and subsequent checks reveal a date which may have been considered out of range.	Yes/No
FLAG_SRT_check_not_triggered	The check associated with SRT was not triggered and subsequent checks reveal a date which may have been considered out of range.	Yes/No
FLAG_NST_check_not_triggered	The check associated with NST was not triggered and subsequent checks reveal a date which may have been considered out of range.	Yes/No

Variable (flag) name	Variable (flag) label	Response options
FLAG_NON_check_not_triggered	The check associated with NON was not triggered and subsequent checks reveal a date which may have been considered out of range.	Yes/No
FLAG_LJB_check_not_triggered	The check associated with LJB was not triggered and subsequent checks reveal a date which may have been considered out of range.	Yes/No
FLAG_MOAD_check_not_triggered	The check associated with MOAD was not triggered and subsequent checks reveal a date which may have been considered out of range.	Yes/No
FLAG_MOVA11_check_not_triggered	The check associated with MOVA11 was not triggered and subsequent checks reveal a date which may have been considered out of range.	Yes/No
FLAG_PXWY_check_not_triggered	The check associated with PXWY was not triggered and subsequent checks reveal a date which may have been considered out of range.	Yes/No
FLAG_PXLY_check_not_triggered	The check associated with PXLY was not triggered and subsequent checks reveal a date which may have been considered out of range.	Yes/No
FLAG_PXJY_check_not_triggered	The check associated with PXJY was not triggered and subsequent checks reveal a date which may have been considered out of range.	Yes/No
FLAG_PXCY_check_not_triggered	The check associated with PXCY was not triggered and subsequent checks reveal a date which may have been considered out of range.	Yes/No
FLAG_PXNY_check_not_triggered	The check associated with PXNY was not triggered and subsequent checks reveal a date which may have been considered out of range.	Yes/No
FLAG_PXNW_check_not_triggered	The check associated with PXNW was not triggered and subsequent checks reveal a date which may have been considered out of range.	Yes/No
FLAG_PXBY_check_not_triggered	The check associated with PXBY was not triggered and subsequent checks reveal a date which may have been considered out of range.	Yes/No
FLAG_RELYRELM_check_not_triggered	The check associated with RELYRELM was not triggered and subsequent checks reveal a date which may have been considered out of range.	Yes/No
FLAG_REPYREPM_check_not_triggered	The check associated with REPYREPM was not triggered and subsequent checks reveal a date which may have been considered out of range.	Yes/No
FLAG_RESYRESM_check_not_triggered	The check associated with RESYRESM was not triggered and subsequent checks reveal a date which may have been considered out of range.	Yes/No
FLAG_REEYREEM_check_not_triggered	The check associated with REEYREEM was not triggered and subsequent checks reveal a date which may have been considered out of range.	Yes/No
FLAG_RPRYRPRM_check_not_triggered	The check associated with RPRYRPRM was not triggered and subsequent checks reveal a date which may have been considered out of range.	Yes/No

Variable (flag) name	Variable (flag) label	Response options
YPINT data files		
FLAG_edit	Was any edit made to this row of data?	Yes/No
COGASS data files		
FLAG_edit	Was any edit made to this row of data?	Yes/No
FLAG_Cogs_Swapped	Main or Partner or CM cognitive assessments was completed by the wrong respondent	Yes/No
ACCTUD data files		
FLAG_edit	Was any edit made to this row of data?	Yes/No
PM data files		
FLAG_edit	Was any edit made to this row of data?	Yes/No
FINALEL data files		
FLAG_edit	Was any edit made to this row of data?	Yes/No

9.5 Remapping the data

Coded and edited data was remapped according to specifications provided by CLS. If the module contained verbatim responses from 'other-specify' and open ended questions these were delivered in a separate file.

For the Household interview, the information about each person in the household was re-mapped so that each person corresponded to a row of data. Household-level information was delivered in a separate data file, with one row of data per family.

For the main parent interviews and partner interviews, files for each topic were delivered. Data was transformed so that questions pertaining to the young person were in one file with one row of data for each young person and questions pertaining to the main parent/partner or family as a whole in another file.

Young person interview data, physical measurement data and activity monitor and time-use record data was transformed so that questions pertaining to each young person were on one row in the dataset.

The cognitive assessment data was transformed so that tasks completed by the young person were delivered in one file with one row for each young person, and a separate file containing tasks completed by the main parent and partner was delivered in another file.

The Final Element data was transformed so that each young person, main parent and partner were on one row of data each.

9.6 Activity monitor data

Upon receipt of each activity monitor in the Ipsos MORI office, it was booked in and then the data downloaded and assigned to the correct young person serial number. This was based on the device serial number input into CAI by the interviewer (or recorded in the office if interviewers were out of stock). To help avoid mis-assigning devices which were placed more than once during fieldwork, Ipsos MORI checked that the activity monitor recording started on the same day or soon after it had been placed, and that the allocated days had taken place before the activity monitor was received.

Where cases could not be assigned to a young person placement, following the rules above, they were reconciled manually if possible.

All matched activity data was then analysed (using R code provided by CLS) to check if they contained valid data (worn for at least 10 hours between 4am and 4am on at least one of the allocated days). Activity data was classed as partially productive if it contained valid data for either day 1 or day 2 (but not both) and fully productive if it was valid for both days.

9.7 Inputting the time-use record and SDQ data

9.7.1 Time-use record data

The time-use record was available in three modes – online, smartphone app, and paper. Respondents opting for the paper version returned the record to the Ipsos MORI Field team in the envelopes provided. On placing the records, interviewers attached a login sticker, which was used in the office to identify each young person, before the records were passed to the Data Capture team who input the entries into a data entry version of the online instrument. This version allowed exact replication of the paper record entries (including 'invalid' entries such as multiple activities in the same time slot). The data were provided to CLS unedited.

For quality control, the Data Capture team spot checked 10% of this work. This was always done by a different member of the team; no coders checked their own work.

If a paper time-use record was returned without a login sticker attached to it, where possible other things returned in the same envelope (the activity monitor despatch form or activity monitor itself) were used to identify the respondent. If this was not possible, the two selected days (if written on the record) were checked against the full list of assigned days, and in any instances of unique combinations, data were assigned to the respective young people.

9.7.2 SDQ data

Interviewers returned the paper Strengths and Difficulties Questionnaire (SDQ) to the Ipsos MORI Field team. The forms were booked in by scanning the barcode sticker (attached by interviewers on placement). The team used other information on the form – such as names, dates of birth and dates of completion – to reconcile forms with missing barcodes or where the name written on the form did not match the name of the cohort member assigned to the barcode.

Once successfully booked in, the Data Capture team scanned the forms and specialist software recorded the responses. All questions on the SDQ required a single answer. However, there were cases where more than one answer was recorded. The research team applied a cross-check to identify where this had happened, and the Data Capture team then inspected the original SDQ to establish whether the respondent had deliberately given more than one answer or whether one of the answers was, for example, crossed out or just a smudge. In cases where there were multiple intentional answers to a question the data was edited out as 'not answered'.

The data (with matched respondent serial numbers), original paper SDQs and their scans were provided to CLS.

10 List of survey outputs

Various survey outputs were provided to CLS including the re-mapped CAI data, other survey data, contact information, final response and survey process data, all documentation and consent form data. All deliveries are detailed below.

10.1 Survey outputs

Output	Date delivered	Notes
Re-mapped CAI data (including specifications for each data file and a log of any edits made to the data)		
Household interview	10 June 2016 (V2 11 Aug 2016)	Two datasets provided with one row of data for each household and two with one row for each person in the household (text strings provided in separate files)
Parent	29 July 2016 (V2 for some files 11 Aug 2016)	Eight datasets provided with one row of data for each cohort member answered by either Main or Partner and sixteen provided with one row of data for each Main or Partner respondent in the household (text strings provided in separate files)
Young person interview	27 May 2016 (V2 for some files 11 Aug 2016)	Two datasets provided with one row of data for each Cohort Member (text strings provided in separate files)
Cognitive Assessment interview (CAI data only)	27 May 2016 (V2 for some files 11 Aug 2016)	Two datasets provided with one row of data for each Main or Partner respondent in the household and two provided with one row of data for each Cohort Member (text strings provided in separate files)
Physical measurements	27 May 2016	Two datasets provided with one row of data for each Cohort Member (text strings provided in separate files)
Activity monitor and time-use record (CAI data only)	27 May 2016	Two datasets provided with one row of data for each Cohort Member (text strings provided in separate files)
Final Element	21 June 2016	Two datasets provided with one row of data for each cohort member answered by either Main or Partner (text strings provided in separate files)
Other survey data		
Strengths and Difficulties Questionnaire (SDQ)	22 June 2016 (V2 3 Aug 2016)	Includes: 1) scans and hard copies of the original forms 2) a report on cleaning (data edits log)
CANTAB (Decision-making Task)	27 June 2016	
Time-use record data	27 June 2016	Includes: 1) app data 2) online data 3) paper data (combined with the online data)
Activity monitor data	7 Sept 2016	Provided throughout fieldwork, date here is the final delivery

Contact Information		
Productive Contact Information	13 May 2016 (edits file sent on 27 May 2016)	Provided throughout fieldwork, date here is the final delivery
Unproductive Contact Information	24 June 2016	
Institutional Contact Information	24 June 2016	
Final response and survey process data		
Draft Case-Level and Issue-Level para data	17 May 2016	
Issue-Level paradata	30 June 2016	
Case-Level paradata (except saliva, activity monitor, SDQ office outcomes and Consent form barcodes)	30 June 2016	
Call-Level paradata	30 June 2016	
Interviewer paradata	30 June 2016	
Activity monitor and time-use record paradata	2 Sept 2016	
Case-Level paradata (saliva, activity monitor, SDQ office outcomes and CF barcodes)	2 Sept 2016	
Saliva paradata	8 Sept 2016	
CAPI questionnaire documentation (including cognitive assessments and physical measurements)		
Interim	20 Feb 2015	
Final	8 April 2016	
Other documentation		
Time-use record documentation	24 June 2016	
Consent forms (scans and hard copies)	22 July 2016	
Code frame for all open questions and 'other' comments for coding	29 July 2016	
Technical report	9 Sept 2016	

Kirsty Burston
Research Manager
Kirsty.Burston@ipsos.com

Andrew Cleary
Research Director
Andrew.Cleary@ipsos.com

Colin Gardiner
Associate Director
Colin.Gardiner@ipsos.com

Olivia Michelmore
Research Executive
Olivia.Michelmore@ipsos.com

Paul Sheriffs
Research Executive
Paul.Sheriffs@ipsos.com

Anne Conolly
Associate Director
Anne.Conolly@ipsos.com

Peter Dangerfield
Research Manager
Peter. Dangerfield @ipsos.com

Sarah Knibbs
Research Director
Sarah.Knibbs@ipsos.com

Nickie Rose
Research Director
Nickie.Rose@ipsos.com

Stephan Tietz
Senior Research Executive
Stephan.Tietz@ipsos.com

For more information

3 Thomas More Square
London
E1W 1YW

t: +44 (0)20 3059 5000

www.ipsos-mori.com
http://twitter.com/IpsosMORI

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The Social Research Institute works closely with national governments, local public services and the not-for-profit sector. Its c.200 research staff focus on public service and policy issues. Each has expertise in a particular part of the public sector, ensuring we have a detailed understanding of specific sectors and policy challenges. This, combined with our methodological and communications expertise, helps ensure that our research makes a difference for decision makers and communities.