Ipsos MORI

Millennium Cohort Study Fifth Sweep (MCS5)

Technical Report

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Kathryn Gallop, Nickie Rose, Emma Wallace, Rachel Williams, Andrew Cleary, Angela Thompson, Kirsty Burston, Tom Frere-Smith, Peter Dangerfield and Stephen Tietz

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Acknowledgements

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1. Introduction

1.1 Background

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

Britain has a unique tradition of carrying out national birth cohort studies, which follow the same group of people from birth into and through adulthood, providing a picture of whole generations, and helping us to understand what matters for healthy and happy lives across the life span.

There are four such surveys and The Millennium Cohort Study (MCS) is the fourth:

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

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

The study is funded by the ESRC (the Economic and Social Research Council) and a consortium of government departments coordinated by the Office for National Statistics (ONS). The government departments involved in funding sweep 5 of the study were: the Department of Health (DoH), Department for Education (DfE), the Department for Work and Pensions (DWP), Department for Transport (DfT), Home Office, and all three devolved administrations, Welsh Government, Scottish Government and the Northern Ireland Executive.

Following competitive tender, the Centre for Longitudinal Studies commissioned Ipsos MORI to carry out the instrument development, data collection and initial data preparation for the fifth sweep of the Millennium Cohort 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 sub-contracted 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).

1.2 Millennium Cohort Study: key features

The Millennium Cohort Study (MCS) follows a group of over 19,000 children born in the UK between September 2000 and January 2002 across their lives. It differs from the earlier 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 that it can measure differences in children's outcomes

depending on the month they were born. For example, it is known that children who are young for their school year (born in July or August), are less likely to do well, other things considered, than their older counterparts (born in September or October).

- It follows up children across all four countries of the UK. In fact, it has oversamples from the three smaller countries, so that it is possible to compare all four countries with each other, as well as to look at the UK as a whole.

- It oversamples children from wards with higher concentrations of minority ethnic families and with higher concentrations from disadvantaged backgrounds. It is well known that there are differences in outcomes in a range of areas for different ethnic groups. There is also ample evidence and strong policy interest in the ways in which socio-economic background continues to affect life chances. By including these oversamples MCS enables much greater understanding of when and how differences emerge, and how they change over time. For example, we can see that differences in cognitive achievement by social class have already emerged by the age of 3. There are also early differences across ethnic groups, but the gaps tend to decline over time.

The original MCS sample was drawn in two stages: the first stage was the selection of electoral wards; the second stage was 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'. Note that the statistics presented from the data are always adjusted to take account of this design so that they are representative of the whole population rather than being skewed towards those living in the oversampled wards.

The sample of children was selected from Child Benefit Records held by the DWP. The DWP sent opt-out letters to all families claiming Child Benefit for an eligible child at an address in one of the selected wards. In order to be eligible, the child had to be born between 1 September 2000 and 31 August 2001 (in England and Wales) or between 24 November 2000 and 11 January 2002 (in Scotland and Northern Ireland) and to be living in one of the selected wards when aged 9 months.

1.3 Previous coverage of the Millennium Cohort Study

The **first sweep was conducted during 2001-2002** and laid the foundations for a major new longitudinal research resource. Information was collected from co-resident parents 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. 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 co-resident parents and there were some additional questions about older siblings and (in England) a self-completion questionnaire for siblings aged 10-15. The cohort children were also involved directly in the study for the first time. They completed a cognitive assessment and had their height and weight measured by interviewers. Interviewers were asked to record some observations about the home environment and the neighbourhood. 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 co-resident parents, and, as in sweep 2, there were questions about older siblings. In England, there was a self-completion questionnaire for siblings aged 10–15. The cohort children completed cognitive assessments and had their height, weight and waist measurements taken. Information about the child was also collected from teachers in Scotland, Wales and Northern Ireland. This provided equivalent information to the 'Foundation Stage Profile' data collected through routine records in England. 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 the third year of primary schooling. Interviews were conducted with the co-resident parents. The cohort children were asked to participate in four cognitive assessments; had their height, weight and body fat and waist measurements taken and filled in a paper self-completion questionnaire. Information about the children was collected from the cohort children's teachers in each country. Consent to link to health (parents and children), education (cohort children) and economic (parents) records was sought.

In addition, the cohort children were also asked 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

The following MCS data sets have been deposited with the UK Data Service:

- SN 4683 Millennium Cohort Study: First Survey, 2001-2003
  University of London. Institute of Education. Centre for Longitudinal Studies

- SN 5350 Millennium Cohort Study: Second Survey, 2003-2005
  University of London. Institute of Education. Centre for Longitudinal Studies

- SN 5795 Millennium Cohort Study: Third Survey, 2006
  University of London. Institute of Education. Centre for Longitudinal Studies

- SN 6847 Millennium Cohort Study: Third Survey, Teacher Survey and Foundation Stage Profile, 2006
  University of London. Institute of Education. Centre for Longitudinal Studies

- SN 6411 Millennium Cohort Study: Fourth Survey, 2008
  University of London. Institute of Education. Centre for Longitudinal Studies

- SN 6848 Millennium Cohort Study: Fourth Survey, Teacher Survey, 2008
  University of London. Institute of Education. Centre for Longitudinal Studies

- SN 7050 Millennium Cohort Study: First to Fourth Surveys, 2001-2003, 2003-2005, 2006 and 2008, Geographical Identifiers, Lower Super Output Area Level: Secure Access
  University of London. Institute of Education. Centre for Longitudinal Studies

- SN 7051 Millennium Cohort Study: First to Fourth Surveys, 2001-2003, 2003-2005, 2006 and 2008, Geographical Identifiers, Output Area Level: Secure Access
  University of London. Institute of Education. Centre for Longitudinal Studies

- SN 7049 Millennium Cohort Study: First to Fourth Surveys, 2001-2003, 2003-2005, 2006 and 2008, Geographical Identifiers, Ward Level: Secure Access
  University of London. Institute of Education. Centre for Longitudinal Studies

- SN 6862 Millennium Cohort Study: First to Fourth Surveys, 2001-2003, 2003-2005, 2006 and 2008, Linked Education Administrative Dataset: Secure Access
  Department for Education and University of London. Institute of Education. Centre for Longitudinal Studies

- SN 5724 Millennium Cohort Study, 2001-2003: Hospital of Birth: Special Licence Access
  University of London. Institute of Education. Centre for Longitudinal Studies

- SN 5614 Millennium Cohort Study, 2001-2003: Birth Registration and Maternity Hospital Episode Data
  University of London. Institute of Education. Centre for Longitudinal Studies

- SN 7261 Millennium Cohort Study: First Survey, Health Visitor Survey, 2002-2003
  University of London. Institute of Education. Centre for Longitudinal Studies

- SN 6073 Ethnicity Coding for the Millennium Cohort Study, First Survey, 2001-2003
  Kelly, Y., University College London. Department of Epidemiology and Public Health

- SN 5559 Millennium Cohort Study: Survey of Mothers who Received Assisted Fertility Treatment, 2003
  University of London. Institute of Education. Centre for Longitudinal Studies

- SN 6993 Millennium Cohort Study: Second Survey, 2003-2005: Oral Fluid Collection Bioassay Data
  University of London. Institute of Education. Centre for Longitudinal Studies

- SN 7238 Millennium Cohort Study: Fourth Survey, Physical Activity Data, 2008
  University of London. Institute of Education. Centre for Longitudinal Studies

1.5 The fifth sweep

This **fifth sweep took place when the children were aged around 11** and in their last year of primary school. Fieldwork started in January 2012 and finished in February 2013. Interviews were conducted with the main carer (typically the child's parent) and their co-resident partner (typically the child's other parent). The cohort children had measurements taken of their height, weight and body fat; participated in three cognitive assessments and completed a self-completion questionnaire. A survey of class teachers was also conducted but only in England and Wales, and consent was collected from the parent and children to contact the teacher. Consent was also collected from the main and partner respondents to link to their Department for Work and Pensions (DWP) records.

This report contains details of the design and conduct of the In-home survey for the fifth sweep of the Millennium Cohort Study (MCS5).The teacher survey is subject to a separate

technical report and so is not discussed further in this report, the exception being the consents collected in relation to it.

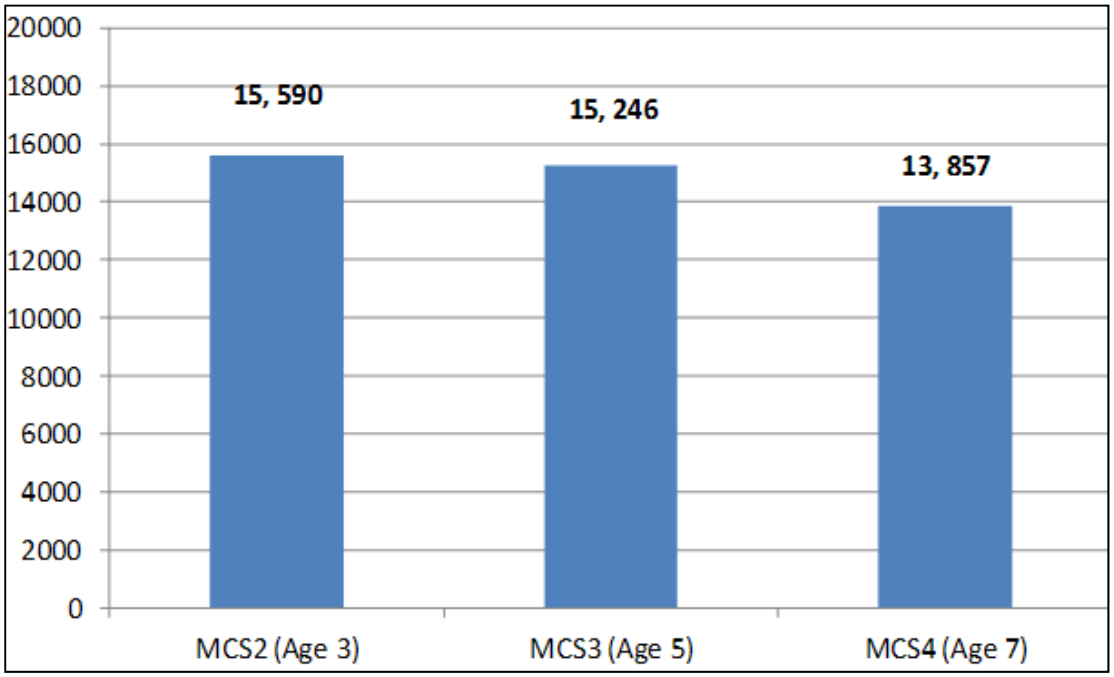
2. The Sample

2.1 The original sample

Just over 24,000 (24,180) families were issued to the field for the first sweep of the MCS and 18,552 families were recruited to the cohort at aged 9 months. 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 are 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 children in total. There are no higher order multiple births. There is a very small number of families who have more than one child in the study which are not multiple births i.e. two births pregnancies in the period covered by the sample from separate pregnancies.

Sample sizes at the follow-up surveys at age 3, 5 and 7 are shown in Figure 1. Retention rates on the study are generally good. There was a larger drop-off at the first follow up survey at age 3 which is typical on 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 1000 families to just under 14,000 families at age 7.

Figure 1: Sample size at MCS2, MCS3 and MCS4



Error! Reference source not found. shows the longitudinal response patterns on MCS for families recruited at 9 months and, in italics, the new families recruited at age 3. By sweep 4, around 12,200 families (63%) had not missed any of the sweeps they were eligible for. Another 3,000 or so (16%) had only missed one of the sweeps they were eligible for.

Figure 2: Response patterns across MCS sweeps 1-4

Productive these sweeps		N	%
All four sweeps	S1,2,3,4	11,721	60.9
Three out of four sweeps	S1,2,3	1,513	7.9
	S1,3,4	1,029	5.3
	S1,2,4	445	2.3
Two out of four sweeps	S1,2	1,219	6.3
	S1,3	415	2.2
	S1,4	168	0.9
First sweep only	S1	2,042	10.6
All three sweeps	*S2,3,4*	*468*	*2.4*
Two out of three sweeps	*S2,3*	*100*	*0.5*
	S2,4	*26*	*0.1*
Sweep two only	*S2*	*98*	*0.5*

2.2 Issued sample at MCS5

The issued sample for MCS5 was all families except those that were ineligible (died or emigrated), 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 MCS5 was 16,393 households. This number fluctuated slightly throughout fieldwork, as explained in section 7.10 and section 9.3.

2.3 Serial numbers

Each family within the cohort was issued a unique alpha-numeric and numeric serial number at the start of the study, in addition to a check digit and household number. Ipsos MORI created a numeric serial number for each family using the numeric serial number combined with the check digit and household number. Each member of the family was also allocated a two-digit person number while cohort children were allocated a three-digit person number. These serial numbers were used on barcode labels which interviewers were provided with to attach to the relevant consent forms and the child self-completion questionnaire (see section 4.13 for more detail).

2.4 Allocating the sample to waves

The timing of MCS5 was planned so that almost all of the cohort children would be in their last year of primary school when the interviews took place, i.e. Year 6 in England and Wales, and Primary 7 in Scotland and Northern Ireland.

In each country, the sample was divided into two waves, determined by the date of birth of the cohort children and their school year. The first wave, among English and Welsh cohort children, was further divided into three waves: 1a, 1b and 1c. In addition to facilitating the management of fieldwork, this also allowed for experimental work in Wave 1.

Before fieldwork, statistical models were run on an indicative sample provided by CLS to determine the cooperation propensity (how likely a family is to participate) and contact propensity (how challenging a family may be to contact). This information was used when deciding which subset of Wave 1 a household would be issued in. Addresses that were identified as having a lower cooperation propensity (and were not already defined as having a low contact propensity) were called 'target cases' and addresses that were identified as being challenging to contact were called 'priority cases'.

Priority cases were batched into sample points differently from other households. Non-priority households were batched by combining addresses geographically. Priority addresses were then assigned to the geographically nearest Wave 1a batch, with the idea that assigning these cases to Wave 1a gave interviewers the maximum amount of time to make contact with these families.

Target cases were issued in all waves, but an interviewer pay experiment was conducted among Wave 1a and Wave 1b cases. The experiment aimed to test whether paying interviewers an additional 'bonus fee' for these cases would result in more interviews taking place. Target cases were randomly assigned to batches in either Wave 1a or Wave 1b and households were identified as target cases on the contact sheets. A flat bonus fee was paid per successful household in Wave 1b. Bonuses were only given for Wave 1b cases, thus making Wave 1a a 'control group'.

2.4.1 England and Wales

All of the cohort children in England and Wales are in the same school year, and were due to have started Year 6 in September 2011. As discussed above, children in Wave 1 were divided into three further waves: 1a, 1b and 1c. Waves 1a and 1b contained children in England and Wales, while 1c contained only children living in Wales. Additionally, priority cases, made up of those identified as challenging to contact because of their address status (i.e. the family's current address was not known) or because statistical modeling had highlighted them as having a lower contact propensity, were originally designated for Wave 1a, though a few were moved to Wave 1b for clustering reasons.

2.4.2 Scotland

Unlike in England and Wales, the cohort children in Scotland did not all start school in the same academic year. In Scotland, children born between September and February are able to start school in the August before or the August after their fifth birthday; children born between March and August start school in the August after their fifth birthday (or the August they turn five, in the case of August births).

The cohort children were born between 24th November 2000 and 11th January 2002. The majority of the children born between 24th November 2000 and 28th February 2001 had started school in August 2005, and were therefore due to start Primary 7 in August 2011; these children were assigned to the first wave of fieldwork in Scotland, which was

scheduled to take place from January to July 2012.

Those cohort children born between November 2000 and February 2001 who had not started school until the August after their fifth birthday, and those born between 1st March 2001 and 11th January 2002 were due to start Primary 7 in August 2012. These children were assigned to the second wave of fieldwork, Wave 2, which was scheduled to take place from August to December 2012.

2.4.3 Northern Ireland

Like Scotland, the cohort children in Northern Ireland did not all start school in the same academic year. Children born between 24th November 2000 and 1st July 2001 were due to start Primary 7 in September 2011. These children were assigned to Wave 1a and Wave 1b.

Children born between 2nd July 2001 and 11th January 2002 were due to start Primary 7 in September 2012; these children were assigned to Wave 2.

A summary of the wave structure can be found in Figure 3**.**

Figure 3: Summary of wave structure for MCS5

Wave	Country	Timetabled fieldwork dates	Dates of birth	Date due to start Year 6/Primary 7
1a-b	England	January 2012 - July 2012	1 September 2000 - 31 August 2001	September 2011
1a-c	Wales	January 2012 - July 2012	1 September 2000 - 31 August 2001	September 2011
1a	Scotland	January 2012 - July 2012	24 November 2000 - 28 February 2001	August 2011
2	Scotland	August 2012 - December 2012	24 November 2000 - 28 February 2001 1 March 2001 - 11 January 2002	August 2012
1a-b	Northern Ireland	January 2012 - July 2012	24 November 2000 - 1 July 2001	September 2011
2	Northern Ireland	August 2012 - December 2012	2 July 2001 - 11 January 2002	September 2012

2.5 The sample files

CLS was responsible for providing sample information for families that are part of the Millennium Cohort Study to Ipsos MORI and for ensuring that this information was as accurate and up-to-date as possible. They 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.

The sample information that was provided to Ipsos MORI was split into two types: fixed sample and live sample. The fixed sample file 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
  - If the family refused at sweeps 3 or 4, reasons for refusal
  - If the family participated at sweep 4, whether they enjoyed it and, if so, the main reason they enjoyed it
  - Main reasons agreed to be interviewed at previous sweeps
  - 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
  - Number of people in household at last sweep participated in
  - Whether interviews translated, who translated and which language
  - Cohort child information such as whether they have dyslexia, SEN, ADHD or

autism

Live sample files were produced for each wave, and included the following information:

- Serial numbers
- Cohort child details
  - Full name
  - Sex
  - Date of birth
- Resident parent details
  - Title
  - Full name
  - Details of the type of interview each parent did in MCS4, or, if the household did not take part in MCS4, MCS3, MCS2, in MCS1, either main, partner or proxy, or that parent was not eligible for interview last time (e.g. if they were not resident in the household at the time of the last interview).
- Contact details
  - The last known address, telephone numbers and email addresses for the household
  - Stable contact 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 (see section 7.6).

Two additional fields relating to the contact details were also given: 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 2.7% of the issued cases, CLS would know prior to fieldwork that the family was no longer resident at the address provided for them but had been unable to find a new address.

2.5.1 Delivery of sample files to Ipsos MORI

The fixed and live sample files were delivered to Ipsos MORI before the start of fieldwork. If CLS had any amendments to the live sample data prior to the start of a wave, a separate, updated file was delivered.

Once the sample was delivered to Ipsos MORI it was loaded onto Ipsos MORI's fieldwork management systems. This was then used to produce the paper documents containing the sample information for interviewers and advance letters; details of these can be found in sections 7.2 and 7.5.1. The information was also loaded into the Computer Assisted Personal Interviewing programme (CAPI) prior to fieldwork beginning in January 2012.

2.5.2 Other sample information

In addition to the fixed and live sample files, feed-forward files were also delivered to Ipsos MORI before the start of fieldwork. These files encompassed previously-collected data about the cohort children and their families and information on participation throughout the sweeps. Three files were provided: a person-level file, which included information about people known to have been/currently in the household and interview data from previous interviews with main and partner respondents; a cohort-level file, which contained information about the cohort child collected at previous interviews; and a family-level file,

which contained information about the household, such as last sweep of participation and the family-level outcome at previous sweeps.

Data contained in the files were loaded or 'fed-forward' into the current CAPI questionnaire, either to confirm the information was correct or to route through the script. For example, the previous school the cohort child had attended was fed-forward into the question about the name of the school currently attended and the respondent was asked if the cohort child was still attending that school. Similarly the respondent's job title given at the previous interview was fed forward and the respondent was asked if that was still their job. In terms of routing, for example, a question such as, "Has the child ever had measles?" would be routed past if the respondent has said at a previous interview that the child had had measles.

2.6 Sample updates

CLS continued to trace families until the start of fieldwork for each wave. In some cases, CLS received information about cohort families after the sample had been sent to Ipsos MORI. Sample updates were sent to Ipsos MORI on a twice weekly basis. These sample updates consisted of three types:

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

The action 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 or not, and if it had been issued to an interviewer whether the interviewer had started working on a case or not.

For details of how sample updates were handled and changes made as a result of these by Ipsos MORI please see section 7.10.

3. Development Work

3.1 Scope of the development work

The development stages of MCS5 were conducted from October 2010 to December 2011.

The programme of development work was based on pre-testing development work, one pilot study and one dress rehearsal, and subsequent CAPI programme testing. In addition, design work was done on the associated survey documents. The first pilot and the dress rehearsal pilot are the subjects of separate technical reports, available on the MCS web pages, and so are only discussed briefly here.

3.2 Pre-testing development work

Ipsos MORI conducted qualitative work and a small scale draft child self completion questionnaire testing exercise in November and December 2010 to understand the following:

- Whether the proposed questions in the child self-completion were relevant and topical
- Whether parents and children were comfortable with the questions
- How to ensure acceptability of the child self-completion and ensure frank answers
- How long the draft questionnaire took to complete, and if children had problems with any questions
- What concerns parents and children had about the request for a DNA sample

To that end, Ipsos MORI undertook in-depth, qualitative interviews with 12 parents and their children (all who were in Year 6) and 11 friendship cells during two in-school days with Year 6 pupils. In addition, Ipsos MORI tested an early draft of the questionnaire among 24 Year 6 pupils in a London school, primarily to assess length, but also to gain some early basic feedback about the experience of completion, and any concerns or difficulties relating to this.

Broadly, parents and children thought the proposed questions were relevant and no topic that could be important to understanding the lives of 10/11 year olds was missed. A few parents objected to questions on alcohol, cigarette and drug use, doubting the relevance of the questions or worrying that the questions might imply it is acceptable for children to do these things. Children tended to be comfortable with the questions on alcohol and smoking, but many did not understand how questions on drug use were relevant to them at this age.

Questions on drug use were dropped as a result, and wording amended to ensure children understood that consuming alcohol was not necessarily an activity that they would be involved with. Questions on bullying, body weight, puberty and anti-social behaviour were found to be upsetting or uncomfortable for some children; as a result questions on puberty were cut from the child questionnaire and asked in the main carer questionnaire instead. A number of measures were put in place to support the wellbeing of children responding to sensitive questions. This included ensuring children understood they could skip questions they did not like, and providing them with information on where they could go for help and support. Parents' concerns were also alleviated by enabling them to read the questionnaire before it was given to children.

The questionnaire testing exercise additionally identified that the length and level of difficulty of the self completion questionnaire was reasonable for most children. The questionnaire took an average of just under 29 minutes to complete, but this did vary according to children's ability. The six children defined by the teacher as being of "high" ability took an average of just under 21 minutes to complete the questionnaire, whereas those defined by the teacher has having "low" ability took an average of almost 43 minutes to complete it. The latter group seemed to struggle more with levels of concentration and comprehension of some questions. This contributed to the decision to explore possible options to offer supported completion, such as the audio support approach that was adopted in the main stage of the project.

A small number of children struggled with some of the question routing and there were also some words and phrases throughout the questionnaire which some of the students did not understand. Some common themes included difficulties with the terms "ethnic" and "quarrel" and some of the questions on "risk".

In the final version of the questionnaire, the overall level of routing was reduced, and further changes made to make routing instructions clearer.

When asked about the request for a DNA sample via saliva, parents were more likely to express unease about the potential uses to which the data might be put, while children were more likely to express unease about the practical element of giving a sample. Generally, the information presented to parents and children about giving a sample helped to reassure them. However, the qualitative research highlighted the benefits of providing even more detailed specific reassurance of the uses to which the data would be put (or not put).

Findings from the qualitative research discussed here were also presented the European Child Cohort Network conference in Dublin in May 2011.[1]

3.3 First pilot survey

This pilot survey was conducted between 2nd April and 26th April 2011 in five locations in England, Scotland and Wales. The main aims of the first pilot were to:

- Measure the average length of each study element individually and the total time in the household
- Assess approaches for engaging with respondents for each individual element, in particular encouraging co-operation and gaining informed consent from parents and informed assent from children to their own elements
- Assess methodological and practical implementation of all study elements:
  - Parent CAPI and Computer Assisted Self Interviewing (CASI) and child self completion questionnaires
  - Child cognitive assessments
  - Child height, weight, body-fat and waist measurements
  - Parent and child saliva sample collection
  - CAPI set-up
  - Identifying any issues associated with implementing the study tasks *collectively* in the household, including time in household, respondent burden

[1] http://www.growingup.ie/fileadmin/user_upload/documents/EUCCONET/Emma_Wallace___Angela_Thompson_MCS.pdf

and issues relating to the ordering and co-ordination of the different tasks among different household members

- Assess approaches for addressing ethical issues, such as relating to achieving fully informed consent/assent, and supporting respondent safety and wellbeing
- Test the approach to briefing interviewers to ensure they were fully equipped to implement all elements successfully
- Evaluate the fieldwork materials, including respondent communication materials, and interviewer fieldwork administration and guidance materials.

3.3.1 Elements included in the first pilot

The following elements were included in the pilot:

- Household grid CAPI questionnaire
- Main respondent CAPI and CASI questionnaires
- Partner CAPI and CASI questionnaires
- Child paper self-completion questionnaire
- Child cognitive assessments
  - Two assessments taken from the British Ability Scales: Verbal Similarities and Pattern Construction
  - Two assessments taken from CANTAB (Cambridge Neuropsychological Test Automated Battery): Memory task (officially named the Spatial Working Memory task) and Decision-making task (officially named the Cambridge Gambling task)
- Child physical assessments
  - Height measurement
  - Weight and body fat measurement
  - Waist measurement
- Saliva samples (parent, partner (if applicable) and child)
- Interviewer observation of conditions in which the cognitive assessments were conducted
- Teacher survey
- Consents and assents

3.3.2 Pilot briefing

A group of five interviewers from a range of urban and rural locations in England, Wales and Scotland were briefed by Ipsos MORI researchers, with extensive contributions from members of the CLS research team. The briefing took place on 23rd, 24th and 29th March 2011. Each interviewer was asked to carry out two practice sessions of the cognitive assessments and physical measurements between the second and third day of the briefing, based on what was briefed on the first two days.

3.3.3 Pilot feedback and debriefing

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

By the interviewers completing:

- An 'Interviewer feedback form': Used to record any observations that interviewers felt might improve the procedures, and make the main stage of the survey more

successful

- An 'Interviewer feedback form (CAPI)': Used to record any difficulties interviewers encountered specifically with the CAPI script
- An 'Outcomes sheet' for every household: As a contact sheet was not implemented at the pilot stage, the outcomes sheet enabled interviewers to record household level details (such as household demographics, a calls record, outcomes and timings).

Respondents were also asked to complete a respondent feedback form which was used to gain feedback on the survey from the main respondent, partner (if applicable) and child and was used to ascertain feedback on each element and reasons for participation/non-participation.

In addition to the above, five appointments were accompanied by one of the Ipsos MORI research team in order to record any observations and gain additional feedback. Telephone interviews were also conducted with six parents and four of their children[2] who had participated in the pilot around four to five weeks after the pilot interviews had taken place. This provided an additional reflective respondent perspective on the experience of participation, and feedback on aspects that were not possible to evaluate at the time of the interview.

Copies of all feedback materials can be found in the appendices.

The feedback materials helped to aid discussion at the two-day debriefing which took place on the 19th and 20th April 2011.

3.3.4 Pilot sample

The sample for MCS5 was recruited by Ipsos MORI with the objective of achieving 50 interviews with families who had a child in their final year of primary school, split equally across five locations chosen for the pilot study:

- London
- Manchester/Liverpool
- Glasgow
- Newcastle
- Cardiff

Ipsos MORI qualitative recruiters were assigned to each of the locations and asked to find eleven eligible families for ten interviews, making allowance for one of the recruited families to drop-out prior to their appointment. Quotas were also set to ensure a cross-section of families were recruited for the pilot.

A total of 45 families were interviewed for the pilot study, 5 short of the target of 50. The reason for falling slightly short of the total was largely attributed to more families dropping out prior to their appointments than initially envisaged.

At the outset of the pilot fieldwork, £25 in gift vouchers was set as the incentive to be offered to families for their participation in the study. Midway through fieldwork, however, this was increased to £40 in order to help recruiters persuade parents to take part (and families who were originally provided with £25 were given an additional £15 in order to make things equitable). An incentive was not implemented for the dress rehearsal or the

[2] Two children were unavailable to take part

mainstage, although the children were provided with a small gift (Top Trumps).

3.3.5 Key findings and changes

Main respondent and partner CAPI and CASI interview

In general, all of the modules of the questionnaires worked and there were no parts of modules that were resisted by respondents. At the individual question level, most questions appeared to work well, including most of the new questions, though there were suggestions from interviewers on how to improve a number of questions, including typographical errors, grammar, clarifications, and questions that were better suited for CASI or required a showcard. Most of these suggestions were acted upon for the dress rehearsal.

Some clarifications included questions where the wording used did not make sense in Scotland, where it was unclear where an answer would fit among the pre-coded list, and where the question did not seem appropriate for a parent of an eleven year old.

As a result of interviewer feedback, a number of changes were made to the script. First, the research team reviewed the layout of the script. The cognitive assessments were combined into one entry point instead of multiple points, and questions to acknowledge consents received were added at the beginning of each element instead of being combined into a 'consents script'. So, for instance, interviewers answered a question at the beginning of the main interview to say whether or not consent had been given to conduct the interview. Second, interviewers were given a sheet detailing which element was contained in which script. Third, in light of comments that it was difficult to keep track of what had been done in each household, the contact sheet design for the dress rehearsal included a section showing interviewers which elements needed to be completed in a household and enabling them to tick off elements that had been completed. Fourth, the showcard labeling convention was amended, so that each module was labeled alphabetically and then numerically within modules.

Feedback from the pilot 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 input from Funders and the scientific community.

Child cognitive assessments

Only one of the cognitive assessments included in the first pilot survey, Pattern Construction, had been used in MCS4. Three other new assessments were piloted: Verbal Similarities, Spatial Working Memory (hereafter known as the Memory task) and Cambridge Gambling task (hereafter known as the Decision-making task)

Like Pattern Construction, Verbal Similarities is taken from the British Ability Scales (BAS). Memory task and Decision-making task are taken from the Cambridge Neuropsychological Test Automated Battery (CANTAB).

Interviewers found the assessments interesting and enjoyable and felt the vast majority of parents and children also enjoyed all four of the cognitive assessments. In most instances, parents observed their child's performance. The interviewers did not report any problems with parents attempting to control the child's behaviour during the assessments. All of the families visited gave consent and assent to all of the cognitive assessments.

There was universal agreement among the interviewers that children experienced the most difficulty with the Verbal Similarities assessment and that it was the most "test like" of the

four assessments; in some instances children became upset when completing it. At the briefing the feeling was that interviewers would find the Pattern Construction assessment most difficult to administer. However, interviewers reported no significant problems and felt the children enjoyed the Pattern Construction assessment, and that it raised the confidence of some children who had become upset during the Verbal Similarities assessment. All of the interviewers agreed that the children enjoyed both the Memory task and the Decision-making task.

One interviewer reported having problems attaching and calibrating the touch-screen add-on. Another interviewer forgot to insert the USB software key before beginning the CANTAB assessments.

All interviewers admitted that they did not read word for word from the laminated administration scripts for the Memory task and the Decision-making task, and found them hard to follow.

Some specific suggestions were made in order to improve the ease with which interviewers could administer the assessments, for example advice to interviewers on how to reassure children if they are finding Verbal Similarities difficult, and clear guidelines on how and when to give neutral praise. It was also suggested that the laminated CANTAB scripts be re-formatted to make them easier to follow for interviewers.

Some other suggestions were made in order to make the process of using the touch screen add-on and the USB software key clearer to interviewers, and to help interviewers resolve any problems they might encounter when using them.

Following the first pilot, due to length constraints, Pattern Construction was removed from the battery of cognitive assessments. Verbal Similarities, Memory task and Decision-making task were carried forward to the dress rehearsal and subsequently the main stage of fieldwork.

Child physical measurements

Every child's height, weight, body fat and waist circumference was measured. The procedures for the height and waist measurement used were the same as those used in MCS4.

All of the children and their parents were happy to have their height, weight and body fat percentage measured, and interviewers reported few problems with these measurements. Interviewers were less confident taking the waist measurement, and although no children or parents refused, a number of parents said they would not have felt comfortable with a male interviewer taking the measurement.

Following the first pilot, the waist measurement was removed from the battery of physical measurements. Height, weight and body fat percentage measurements were taken forward to the dress rehearsal and subsequently the main stage of fieldwork.

Saliva samples

Biological parents of the child and cohort children were asked if they would be willing to provide a sample of saliva so that DNA could be extracted from it to be used for research about genes.

Respondents were asked to spit into a container (an Oragene 500 DNA self-collection kit) until the amount of liquid saliva (not bubbles) had reached the fill line marked on the side of the tube. When the amount of liquid saliva had reached the fill line and the lid had been closed, interviewers then removed the tube from the funnel. Saliva samples were only taken if the respondent had not eaten drunk, smoked, or chewed gum in the 30 minutes

prior to providing the sample.

Interviewers recorded the time and date the sample was taken on and attached the appropriate barcode label to the sample. No identifying information was recorded on the samples. Each individual sample was then sealed in a plastic bag, and samples were sent back twice a week during fieldwork to the research laboratory at the University of Bristol.

Interviewers were successful at gaining informed consent, and securing co-operation from respondents, and achieved high rates of sample collection. Saliva samples were collected and processed from 73% of mothers, 76% of eligible fathers, and 74% of children. However, saliva sample collection was not included at the Dress Rehearsal or main stage of the study as funding was not secured.

Further information on the collection of saliva samples can be found in the MCS5 pilot report and in Calderwood and Rose. (2013).[3]

Cohort child self-completion

In general, the feedback received about the cohort child self-completion questionnaire was positive. Most children enjoyed filling in the questionnaire, and, in the majority of cases, children were able to understand and complete most of the questionnaire on their own.

However, the pilot highlighted two questions in particular that children had trouble understanding, and these were reviewed prior to the dress rehearsal. Questions prioritised for cuts included those which children had most difficulty with and for which relevant data was also captured in the main carer survey (e.g. question on ethnic group). In addition, it was identified that fuller involvement of interviewers in explaining how to complete the questionnaire (rather than the child just reading instructions themselves) would be helpful for supporting accuracy of completion among all children and cutting down the length to ensure it was more manageable for children.

Teacher survey consent

The parent was asked to give signed consent for the child's class teacher to be approached later and be asked to complete a questionnaire about the child's progress at school. No problems were reported with gaining consent.

Child consent/assent

In order to protect the wellbeing of children, it is important to ensure fully informed consent is achieved from or on behalf of the child, in a voluntary way on the basis of a full understanding of the implications of taking part. Specifically for this study, consent needed to be obtained for children's participation in child elements and to contact their class teacher for the teacher survey.

At the age 7 survey, children's ability to understand the full implications of taking part in the research was partial, and parents therefore played a primary role in providing informed consent, alongside children's own assent being ascertained.

Qualitative scoping work identified that by age 11 children's understanding had progressed to the point that their comprehension was much greater, but not always fully

[3] Calderwood, L. and Rose, N. (2013) '*Collecting saliva samples for DNA extraction from children and parents: Evidence from the UK Millennium Cohort Study*'. Available at (http://www.cls.ioe.ac.uk/news.aspx?itemid=2561&itemTitle=CLS+tests+new+methods+of+collecting+DNA+samples+from+children&sitesectionid=27&sitesectiontitle=News)

comprehensive, for example regarding the full uses to which the data might be used. In line with best practice, interviewers were therefore instructed to secure parents' fully informed consent to the child's participation, and also children's fully informed consent as far as the child could comprehend.

In the pilot stage, interviewers recorded in CAPI that they had successfully secured child assent for all elements participated in by children, as required.

Feedback provided by interviewers at the pilot highlighted that a more effective approach to gaining child assent was outside the formality and rigidity of the CAPI script (i.e. by talking through each element with the child on a more one to one basis using the leaflets provided). Although interviewers all implemented the CAPI assent questions, they felt that assent had in practice been obtained prior to them reading out the CAPI assent questions.

As a result of interviewer feedback, a change was made from CAPI recording, to a more paper based approach to allow greater flexibility. This also coincided with a change of wording from assent to consent, since it was determined that despite parental consent still being necessary for child participation it was not sufficient and that the child was being asked to provide their own informed consent to the best of their understanding at this developmental stage. To achieve greater flexibility, interviewers administered the consent process on paper, and were asked to sign it to confirm that the child's oral consent had been obtained.

Other issues: briefing

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 assent, and in how to administer each individual study element.

However, a number of recommendations for improvements were made which were implemented for the dress rehearsal briefings. Specifically:

- More time was given on elements interviewers were unfamiliar with (e.g. measurements and assessments) and more time was built in the schedule to allow interviewers time to practice conducting the physical measurement and cognitive assessments. Training videos were produced to help interviewers with these elements of the study
- Less time was spent on the CAPI element, given interviewers' extensive experience and familiarity with the process of household interviewing
- More guidance was provided on how to manage the household as a whole. A chart was developed to be used at future briefings showing the visit as a whole so that interviewers could see how all elements fitted together (see section 4 – Figure 4: Overview of survey elements).

Other issues

A recommendation was made by interviewers that having a way to distract younger siblings in the household may have made it easier to manage the survey process and to avoid disruption. As a result, a small gift of sticker sheets were provided to younger siblings at the dress rehearsal and this was also implemented at the mainstage.

Delivery of data

Post-fieldwork, raw, uncoded data from the CAPI interviews was supplied in SPSS datasets and raw CANTAB data from the CANTAB assessments was also provided.

All participating families were sent a thank you letter with a certificate enclosed for the child.

3.4 Cognitive testing of the child self completion questionnaire

Cognitive testing of some sections of the child self-completion questionnaire and of some new sections of the main carer CAPI and CASI questionnaire was conducted with children and parents following the pilot.

A total of 30 interviews were carried out with children in Year 6, in six primary schools with 5 interviews per school. Interviews took place on the 13th, 17th, 18th and 19th May 2011 in London, Kent, Manchester and Leicester.

In total twelve interviews were conducted with 'main carers' of children in curriculum Year 6 during May 2011 in Liverpool, Kent and East London.

The aim of the cognitive interviews was to 'test' the questions to ensure they were collecting accurate data as intended. In order to do this the interviews focused on exploring participants' cognitive processes in interpreting and responding to the questions. Not all questions were tested, the focus was on testing new questions, and any where there were particular concerns that there may be particular challenges.

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

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 covered everything that the participant was thinking of. Questions were also checked for sensitivity. Finally, usability of question wording and formatting were checked to test the ease of answering the questions in self completion formats.

Cognitive testing topic guides were developed by Ipsos MORI and approved by CLS for both the child and main carer cognitive testing. These outlined the key issues particularly important to explore for each question, and also incorporated useful probes that the researcher could draw on to help generate a full understanding of the issues. A copy of these documents can be provided on request.

As a result of the cognitive testing a number of changes were made to the questionnaires prior to the dress rehearsal.

For the child questionnaire changes included:

- Emphasising confidentiality even more strongly (to encourage honest answers) by putting the instruction to seal the completed questionnaire into a private envelope on the front page as well as the last page
- Reducing the level of routing, and clarifying routing instructions to support accuracy of completion
- Simplifying questions about frequency of activities carried out in different temporal contexts to ensure greater consistency of understanding and interpretation
- Reducing the amount of 'free floating text' (which children tended not to read) and

ensuring that key instructions formed part of main question wordings to ensure they were not missed

- Making a range of other minor changes to the wording of specific questions to help ensure accuracy and consistency of understanding, interpretation and response.

For the main parent questionnaire, changes included:

- Clarifying wording of questions about frequency of activities carried out in different temporal contexts, to ensure greater consistency of understanding and interpretation
- Using showcards for a greater proportion of questions (rather than the interviewer reading out scales) to help speed and clarity of communication and, to increase comfort with more sensitive questions
- Expanding pre-code lists for unprompted questions based on additional responses given by participants
- Refining wording of questions to ensure relevant to eleven year olds: for example, amending questions on puberty to reflect children are more likely to be at the start than the end of this process
- Making a range of other minor changes to the wording of specific questions to help ensure accuracy and consistency of understanding, interpretation and response.

3.5 Pilot two: dress rehearsal

The dress rehearsal was conducted between 25th August and 27th September 2011 in 13 locations in England, Scotland, Wales and Northern Ireland.

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 listed below
- Approaches for addressing ethical issues, such as those relating to achieving fully informed consent, and supporting respondent and interviewer safety and wellbeing
- Consent forms, contact sheets 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 secondary aim was to test the questionnaires for:

- content
- accuracy of feedforward data
- comprehension
- flow
- length

3.5.1 Elements included in the dress rehearsal

The dress rehearsal included the following elements:

- Household grid CAPI questionnaire
- Main respondent CAPI and CASI questionnaires
- Partner CAPI and CASI questionnaires
- Child paper and audio-assisted self-completion questionnaire
- Child cognitive assessments:
    - Verbal Similarities (taken from the British Ability Scales)
    - Memory Task (taken from CANTAB and officially named Spatial Working Memory)
    - Decision-making Task (taken from CANTAB and officially named Cambridge Gambling Task)
- Child physical measurements
    - Height
    - Weight and body fat measurements
- Cognitive observations
- Collection of cohort member's teacher's contact information
- Consents

Most of these elements had been provisionally tested in the first pilot study. However, the pilot was the first time that the audio support for child self completion questionnaire had been tested, and so it was a priority focus for the pilot testing.

As discussed earlier, collection of saliva samples was not included in the dress rehearsal due to funding not being secured. As a result, engagement materials (such as the advance leaflet) were adapted to reflect this change.

3.5.2 Dress rehearsal briefing and debriefing

A group of 13 interviewers were briefed by Ipsos MORI researchers, with extensive contributions from members of the CLS research team. The briefing took place on 16th, 17th and 23rd August 2011. Each interviewer was asked to carry out two practice sessions covering the cognitive assessments and physical measurements between the second and third day of the briefing, based on what was briefed on the first two days.

A two-day debrief took place on 28th and 29th September 2011.

3.5.3 Dress rehearsal sample

The sample for the MCS5 dress rehearsal comprised two types. First, it included longitudinal sample previously recruited by CLS and used for the dress rehearsal piloting of previous waves of MCS. Second, it included new cases selected from within some of the same area locations as the longitudinal sample in England. This was a top-up sample designed to enhance the sample size available from the longitudinal cases. Those who consented to follow up among the top-up sample will be incorporated into the longitudinal sample for the purpose of dress rehearsals in potential future sweeps of the MCS. All children in the longitudinal sample were born between 1st May 2000 and 22nd July 2000, while children in the top-up sample were born between 1st January 2000 and 31st March 2000.

In England, the top-up sample was selected from the Department for Education's National

Pupil Database (NPD) which is the governments' comprehensive database of all children attending maintained schools in England. Additionally, sample was recruited from the Welsh Government's record of pupils. Since the record does not have the children's addresses, CLS sent letters to potential new families via the school of the sampled pupils. The letters, which head teachers were requested to pass on to parents, informed them of the survey, and requested that families opt-in to the research through a reply slip to CLS, which provided their details. This yielded one additional piece of sample.

The sample was spread across 13 areas:

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

In total, 236 addresses were issued. Of these, 132 were longitudinal sample and 104 were new families.

In May 2011 a pre-notification mailing was sent out to all members of the dress rehearsal sample. The mailing contained a letter to parents telling them about the August 2011 dress rehearsal and introducing Ipsos MORI. It also asked them to confirm their contact details via a mail-merged reply slip. Finally, leaflets for parents and children with findings from the Age 7 Survey were enclosed. A reminder was sent to families in mid-June 2011 if a reply-slip had not been returned.

In total interviews were achieved at 126 households.

3.5.4 Key findings and changes

CAPI and CASI scripts

Overall interviewers thought the scripts worked well, though they recommended some administrative improvements and feedback on some questions in the scripts. In light of their recommendations, changes were made at the main stage. The scripts were renamed to better describe their contents, helping interviewers to learn which scripts contained which elements. When interviewers entered the script and input a serial number, a screen followed detailing the child's name, date of birth and gender, which reassured interviewers they were using the correct serial number (or highlighted when they were not).

Main respondent and partner CAPI and CASI scripts

Interviewers reported that the main respondent and partner interviews worked well, though they raised a few issues. Some interviewers reported that the school look-up function (used

in main parent interview when asking about the cohort child's schooling) did not work in certain areas. Additionally, a review of the resulting data showed that some results did not output correctly into the data. As a result, postcodes were added to the look-up as a further input to match on, and the issue with outputting was corrected in the CAPI script. Interviewers also noted that routing at two questions was incorrect and this was subsequently corrected. A number of other suggestions about changes to question wording or clarifications in interviewer comments were also implemented.

Cohort child self-completion

As well as testing the final paper questionnaire tool in general, the dress rehearsal incorporated the use of an audio-support supplement using an MP4 player to help some children with lower levels of literacy to fully participate. The pilot tested approaches to identify children who would need the support, as well as testing implementation of the audio support itself.

The self-completion questionnaire in general was found to work well: over 95% of parents and children consented to this element. The majority of the children also found the questionnaire sufficiently easy to complete. Just under two-thirds (65%) of children completed the survey without asking any questions about it; another 30% of children had a small number of minor queries. The remaining 5% of children needed help with many of the questions.

Approaches to audio targeting were found to be effective. A total of eight children used the audio support and this approach was found to increase participation of children with lower levels of literacy (3% of the sample were helped) and to be acceptable for children and parents; it was also found that use of audio for a sub-sample of children did not impact excessively on the length of time required in each household. Therefore, given the success of the approach, the audio-support was retained for the mainstage.

However, the dress rehearsal identified a number of refinements that would support smooth and effective implementation of the paper-only and audio-supported approaches including:

- Ensuring that it was clear to the child that we wanted them to answer themselves, and not seek input from a parent or sibling;
- Ensuring children understood that they could ask the interviewer for help, even if the interviewer was interviewing the main parent at the same time the child was completing the self-completion questionnaire;
- Encouraging interviewers to point out the filtered alcohol section to children, and to explain where in the questionnaire that children routed out of these questions should restart;
- Incorporating more time for interviewers to practice using the MP4 players in the briefing process and ensuring they are sufficiently briefed on charging MP4 players, and 'hibernation' settings in order to ensure that audio machines do not shut down unintentionally during use.

Child cognitive assessments

Interviewers reported that the children, for the most part, enjoyed the cognitive assessments.

Reflecting the findings from the first Pilot, Verbal Similarities was found to be the most difficult for children to complete. This led to some of the interviewers feeling uncomfortable, particularly when the children were clearly struggling and looking for some reassurance. As a result a number of interviewers admitted to encouraging children by giving non-neutral

feedback after items in the assessment. The assessment, however, prescribes that interviewers do not provide any feedback, apart from on teaching items. It was recommended that for the main stage greater emphasis be placed on the need to abide by the protocols of the assessment to ensure the assessment is administered to all children in a uniform way. The CAPI introduction to Verbal Similarities was amended for the main stage to make it clearer to children that they would only receive feedback on the first two items.

In setting up for the CANTAB assessments, no interviewers reported problems calibrating the touch-screen add-on. In a handful of instances, however, interviewers did have difficulties after the screen had been calibrated. One interviewer reported a problem with the add-on freezing and no longer being touch sensitive, but after cleaning it with a wipe this resolved the problem. It was suggested that all interviewers be briefed for the main stage to clean the touch-screen add-on screen between visits. Some interviewers reported other small practical problems, such as children not touching the screen firmly enough and the screen moving backwards once pressed, and suggestions were made about how to resolve these for the main stage.

Interviewers did not report any problems using the CANTAB USB software key.

Children generally enjoyed the Memory task and the Decision-making task and interviewers felt they were helpful in building the child's confidence following Verbal Similarities. However, some interviewers felt the Memory task and particularly the Decision-making task went on too long and, in some instances, this resulted in the child becoming bored.

Some interviewers continued to report difficulty following the laminated CANTAB administration scripts, and further suggestions were made to improve the layout and design of the scripts for the main stage. In some cases interviewers struggled to abide by other protocols of the assessments. For example, interviewers were required to ensure that the child did not press the space bar between items but some had difficulties controlling this. It was therefore suggested that greater emphasis should be placed on the need to adhere to the assessment protocols at the briefings for the main stage.

Most interviewers reported that in at least one of their interviews a parent had spoken to the child during the Verbal Similarities assessment. In some cases, this was to try to help the child give the correct response, but in others the parent was simply urging the child to give an answer. In the majority of cases, however, the parents did not interject. This was far less of a problem during the Memory task and Decision-making task, where interviewers reported very few instances where parents interfered with the child's performance.

Many interviewers said that when parents did try to affect the child's performance, they politely asked the parents to refrain from interjecting. To limit the parent's temptation to give advice to their child during Verbal Similarities, interviewers also said it was easier if the parent sat or stood out of the line of sight of the child. These suggestions were incorporated in to the main stage briefings.

Child physical measurements

Overall, interviewers reported few problems with taking the child measurements, and parents and children were happy with them taking these measurements.

Interviewers' feedback and observations during the executive accompaniments revealed there were a few issues with the protocols not being followed correctly. Most significantly in this respect, most of the interviewers took the measurements while the main parent was doing his/her self-completion section on the CAPI machine, resulting in interviewers being unable to input the measurements into the CAPI script as they were recorded. Whilst the

rationale for doing this was to save time and shorten the overall length of the visit, it did mean that a number of interviewers forgot to ask whether the child used a pacemaker prior to taking the body fat measurement. For the main stage briefings, it was recommended that greater emphasis should be placed on the necessity for interviewers to enter the measurements into the CAPI script at the moment they've been taken. To assist them in doing this, it was recommended that interviewers be given a laminated physical measurements summary sheet for the main stage, which would outline the step-by-step protocols interviewers needed to follow when administering the physical measurements.

Interviewers generally had no problems taking the height measurement, and reported no problems setting up and using the equipment. No children refused to have their height measured. Levels of refusal among children were higher for the body fat measurement, for reasons ranging from a perception of being too fat or too thin, to a reluctance for friends or siblings to know their measurements. To try to reassure children who have these concerns, it was recommended that interviewers be reminded at the main stage briefings to tell children their measurements will not be read out and they do not need to know them if they do not want to. Interviewers were provided with a postcard on which to record those of the child's measurements that the child wished to know, and were instructed not to read aloud the information in order to help to ensure confidentiality (see section 4.9.3 for further details on this).

Interviewers did not report any problems using the scales.

Observation of conditions in which the cognitive assessments were administered

No problems were reported with this element.

Other Elements

Other Elements was a new module introduced for the dress rehearsal. It collected information the interviewer gathered while in the home, but was filled out by interviewers after they had left the cohort children and their families. No issues were reported with this module.

Teacher survey consent

There were no problems gaining consent to contact the cohort children's teachers and in getting their contact details.

Collection of consents

Parents were required to give the following written consents, as collected via paper consent forms (4 in total):

- Consent from the main respondent to participation in the CASI/CAPI interview
- Consent from the partner (if applicable) to participation in the CASI/CAPI interview
- Consent from one of the parents, typically the main respondent, to carry out the child elements and contact the class teacher, subject to the child's own consent to each of these elements.
- Consent from the child: Oral consent was required from children for their own elements and to contact their class teacher for the teacher survey. To achieve this, interviewers administered a consent script provided on paper, and were asked to sign it to confirm that the child's oral consent had been obtained.

Consent needed to be fully informed. Interviewers were instructed to talk through each

element carefully with parents and children and ensure that they fully read (or had read to them) all supporting communication leaflets provided.

Confirmations of all consents were also recorded in CAPI.

Feedback from interviewers about the consent process was positive and the vast majority of the interviewers found the process easy to administer. Interviewers reported finding all consent forms user friendly and were happy with both the content and layout. They felt that the content was effective in stressing the importance of the survey and felt that the design helped to reinforce the professionalism of the study. Being able to give duplicate copies of parent forms to respondents also helped with this. Interviewers also fed back that in general respondents seemed happy with the process and there were no issues gaining fully informed consent from either parents or children.

Only minor changes to the consent process for the main stage were made as a result of feedback from the dress rehearsal.

Delivery of data

After fieldwork was completed, uncoded substantive data was delivered to CLS to their specifications. CANTAB data, in its raw format, was also provided. Additionally, contact data (amended or confirmed during the CAPI interview for interviewed families; amended in iProgress by interviewers for families that were not interviewed) was delivered.

All families who participated were sent a thank you mailing after fieldwork had ended, with a letter for the parent(s) and a certificate for the child.

3.6 Post dress rehearsal changes

Following the dress rehearsal debriefing, a summary of recommended changes was prepared. Question cuts were necessary to reduce the questionnaire length by about five to six minutes. CLS suggested questions to cut (after looking at the proportion who responded to these questions in the dress rehearsal).

The research team at CLS consulted with Funders and the scientific community about changes to be made to the study prior to the main stage.

Cuts were duly agreed for the questionnaire to achieve the target interview lengths of 62 minutes for the main interview, and 24 minutes for the partner interview. Questions were cut throughout the main respondent and partner modules, but mainly came from the Education, Schooling and Childcare (ES) section, Employment and Income (EI) section and the Self-Completion (SC) section.

Interviewer comments also prompted revision of the contact sheets. Based on an example prepared by one of the dress rehearsal interviewers, the contact sheet was shortened, with the call record section substantially overhauled to make it more streamlined.

iProgress, the electronic system for interviewers to record their calls and outcomes, was also amended after the dress rehearsal. The call record data-entry screen was re-designed to follow the formatting of the contact sheet more closely, and the entry of contact details was amended to make it more intuitive in terms of how and where to enter these details.

Economic data linkage (to both HMRC and Department for Work and Pensions records) had been sought at MCS4. However, DWP determined that from their perspective the consents were not sufficient to enable the linkage to DWP data to take place. Given this was decided around the time of the Dress Rehearsal, CLS took the decision to ask main and partner respondents whether they would be willing to provide consent for linking their data to

records held by the Department for Work and Pensions. This consent was therefore developed after the Dress Rehearsal and was not tested in the development work. To ensure that respondents were equipped to provide fully informed consent to this element, the main and partner consent forms were adapted and a leaflet was designed specifically to provide all necessary information and to encourage cooperation. A substantive amendment to the ethical approval was sought and obtained to cover this. Section 4.13.3 provides further information on DWP data linkage consent.

4. Overview of the elements of MCS5

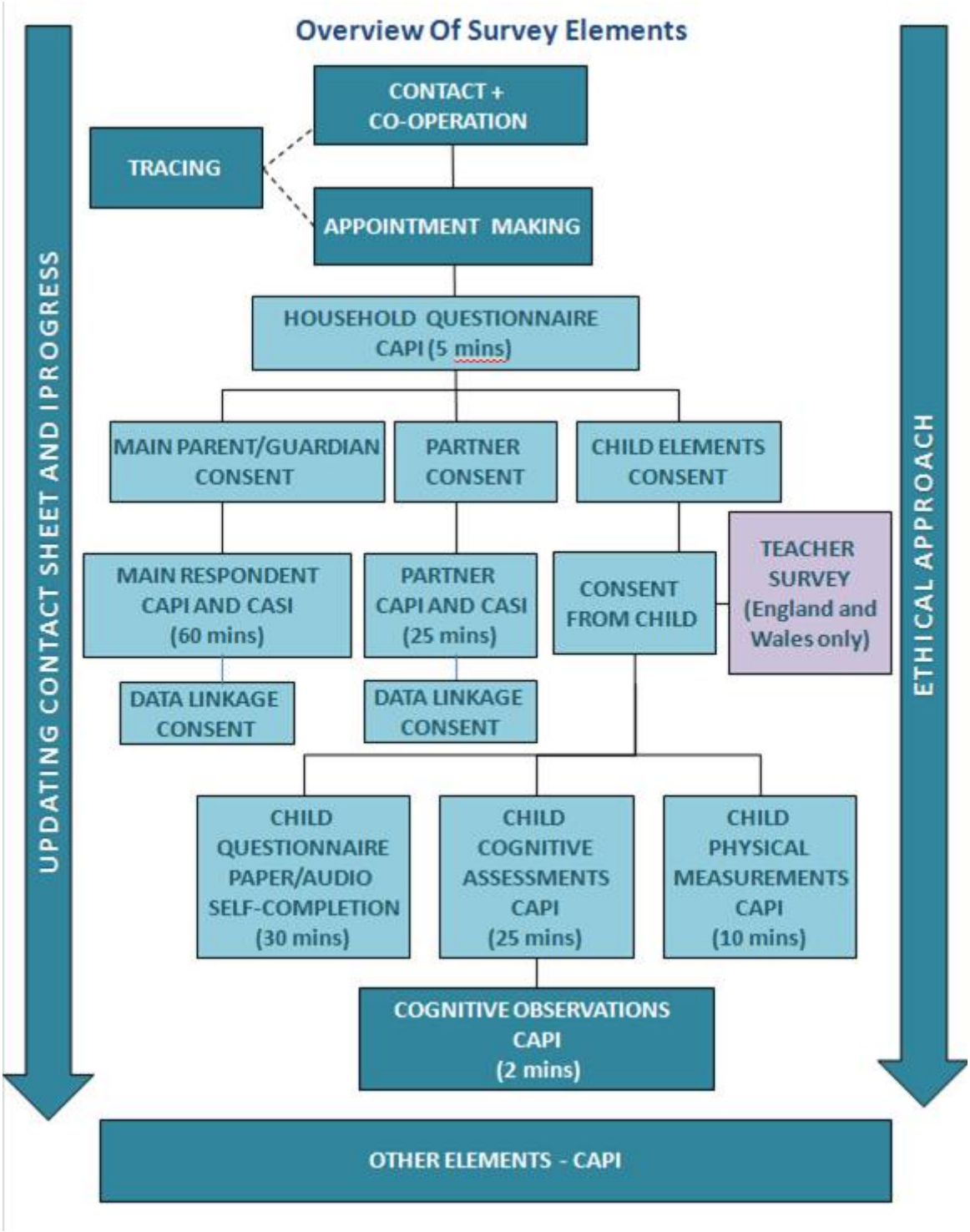
The content of the fifth sweep of the Millennium Cohort Study consisted of the following elements:

- Household questionnaire (CAPI)
- Main respondent interview (CAPI and CASI)
- Partner interview (CAPI and CASI)
- Child cognitive assessments
    - Verbal similarities
    - Memory task (officially named the Spatial Working Memory task)
    - Decision-making task (officially named the Cambridge Gambling task)
- Child physical measurements
    - height
    - weight and body fat
- Interviewer observation of the conditions in which the cognitive assessments were conducted
- Other elements
- Child self-completion questionnaire
- Collection of consents
    - data collection
    - consent to the teacher survey
    - consent to data linkage (permission to access economic records)

This section contains a brief description of each element of the study. Details of the development work for the study are contained in section 3.

Figure 4 below provides an overview of the survey requirements and the order in which they were to be conducted. It also indicates approximate timings for each element. This was used during the briefings to help interviewers understand how each of the different household elements fitted together.

Figure 4: Overview of survey elements



4.1 CAPI elements

The length and complexity of the questionnaires made it necessary to split the questionnaires across six linked scripts, as follows:

- MCNCHOLD contained the household grid
- MCNCPARA contained the first portion of the main respondent and partner

interviews

- MCNCPARB contained the second portion of the main respondent and partner interviews
- MCNCPARC contained the third portion of the main respondent and partner interviews, including a CASI element
- MCNCPROX contained the script for the proxy interview (if required)
- MCNCCHIL contained the Physical Measurements, Cognitive Assessments, Cognitive Observations and Other Elements

4.2 Household questionnaire

This was the first part of the CAPI, and interviewers were instructed to ask one of the parents listed on the Sample Information Sheet to complete it. If neither lived with the cohort child, it could be completed with any resident parent or guardian.

The household questionnaire collected information about the household members, and checked availability for interview. It had to be completed before any other element.

4.2.1 Selection of main and partner respondents

At the end of the household questionnaire the CAPI determined which parent was to be the main respondent and which the partner respondent.

The selection of main and partner respondents was based exclusively on relationships between household members. Parents (including step, foster and adoptive) of the cohort child and partners (including same-sex partners) of parents were selected for interview. In general, the mother was selected for the main interview and the father or father-figure for the partner interview. The main exception was when the father was the legal parent of the cohort child and the father's partner was not.

If there were no parents living with the child, the CAPI first checked if there were any step-parents or grandparents in the household and selected main among them along with his or her partner. If none of these were present, CAPI selected the main carer and his or her partner 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 child 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 main and partner respondents at the end of the household questionnaire. For example, if mother, grandmother and cohort child were the household members, the mother was selected even if the grandmother was the main carer. Obviously in this situation, no one could be eligible for the partner interview.

4.3 Main respondent 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
- Child and family activities

- Parenting activities
- Child's health
- Parent's health
- Employment, income and education
- Housing and local area
- Other matters
- Self-completion section
- Contact information

4.4 Partner interview

As for the main respondent, 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

4.4.1 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. There were questions in the household questionnaire that determined whether or not a proxy partner interview should be done. Proxy interviews were only required if the circumstances mentioned above applied to the partner; they were not required in cases where the partner simply did not want to take part in the survey. The proxy partner interview covered the following topics:

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

4.5 Other elements

Once the interviewer had attempted all elements a family was eligible for, he or she completed Other Elements once they had left the family home. It contained questions on the following topics:

- Child self-completion questionnaire, including whether consent was given, the method used to complete it, whether the child need help and how long it took
- The interviewer's observation of the child's build (to be used as an additional check on the data).
- Teacher Survey consent and class teacher name

- Data linkage consent
- Whether the main respondent or partner interviews were translated, and if so by whom and in what language
- If the family lives in Wales, whether the child self-completion or cognitive assessments were completed in Welsh
- The total time the interviewer spent in the household

4.6 Child cognitive assessments

Three cognitive assessments were included in the main stage of the study. These assessments are all educational assessment tools that are well respected and widely used. They are used to examine cognitive development and educational attainment and are normally employed by educational psychologists in a classroom or clinical setting.

Each assessment was adapted for use in a survey setting.

The cognitive assessments included in the main stage were:

One assessment taken from the British Ability Scales (BAS):

- Verbal Similarities

Two assessments taken from Cambridge Neuropsychological Test Automated Battery (CANTAB):

- Memory task (officially named the Spatial Working Memory task)
- Decision-making task (officially named the Cambridge Gambling task)

Verbal Similarities was modified to be administered with the help of the CAPI programme, so that interviewers did not need to memorise a complex set of rules for routing children through each assessment.

The Memory task and the Decision-making task are pre-programmed, touch-screen administered assessments, and were conducted using interviewers' own touch-screen CAPI machines or via a touch-screen add-on. (The add-on is attached using Velcro straps and a USB input and is calibrated by the interviewer.) A 'headless' version of the CANTAB software was loaded on to interviewers' machines to capture data from the two assessments and to allow the software to load directly from the CAPI script. Interviewers were issued with a USB software key to use when completing the Memory task and the Decision-making task which allows the data derived from both assessments to be collected and stored on interviewers' machines. Failure to insert the software key results in the CANTAB software launching in 'Evaluation' mode and the data is not collected. For both CANTAB assessments, interviewers were asked to read from laminated administration scripts to guide the child through the assessments.

4.6.2 Verbal similarities

BAS assessments are widely used to measure the cognitive ability and educational achievement of children and adolescents. The Verbal Similarities assessment measures children's verbal reasoning and verbal knowledge.

This assessment can be used with children from age 5 until 17 years 11 months. The general rule in BAS assessments is that the older the child the further into the assessment they start. As all of the cohort children are approximately the same age, they all started the assessment in the same place, at item 16, after completing Example A.

In total, there are 37 scored items and 1 example item in the assessment. The assessment continues until the child's best performance is established. The assessment finishes or moves to an earlier (easier) set of questions when the child begins to answer a lot of questions incorrectly.

The assessment was administered in Welsh on occasions when this was requested by the child. In these instances, Welsh speaking interviewers administered the assessment, and were provided with an administration booklet in Welsh to read from, which included all the words and phrases used in Verbal Similarities

Summary of procedures for Verbal Similarities

- The assessment starts with the interviewer reading out an introduction to the child. The introduction explains that the interviewer will say three things and the child must say how they go together. The interviewer explains that they can repeat the three words if the child likes, and that the task will get more difficult as it goes on. The interviewer reassures the child not to worry if they start to find the task difficult and to just have a go if they are not sure about the correct answer. The interviewer also lets the child know that, for most items, they will not tell the child whether they have got the answer correct or incorrect

- All children are asked Example A and then begin at Item 16.

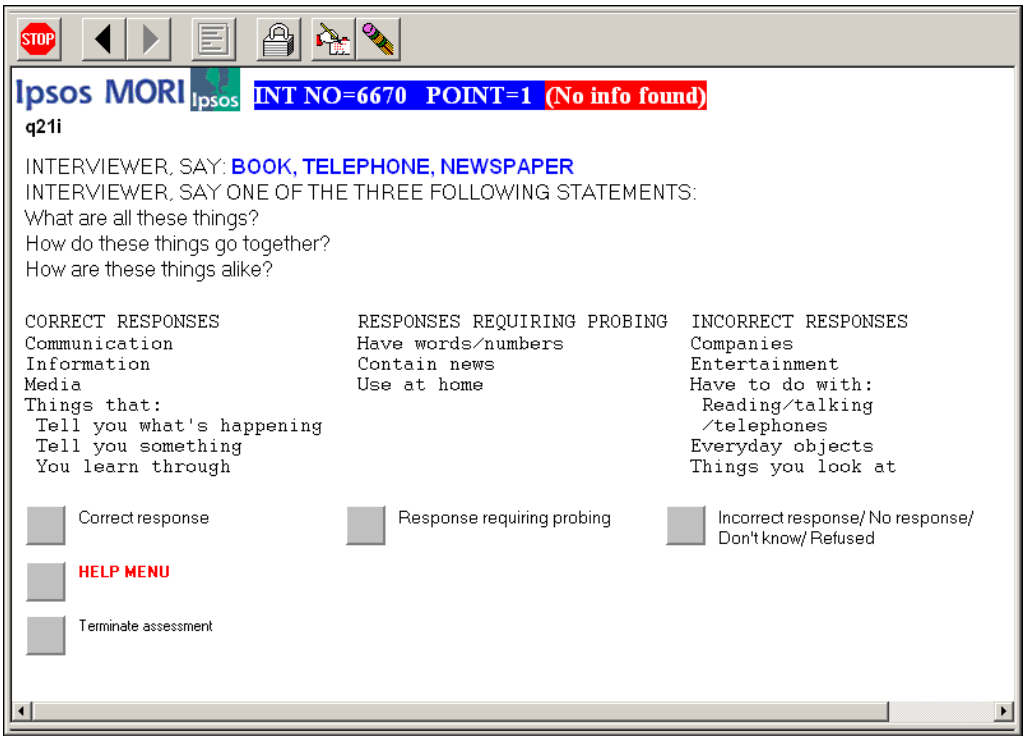
- For Example A the interviewer reads out: *"I am going to say three things and I want you to tell me how they go together. Listen carefully: Banana, Apple, Orange".* The interviewer then asks *"What are all these things?"*. For every subsequent item the interviewer reads out three words followed by one of three questions: *"What are all these things?", "How do these things go together?"* or *"How are these things alike?"*. Once the child gets used to how the assessment works, the interviewer does not need to keep reading out the question, just the three words.

- After the child gives an answer the interviewer records whether the child gave

    - A correct response
    - A response requiring probing
    - An incorrect response (including no response, Don't Knows and Refusals)

- The interviewers' CAPI script shows in three columns the answers that constitute a correct response, the answers that require probing, and the answers that constitute an incorrect response. (Note: in Example A, there are no responses that can be coded as require probing).

Figure 5: Item 21 of the Verbal Similarities assessment displayed on the CAPI screen



- Responses are recorded as 'correct' if they accurately show how the three things go together and are not too general or too specific. Responses are recorded as 'incorrect' if they do not show how the three things go together. Responses are recorded as 'requires probing' if they show some understanding but are not accurate enough; they are often too general or too specific (for example, "You can eat them" instead of "Sugary /sweet things" at Item 16) or too specific (for example, "They all have legs" instead of "Animals" at Item 3).

- If the interviewer records the child's answer as 'requires probing' the interviewer says: *"Yes. Now tell me another way of saying what they all are."* After the child's second response the interviewer can only record it as a 'correct response' or 'incorrect response'.

- If the child gives a response that does not appear on the screen the interviewer is required to use their judgement to decide whether the response is correct, requires probing or is incorrect.

Scoring and routing

- All items (except Example A) are scored 1 or 0 points. If the child gives a correct answer they get 1 point, if they give an incorrect answer the child receives 0 points. If the child gives an answer that requires probing and then subsequently gives a correct answer the child still receives 1 point. On the other hand, if they give an answer requiring probing and subsequently give an incorrect answer they receive 0 points.

- For most children, the assessment will continue up to and including Item 28. This is a decision point. The assessment will terminate at this point unless:

    - The child has less than 3 incorrect responses on all items asked, in which case the assessment continues to the next decision point (Item 33). Or
    - The child has less than 3 correct responses on all items asked, in which case the assessment goes back to an earlier starting point (Item 8).

- If the child has given 5 consecutive incorrect answers and less than 3 correct responses on all items asked, the assessment may not continue on to item 28 before the child goes back to an earlier starting point (Item 8). If the child finds items 8-15 difficult, it is possible that he/she will be routed back to the beginning (Item 1).

4.6.2 Memory task

The Memory task is a touch-screen assessment that tests the child's ability to retain spatial information and to manipulate remembered items in working memory. It also assesses use of strategy.

The aim of this test is that, by process of elimination, the child should find one blue 'token' in each of a number of coloured boxes displayed on the screen and use them to fill up an empty column (black hole) on the right hand side of the screen. To see if a blue token is beneath a coloured box, the child has to touch it with their index finger. If a blue token is revealed to be beneath a coloured box, the child moves it to the black hole by touching the black hole with their index finger.

Touching any box in which a blue token has already been found is an error, as is touching any box which has been found to be empty while searching for the same token. The child decides the order in which the boxes are searched.

Performance at the harder levels of this task is enhanced by the use of a search strategy.

The number of boxes is gradually increased from three to eight boxes. The colour and position of the boxes used are changed from trial to trial to discourage the use of the same search strategies from trial to trial.

The assessment was administered in Welsh on occasions when this was requested by the child. In these instances, Welsh speaking interviewers administered the assessment using a translated version of the laminated administration script.

Summary of procedures for Memory task

The Memory task is administered through the use of a software package called 'CANTABeclipse' which is integrated into the interviewers' CAPI script. The interviewer guides the child through the assessment by reading from a laminated administration script. The laminated script contains the instructions the interviewer is required to read out at different points in the assessment.

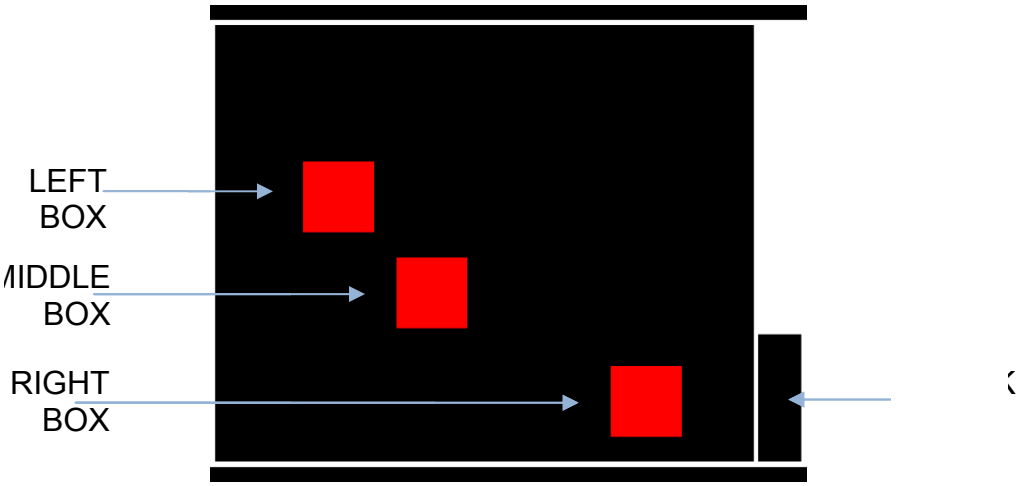
There are three phases in the Memory task:

1. Interviewer demonstration trial: the interviewer completes one trial to demonstrate to the child what they have to do.

2. Child practice phase: the child completes three practice trials and the interviewer provides encouragement and feedback on their performance.

3. Child assessed phase: the child completes 12 assessed trials (3 blocks of 4 trials) which increase in difficulty. The child's performance is only scored in this phase. The interviewer can only provide very limited instruction during this phase.

Figure 6: Demonstration trial screen (3 boxes)



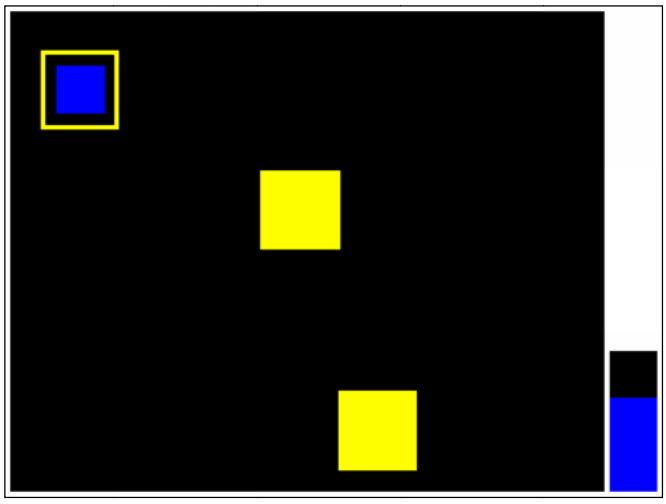
Demonstration Trial

In the demonstration trial the interviewer shows the child how to complete the task. There are three boxes and the interviewer has to find three blue tokens and place them in the 'black hole' on the right hand side of the screen. The interviewer reads instructions to the child from the laminated script at the same time as demonstrating what to do by touching the screen.

Child practice phase

In the child practice phase the interviewer asks the child to complete three practice trials, each with three boxes. There are a number of optional prompts the interviewer can use during the practice phase if the interviewer feels the child needs encouragement or feedback.

Figure 7: Child practice screen (3 boxes)



Child assessed phase

In the assessed phase the child completes 12 assessed trials. The child's score is calculated on the basis of their performance in these trials. There are three blocks of four trials. The first block of four trials has four boxes each, the second block of four trials has six boxes each and the third block of four trials has eight boxes each. In this phase the interviewer is unable

to give any further feedback to the child except for two simple prompts to be used if the child cannot remember what to do.

Scoring

The child's overall score is calculated from three different aspects of their performance: errors, strategy and latency. Their performance is scored on each of the assessed trials.

- Errors are the number of times the child revisits a box which has previously been found to be empty or in which a token has been previously found.

- Strategy is the order in which the child decides to search the boxes. On the harder levels the child will perform better if they make use a search strategy.

- Latency is calculated from three different measures of 'time taken'. They are the average time the child takes to first touch the screen when a new trial is presented, the average time the child takes between when they place the token in the black hole and the next time they touch a box and the average time it takes the child to find the final token from the time each trial was presented on screen.

4.6.3 Decision-making task

This task measures the child's decision-making and risk-taking behaviour.

The child is presented with a row of ten boxes across the top of the screen, some of which are red and some of which are blue. The child has to decide whether a 'token' is hidden in a red box or a blue box. The child starts with a number of points displayed on the screen, and must decide what proportion of their points they are willing to risk on their decision. The child must try to accumulate as many points as possible.

The assessment was administered in Welsh on occasions when this was requested by the child. As with the Memory task, Welsh speaking interviewers administered the assessment using a translated version of the laminated administration script.

Summary of procedures for Decision-making task

Like the Memory task, the Decision-making task is also administered through 'CANTABeclipse', and the interviewer again guides the child through the assessment by reading from a laminated administration script.

There are five phases in the Decision-Making task.

1. Decision only phase: 4 trials. The interviewer demonstrates one trial and the child gets 3 turns to practice.

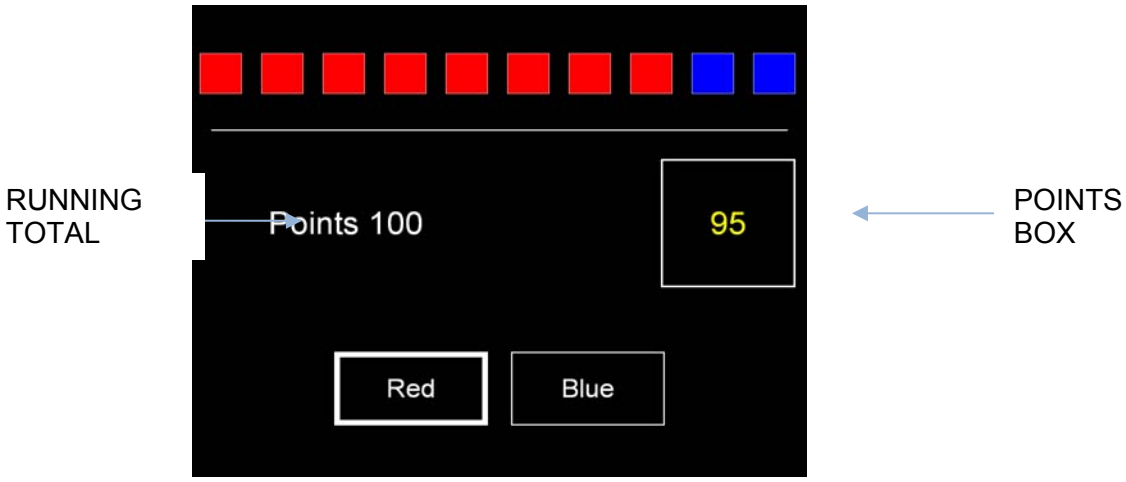
2. Ascending training phase: 4 trials. The interviewer demonstrates one trial and the child gets 3 turns to practice.

3. Ascending assessed phase: 2 blocks of 9 trials. The child's performance is assessed.

4. Descending training phase: 4 trials. The interviewer explains; the child practices 4 times.

5. Descending assessed phase: 2 blocks of 9 trials. The child's performance is assessed.

Figure 8: A screen from the Decision-making task (risk-taking stage)



Decision only phase

In the decision only phase no points are risked on the outcome of the child's decision; the child only needs to select the colour of the box they think the yellow token is most likely to appear under by touching the "red" or "blue" box at the bottom of the screen. The interviewer first reads an instruction to the child and demonstrates what to do. Once the interviewer has demonstrated the first trial the child then completes three decision-only trials.

Ascending training phase

In the ascending training phase the child must first choose whether a token is hidden in a red or blue box, and then select the number of points they wish to risk by touching the points box on the screen at the appropriate time. The child starts with 100 points and the aim is for the child to make as many points as they can.

The number of points that a child can risk in each trial is based on fixed proportions of their running total. It starts low (5% of their total) and increases four more times at intervals of two seconds. The increase in the number of points depends on the number of points the child has but it always uses the same fixed proportions. If the points box is not touched then the final value displayed in the points box (95% of their total) will be used. The later the child touches the screen the more points they risk. If the child guesses correctly or incorrectly the points are respectively added to or subtracted from their running total. If the running total gets as low as 1, the child loses the game.

The interviewer demonstrates the first trial in the ascending training phase by reading instructions from the laminated script and completing the trial on the screen. The child then completes three ascending practice trials.

Ascending assessed phase

This is the first phase where the child's score is calculated. The child completes two blocks of nine trials and receives feedback from the interviewer at the end of each block, depending on how they have performed. At the end of each block the child is told how many points they have won.

Descending training phase

In this phase, the number of points that a child can risk in each trial starts off high (95%) and *decreases* a further four times at intervals of two seconds. The interviewer explains the descending phase to the child and the child completes four practice trials.

The earlier the child touches the screen the more points they will risk. The decrease in the points is again a fixed proportion of the total number of points the child has. As before, if the child guesses correctly or incorrectly the points are respectively added to or subtracted from their running total. If the running total gets as low as 1, the child loses the game.

Descending assessed phase

This is the second phase where the child's score is calculated. The child completes two blocks of nine trials and receives feedback from the interviewer at the end of each block, depending on how they have done. Again, at the end of each block the child is told how many points they have won.

Scoring

The child's overall score is calculated from six different aspects of their performance during the assessed phases:

- Quality of decision making: the number of times in total a child decides that the token is hidden behind the 'more likely' colour.
- Deliberation time: the average time it takes the child to choose what colour the token is hidden behind after the coloured boxes are first presented for each child.
- Risk-taking: the average proportion of points that the child decides to risk.
- Risk adjustment: the extent to which the child adjust their risk taking depending on the proportion of boxes which are of their chosen colour.
- Delay aversion: is based on a child'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 child risks on each trial.

4.7 Observation of conditions in which cognitive assessments were administered

This element comprised ten questions about the condition in the home at the time the cognitive assessments were administered. The questions covered the following topics:

- Level of background noise, such as television, background conversation, other children
- Presence of potential disturbances, such as people entering or leaving the room or house
- Interruptions to the cognitive assessments by other people
- Child's level of awakeness at start of the assessments
- Anything else the interviewer thinks may have affected the cohort child

Interviewers were asked to complete this section outside the family's home, as soon as possible after the cognitive assessments were completed.

4.8 Equipment for cognitive assessments

Listed below are all the items of equipment interviewers were issued with to carry out the cognitive assessments for the main stage of the study.

- CANTAB USB software key
- Laminated Memory task administration script
- Laminated Decision-making task administration script
- Touch-screen add-on (for interviewers without a touch-screen capable CAPI machine)
- CANTAB laminated summary sheet (explaining how to insert the software key, how to attach the Touch-screen add-on, calibrating and re-calibrating the Touch-screen add-on and guidance on how to pause and abort the CANTAB assessments)
- Welsh translated laminated Memory task administration script (for Welsh speaking interviewers conducting interviews in Wales)
- Welsh translated laminated Decision-making task administration script (for Welsh speaking interviewers conducting interviews in Wales)
- Verbal Similarities instruction booklet in Welsh (for Welsh speaking interviewers conducting interviews in Wales and in Welsh)

Copies of the summary sheets and scripts can be found in the appendices.

4.9 Child physical measurements

All children for whom consent was obtained and who could stand unaided were eligible for the child physical measurements: height, weight and body fat percentage.

Height and weight are used to calculate the child's Body Mass Index (BMI). The body fat percentage is the percentage of a person's weight that is made up of fat. The measure of body fat percentage adds further value to BMI measurements by providing an overall estimate of fat-free mass.

Before taking the measurements, the child was asked to remove their shoes and socks, to ensure they were wearing light, indoor clothing, and to remove any items they had in their pockets, and remove any hair ornaments that could affect the measurements.

The following sections contain an overview of the measurement protocols.

4.9.1 Measuring height

Heights were measured using a Leicester stadiometer, which consists of a base-plate, measuring rod, and a head-plate. All interviewers were trained in the use of this equipment during the briefing.

Carrying out the measurement

- The interviewer ensures the child is correctly positioned for measuring the height. The child is asked to stand on the base plate of the stadiometer, ensuring that their heels are as close together as possible and touching the back of the base plate. The interviewer ensures the child's legs and back are as straight as possible and against the height measure, arms hanging loosely by their sides and facing forwards.

- The blue measuring arm is firmly moved down by the interviewer on to the child's head using the handle. The interviewer next moves the child's head so that the Frankfurt Plane (an imaginary line passing through the flap of skin in the ear and the bottom of the eye) is in a horizontal position, parallel to the floor. This represents a change from the protocols used at MCS4, and in the Pilot and Dress Rehearsal for MCS5. Previously, the interviewer first made sure that the child's head was in the Frankfurt Plane position, the child was then gently, but firmly stretched by the interviewer so they were at their maximum height, and the blue measuring arm was brought down on to the child's head by their parent/guardian. The new protocol represented contemporary best practice, which had superceded earlier best practice as used in previous sweeps.

- The interviewer then asks the child to duck away from the base plate, ensuring they do not knock the blue measuring arm out of position.

- The interviewer reads the height off the point marked by the measuring arm to the nearest completed millimetre, and enters it into the CAPI programme. If the interviewer is not happy with the accuracy of the measurement, they can repeat it as long as the child and parent or guardian is happy for them to do so.

4.9.2 Measuring weight and body fat

The weight and body fat measurements were taken using Tanita BF-522W scales. At the same time as measuring weight, the scales calculate body fat percentage by sending a weak electrical current through the body via the feet and measuring the amount of resistance encountered by the current as it travels through the body. The electrical current is safe, and cannot be felt at all, though it can cause medical devices such as pacemakers to malfunction. While such devices are extremely uncommon among eleven year olds, interviewers were asked to check with the parents before taking the measurements.

The scales can also be used in "weight only" mode, which does not involve an electrical current. This mode was used if the parent or child did not want the child's body fat percentage to be measured but was happy to have their weight measured, or if it was not possible to take the child's body fat measurement, for example if the child had a pacemaker.

Carrying out the measurement(s)

- Ideally, for the measurements the scales are placed on a firm, level surface. If only a soft, carpeted surface was available, interviewers were asked to make a note of this in the CAPI programme.

- Before asking the child to step on to the scales, it was necessary for interviewers to enter the child's age, sex and height (in whole centimetres) into the scales; this information was displayed for them, following the completion of the height measurement, in CAPI. This information was needed in order to calculate the body fat measurement, and it was therefore necessary for weight and body fat measurements to be taken after the height measurement. If the scales were used in 'weight only' mode, it was not necessary for the interviewer to enter the child's age, sex or height. This mode could thus be used if, for any reason, the child's height had not been taken.

- Once the scales were ready to use, the interviewer asked the child to step onto the scales with their feet in the correct position. It was essential for the measurement of body fat that the child was barefoot as the electrical current was sent around their body through their feet. Once the weight and body fat measurements were displayed, interviewers were to immediately record them in the CAPI programme. As

with the height measurement, interviewers were allowed to repeat the measurement if they were not happy with the first one.

- Each set of scales was checked before being sent out to interviewers. These checks involved ensuring that they were in kilogram mode and that the mode remained active after turning them off and back on. All scales were also checked for calibration (in weight only mode) using a 30kg calibration weight before being issued to an interviewer. As there was no way of calibrating the body-fat measurement, this was not checked. However the scales were checked to ensure that they displayed a measurement of body-fat. Final checks involved ensuring that all four feet were attached, that they had a padded shoulder bag, a set of instructions, that they beeped and that they were marked with a serial number. All scales were checked to ensure that they were generally fit for use (i.e. clean and the cord was not damaged).

4.9.3 Feeding back measurements to the child

After taking all of the physical measurements interviewers were required to ask the child whether they would like a copy of any or all of their height, weight and body fat measurements. If the child agreed to have these then the interviewer wrote the measurements they would like to have on a measurement postcard. Interviewers were instructed not to read these aloud and were only able to provide these to the child (not the parents).

A copy of the measurements postcard can be found in the appendices.

4.9.4 Equipment for physical measurements

Listed below are all the items of equipment interviewers were issued with to carry out the physical measurements for the main stage of the study.

- Stadiometer
- Frankfurt plane card
- Tanita scales
- Pack of A4 batteries for scales
- Laminated summary instructions for physical measurements
- Measurements postcard

A copy of the summary sheet can be found in the appendices.

4.10 Child self-completion questionnaire

The cohort children were asked to complete a paper self-completion questionnaire (referred to to the children as ‘the question booklet’). There was the option of additional support via audio for children with literacy issues. For children with severe literacy problems or unable to complete the paper questionnaire (or use the audio enhancement) for other reasons, such as disability, there was the option of interviewer administration. (These options are discussed further in section 4.12 below). The questionnaire covered a variety of topics, including the following:

- Family and friends
- School
- Activities they do outside school
- Area they live in
- How they feel and what they think about things

- Growing up

The questionnaire contained only a small amount of routing - children were routed out of questions about alcohol consumption if they had never had an alcoholic drink. Any questions deemed to be more sensitive in nature (such as those on anti-social behavior, bullying, smoking and drinking alcohol) were pre-empted with text reiterating that not all questions will apply to all children and that honest answers should be provided. Interviewers were required to explain how to complete the booklet with the child and highlight key sections of the questionnaire (such as the routed questions and the open-ended question).

It was anticipated that the questionnaire would take 30 minutes to complete. However, this varied depending on the child's ability or how they chose to complete it. All child self completions were completed at the time of the visit so that the interviewer would be on hand to answer any questions that the child might have had.

Once it was completed, children were asked to put it in an envelope and seal it in order to reassure on and emphasize confidentiality.

4.11 Emigrant survey

As part of MCS5 and as a way of keeping in touch, CLS wrote to 326 families who had emigrated to ask whether they would be willing to complete a self completion questionnaire (one for the main parent and one for the child). Ipsos MORI supplied CLS with hard copies of the child self-completion questionnaire and corresponding barcode labels and CLS produced a questionnaire for the parent (similar to the care-home questionnaire discussed in section 7.4.1). CLS were responsible for the data entry of the parent questionnaire and Ipsos MORI scanned all child self-completion questionnaires.

A total of 58 child questionnaires 60 parent questionnaires were returned.

4.12 Audio and interviewer administered child self completion

For children with literacy or other problems which made it difficult for them to complete the questionnaire without additional support two other methods of administering the questionnaire were available (use of audio and interviewer administered). The Sample Information Sheets indicated if these methods might be appropriate, but interviewers were required to carry out additional checks to ensure the most appropriate method of completion was adhered to.

Use of audio (using an MP4 player): This was mainly offered to children with dyslexia, those in the bottom 10% of reading scores, or those with a special educational need (excluding gifted and talented, autism/Asperger's, sight or hearing) indicated at the time of MCS4. In Wales, children were offered the audio script in Welsh.

Interviewer administered: This was offered to children who had been offered registration for poor vision, and among whom sight impairments were expected to limit feasibility of reading a self completion questionnaire unaided. Interviewers were also encouraged to offer this in cases where it emerged during the fieldwork visit the child had other difficulties that made unassisted completion problematic, for example, autism, attention difficulties or behavior difficulties.

4.13 Collection of consents

All adult respondents had to give informed consent in writing to take part in the study. Written consent was also required from a parent or guardian for the participation of a child. It

is worth noting that parents were not asked to consent on behalf of the child, but were asked for their permission to allow the interviewer to speak to the child and ask for their consent to participate in each element.

Interviewers were also required to gain consent from the child that was as fully informed as possible. In order to ensure this, children needed to understand the full details of processes/experience of participation (e.g. the burden/emotional impact) and as much as could possibly be expected about the reasons for the study and how their data will be held and used.

Interviewers were required to attach barcode labels to completed consent forms and child self completion questionnaires. All labels contained serial numbers (address number and check digit, as well as the child number where relevant) that were used to identify the respondent and so that they could be matched back to the data. Interviewers were provided with a strip of barcode labels for each family (3 for the child questionnaire – 1 per child, 3 for the child consent forms – 1 per child, 3 for the child elements consent form – 1 per child, 1 for the main parent consent form and 1 for the partner consent form).

4.13.1 Data collection consents

The household questionnaire in CAPI generated details of what elements should be conducted in the household (and with which household member), and which consents were required before interviewers could proceed with each element. CAPI also indicated which engagement materials (i.e. respondent leaflets – see section 9.13.1 for further details) should be referred to when administering the consent process. For each consent form there was a related leaflet (or leaflets) for the respondent to read (or for the interviewer to explain).

Figure 9 summarises consents obtained, the four consent forms involved and the corresponding respondent communication materials to be referred to for each.

Figure 9: Summary of data collection consents

Title of form	Study elements covered	Purpose	Relevant respondent communication materials
Main parent/guardian	**Main parent CAPI and CASI and data linkage**	The purpose of this form was to gain consent to administer the survey, and also to gain permission to link to the respondents economic records (data linkage). The consent form was split into two parts. The first part was used to gain consent to administer the CAPI and CASI for the main respondent, and it was necessary for this part of the form to be completed before the interviewer started to administer the CAPI to the main respondent. The second part was used to gain permission to release the main respondent's economic records; this part was typically completed at the end of the main respondent interview.	**Advance leaflet for parents (*"What is the Child of the New Century age 11 survey?")* and data linkage leaflet *("Is there any other information we would like?")***
Child elements **(completed by either the main parent OR the partner)**	**All child data-collection elements:** **- cognitive assessments and physical measurements** **- child self-completion questionnaire** **- permission to contact the child's teacher (England & Wales only)**	This form was used to gain consent from either the main respondent or partner to ask the child whether they would be willing to complete the cohort child data-collection elements: cognitive assessments, physical measurements and child self completion questionnaire. In England and Wales only, the consent form also asked the main respondent or partner if they would provide consent to ask the child if they would be willing for their class teacher to be contacted. All sections of this consent form had to be completed by the same parent or guardian. There were several opportunities to complete this consent form. Consent could be asked immediately after the household grid and/or at the end of the main questionnaire (if not collected after the household grid). CAPI also asked interviewers to confirm that written consent had been obtained prior to administering each of the child elements.	**Child elements leaflet ("*More information about the visit"*) and for Teacher Survey consent (in England and Wales only): Advance leaflet for parents (*"What is the Child of the New Century age 11 survey?")***
Consent from child	**All child data-collection elements:** **- cognitive assessments and physical measurements** **- child self-completion questionnaire** **- permission to contact the child's teacher (England & Wales only)**	This form was used to gain overall consent from the child for their participation in the study as a whole and to all individual child elements. The consent form was split into two parts, the first part was used to communicate all key points to ensure fully informed consent to participation in the study as a whole was achieved, as far as the child was able, specifically: - What the survey is for and what it involves as a whole; - That participation is voluntary, that they don't have to answer any questions they don't want to, and that they can stop the interview at any time; - That the data will be kept confidentially.	**Advance leaflet for child ("*How can I help with Child of the New Century?")***

		The second part gained was used to consent to the cohort child data-collection elements: cognitive assessments, physical measurements and child self completion questionnaire. In England and Wales only, the consent form also asked the child if they would be willing for their	
Partner	**Main parent CAPI and CASI and data linkage**	The purpose of this form was to gain consent from the partner to administer the survey, and also to gain permission to link to their economic records (data linkage). The consent form was split into two parts. The first part was used to gain consent to administer the CAPI and CASI for the partner, and it was necessary for this part of the form to be completed before the interviewer started to administer the CAPI to the partner. The second part was used to gain permission to release the partner's economic records; this part was completed at the end of the partner interview.	**Advance leaflet for parents (*"What is the Child of the New Century age 11 survey?")* and data linkage leaflet *("Is there any other information we would like?")*** **(Plus potentially, partner letter)**

4.13.2 Administering the consent process

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

- Consents for any individual element had to be obtained prior to that element being administered.
- Parent consent to the child elements had to always be obtained before consent from the child was sought
- Consent to data linking (which may be sensitive) was not normally to be asked until the interviewer had completed the main parent/guardian and partner interview (i.e. once the interviewer had already established a rapport). CAPI prompted interviewers to do this after the respondent had finished their main interview but prior to their contact details being obtained. It is worth noting that even if the main parent/partner refused the CAPI/CASI interview interviewers were still required to try to obtain the data linkage consent.

Other than the above, interviewers were free to obtain consents in any order and at any time.

To administer the parent consent forms, interviewers were required to ensure that the parent had read all relevant leaflets and understood the key points. Both the interviewer and the respondent were then required to sign each form as indicated. The respondent also needed to initial each element they consent to. The three parent consent forms were printed in duplicate on carbon-paper (main parent/guardian, child elements and partner). One copy was retained by the respondent, and the other copy returned by interviewers to Ipsos MORI's Field department where they were checked and booked in. Interviewers were also required to attach the relevant barcode label to each consent form which were additionally checked at the booking in process.

To administer the 'Consent From Child' form, interviewers were instructed to read out key information word for word from the form. Interviewers were required to complete the first section of the form in order to gain overall consent to participation and communicate the study as a whole. It was essential that this first section was completed prior to any of the child elements being conducted. The other sections of the form were used to gain child consent to each of the individual child elements and could be completed in any order, and at different times to allow flexibility and enable the child to have more opportunity to absorb

and consider the separate information about each one. However, an element could not be started until the corresponding section of the consent form was completed.

The CAPI script allowed interviewers to confirm that the relevant consent forms were obtained for items which were completed in CAPI (main/partner CAPI, physical measurements, assessments). For elements not conducted in CAPI (child self-completion, teacher survey and data linkage) these were confirmed in the 'Other Elements' script.

Copies of all consent forms can be found in the appendices.

4.13.3 Data linkage consent

In addition to the data collection consents, consent was sought to access the main respondent and partner's routine records held by the DWP. This information includes information about parents' benefit receipt and participation in employment programmes.

The DWP holds this information for the whole of the UK, although in Northern Ireland benefits and programs are administered through the Department for Social Development in Northern Ireland.

Interviewers were provided with a leaflet designed specifically to encourage participation in this element and to address any questions respondents may have (more details of which can be found in section 7.7.1). In addition to the leaflet, interviewers were also provided with guidance on how best to explain to respondents the beneficial research uses for social policy research to encourage cooperation and details on the linking process and data security/usage at DWP in order to reassure respondents.

5. Surveying children and ethics

5.1 Ethical approval

Ethical approval for both the pilot surveys and the main survey were obtained by CLS. Ethical approval for the Pilot 1 was obtained on 24th March 2011 from the Northern and Yorkshire REC: Ref: 11/H0903/3/ For the Dress Rehearsal and Main Stage a favourable opinion was received from the Yorkshire and Humber REC on 29th July 2011: Ref: 11/YH/0203. On the 13th December 2011, confirmation of a favourable opinion was received in relation to as substantial amendment put to the Yorkshire and Humber REC covering the addition of the DWP data linkage consent collection to the study.

5.2 Confidentiality issues

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

- Interviewers were instructed to avoid mentioning the title of the study to anyone but the cohort member or their parents.
- 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 reallocated to a different interviewer.
- All cohort members' answers were treated in strict confidence in accordance with the Data Protection Act. The advance letters, leaflets and other survey documents highlighted that the information respondents provided would only be used for the survey and for no other purpose.
- Interviewers were briefed to ensure that everything that takes place during the course of an interview remains 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. The advance leaflet also contained information about sources of professional advice and support (including a helpline number).

A protocol was put in place should an interviewer believe that someone may be at risk of harm but is not in a position to act on their own behalf. Interviewers were instructed to contact their Region Manager only if they genuinely believed there was a serious risk that a member of the family was, or was at risk of, being harmed. Once it had been decided how best to proceed with the incident, interviewers were required to complete an incident report form.

5.3 Respondent wellbeing

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 previously discussed in section 4.13).

However to help to ensure children and parents had ongoing support if they had been affected by any of the issues in the study, the following measures were put in place:

- The parents' leaflet ('What is the Child of the New Century Survey?") contained 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 study.

- At the end of the interviewer visit all children were provided with a 'further information leaflet' ("I've helped with the Child of the New Century – What now?"). Among other things, this sign-posted who children should talk to if they have problems, including parents, teachers, other adults and Childline (the contact details for which were provided). Interviewers were required to specifically draw attention to the support information on the front when handing this to the child at the end of the visit.
- The child elements leaflet ("More information about the visit") highlighted that parents may want to talk to children about the interview visit to check if anything has distressed them. Interviewers were also asked to draw parents' attention to this, especially if it was felt that the child had been upset by anything.

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

5.4 Child and interviewer safety protocols

Interviewers were given guidance on protecting both themselves and the cohort children:

- Other than the parting gift of Top Trump cards and the stickers for siblings, and the equipment required to carry out the survey, children (or siblings) were not to be given anything else (sweets, food, etc).
- A responsible adult had to always be present in the house when the child was completing their study elements.
- Any unnecessary physical contact during the visit needed to be avoided.
- For the child measurements, given the involvement of physical contact a requirement was for an adult to always be present in the room. Where contact was necessary, interviewers were told to explain beforehand what was required and ensure the parent could see what was happening throughout the process.
- For other child 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 or the parent or child felt more comfortable with an adult always being in the room, this approach was taken.

5.5 Consent issues

Any parent or parent-figure was able to give consent for the child data collection elements, regardless of their relationship to the child. So for example a step-parent could give consent to seek consent from the child for the cognitive assessments, physical measurements and child self-completion questionnaire. This is because these consents were an ethical rather than a legal requirement, so it was not necessary for the person signing the form to have legal parental responsibility for the child. However, in general, if legal parents were available, interviewers were advised to seek the consent of that parent. Interviewers were reminded that consent from a parent or guardian did not imply consent from the child, who retained the right to decide whether or not to take part in the survey.

Consent to data linkage was to be completed by the main respondent or partner indicated in the Household Grid. Checks were made at the booking in stage to ensure that the consent forms had the correct barcode label and were completed accurately. Economic records could only be accessed providing:

- The consent form was present: If a consent form was not present then consent could not be deemed to have been given and overrode any record of consent in the CAPI (even if it had been collected the link could not be pursued without the hard copy of the consent form).

- The appropriate section of the consent form was completed: Consent to data linkage was recorded in the booking in system (both whether this consent was signed and also whether the respondent had initialled it). If the consent form indicated that DWP consent was not given then this too overrode any record of consent given in CAPI.

Any respondents whose mother tongue was English but who could not read and understand the advance leaflets or consent forms for themselves because of literacy problems or poor vision had the leaflets and consent forms read out to them by the interviewer. Large-type copies of the leaflets 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 interview was removed, all data along with any paperwork associated with it were destroyed. A confirmation letter was sent to the respondent to confirm this.

If after providing consent to data linkage a respondent requested for this to be withdrawn, a letter was sent by either CLS or Ipsos MORI to confirm that their details would not be sent to DWP for linkage. All requests for withdrawal of data linkage consent were logged by Ipsos MORI and a record of this was provided to CLS in the paradata.

6. Preparation and accreditation

6.1 Briefings

Prior to starting work on the study, all interviewers were required to attend a 3 day briefing. In total, 23 briefings were conducted. 19 were conducted for Wave 1 (between January 2012 and February 2012). An additional 2 briefings were conducted for Wave 2 (in August 2012) and 2 mop up briefings were conducted (one in March 2012 and one in May 2012).

The briefings were led by researchers from Ipsos MORI and CLS. Each briefing was also attended by a Field Executive and a Region Manager from Ipsos MORI's fieldforce. Their role was to oversee and control the briefing, ensure its smooth running and deal with any inappropriate behavior (including unnecessary interruptions and digressions by interviewers). In addition they were responsible for covering all interviewer administration.

In total, 325 interviewers were briefed. The size of the briefings varied between regions and attendance ranged from between 13 to 21 interviewers.

6.1.1 Pre-Briefing preparation

Prior to attending the briefing sessions, all interviewers were sent their equipment for the physical measurements (Stadiometer and Tanita scales) and cognitive assessments (touch screen add-on for those with CAPI machines that were not touch screen enabled and touch screen instructions showing how to insert the USB key and attach and calibrate the touch screen). They were also sent the audio equipment (MP4 player, headphones and MP4 player user guide) to assist any children with literacy difficulties with completion of the child self completion.

Interviewers were required to complete some 'homework' tasks prior to Day 1 of the briefing using a CD-Rom containing training videos in order to familiarise themselves with the equipment, specifically the touch screen add-on and MP4 player.

All interviewers were required to spend a minimum of 30 minutes familiarising themselves with each piece of equipment.

6.1.2 Days 1 and 2 of the briefing

Days 1 and 2 of the briefing ran consecutively and covered the following topics:

Figure 10: Topics covered in Days 1 and 2 of the interviewer briefing

Day 1	Day 2
➢ Pre-briefing ➢ Welcome ➢ Background ➢ Key features of the study ➢ Overview of survey process ➢ Surveying children ➢ Physical Measurements ➢ Cognitive Assessments – Introduction and Verbal Similarities ➢ Cognitive assessments - CANTAB	➢ Pre briefing – Supervisor's training on supervision ➢ Housekeeping ➢ Welcome and introduction to Day 2 ➢ Nature of the MCS sample ➢ Pre-notification mailing, overview of survey process, advance preparation and advance mailing ➢ Sample info sheet ➢ Making contact by phone and face to face ➢ Making the appointment, appointment

➢ Cognitive observations ➢ Engagement and wellbeing issues relating to measurements/ assessments ➢ Set up for practice session and homework requirements	mailing, partner letter, translations and large print documents ➢ Tracing respondents ➢ Contact Sheet ➢ iProgress ➢ Ethics, Surveying Children and Parents, Informed Consent ➢ Homework and practice session ➢ Finish (including homework details)

A pre-briefing was conducted on Day 2 to brief supervisors on what was required of them when conducting the accompaniments with interviewers (See section 8.2 for further details). Supervisors were also accredited on Day 2 of the briefing so that they would be able to help with the accreditations on Day 3.

6.1.3 Practice session and homework tasks

Between Days 2 and 3 of the briefing, interviewers were required to conduct practice sessions with two children in their last year of primary school who were not known to them personally to help familiarise them with some of the different elements of the survey. In the practice sessions interviewers practiced administering the child cognitive assessments, measuring the child's height, weight and body fat and recording the child's measurements in CAPI. Interviewers were unable to work on the survey unless the practice sessions had been completed.

Interviewers were provided with the following materials to conduct the practice sessions, copies of which can be found in the appendices:

- Instructions for practice sessions
- Practice quota sheet
- Practice advance letters (child and parent, to aid recruitment). These were adapted from the mainstage leaflets.
- Practice information sheets (child and parent, to explain the procedures) These were adapted from the mainstage leaflets.
- Two practice consent forms (child and parent)
- Measurement postcards (to leave with the children if requested)

In addition to the practice sessions, interviewers were also asked to complete some practice scenarios on the contact sheet and in iProgress.

6.1.4 Day 3

Day 3 of the briefing covered the following topics:

Figure 11: Topics covered in Day 3 of the interviewer briefing

Day 3
➢ Pre-briefing – RMs/RCs session on survey management and progress chasing ➢ Housekeeping ➢ Feedback/quiz on assessments and measurements ➢ Accreditation of interviewers (see below)

- Feedback on iProgress and Contact Sheet
- Main and Partner interviews
- Teacher Survey in England and Wales
- Data Linkage
- Child self completion including audio
- Engagement
- Managing the household visit
- General Field admin

At the start of Day 3, all Region Managers and Region Coordinators working on the study were briefed on survey management and progress chasing. This included outlining the checks that were required pre-fieldwork/early on during fieldwork, checks during fieldwork to monitor fieldwork progress and response rates (including electronic progress reporting), monitoring movers and tracing steps and the setting up of supervisions.

6.1.5 Accreditation of interviewers

As part of Day 3 of the briefing, all interviewers were individually tested and accredited on taking the physical measurements. The purpose of the accreditation was to check that all interviewers were able to accurately follow the protocols for the measurements. However, other aspects of administration (e.g. explanations given to the subject and rapport with the subject) were not part of the accreditation process. Interviewers were accredited on height only.

In order to pass the accreditation interviewers needed to demonstrate that they could accurately assemble the height measure, measure the subject and disassemble and pack the stadiometer away. They were able to refer to the physical measurements summary sheet and the Frankfurt plane card during the accreditation session and were able to correct themselves if they made a mistake.

At the end of the accreditation session, the accreditor provided the interviewer with feedback and informed them whether they had passed or failed (and if they failed, specifically what they failed on). A checklist was used to determine a pass or fail and if any or all sections were failed, interviewers were required to re-sit the accreditation. All interviewers had to pass the accreditation prior to starting work.

Once passed, all interviewers were sent a copy of the accreditation form stating that they had passed the accreditation.

6.1.6 Post briefing

After the briefings were completed all interviewers were required to conduct two dummy CAPI interviews to familiarise themselves with all elements of the questionnaire. Interviewers were not permitted to start work until these dummy interviews had been completed and checked by the Field team.

6.2 Materials for interviewers

Interviewers were supplied with the following materials for use on the study (copies of which can be found in the appendices).

Figure 12: Table of materials

Item
Briefings
Briefing slides
Interviewer instructions
Interviewer instructions - CAPI
CAPI summary guide
Cognitive and physical measurement instructions
Language card
Practice materials
Advance letter for child (Practice)
Advance letter for parent (Practice)
Quota Sheet (Practice)
Parent consent form (Practice)
Info sheet for child (Practice)
Info sheet for parents (Practice)
Interviewer instructions (Practice)
Child consent form (Practice)
CAPI
Show cards - Main (Normal)
Show cards - Partner (Normal)
Calendar
Self-completion and audio
Child Self Completion Questionnaire and Envelopes
MP4 Player
Headphones
Audio script practice sheet
Letters and leaflets - advance mailing
Advance Letter
Child letter
Advance leaflet
Child leaflet
Laminated version - Advance leaflet
Laminated version - Child leaflet
Letters and leaflets - appt mailing
Appointment card
Appointment Mailing Envelope
Child elements leaflet
Data linkage leaflet
Laminated version - Child elements leaflet
Laminated version - Data linkage leaflet
Letters and leaflets - appt
Child 'further information' leaflet
Letter from parent to teacher
Partner letter
Tracing letters
Change of address card for tracing
Tracing letter
Tracing Letter Envelope
Stable contact letter
Stable Contact Letter Envelope

Item
Occupier letter
Occupier Letter Envelope
School Tracing Letter for Parents
Letter to Parent from Head Teacher Envelope
School Tracing Letter
Head Teacher Mailing Envelope
Freepost Return Envelopes
Stamps
Consent forms
Consent form - Main parent
Consent form - Partner
Consent form - Child Elements
Consent form - Child
Other materials
Contact sheets
Sample information sheet
Barcode labels
Calling card
Child gift (Top Trumps)
Ipsos MORI pens
Info letter for police stations
Reference docs
Pre-notification Leaflet - Child
Pre-notification Leaflet - Parent
Additional information sheet (laminated)

A list of equipment required for the cognitive assessments and physical assessments can be found in section 4.8 and 4.9.4 respectively.

6.3 Welsh language materials

In Wales, respondents were provided with all main communication materials in both English and Welsh, and were also able to choose which language they participated in. Families in Wales were sent or given English and Welsh versions of the following advance and appointment documents:

- Advance letter
- Advance leaflet
- Child letter
- Child leaflet
- Appointment card
- Child elements leaflet
- Data linkage leaflet
- Partner letter

Welsh versions of the following materials were also provided:

- Letter from parent to teacher
- Child 'further information leaflet'

- Child Self-completion Questionnaire
- Showcards (main and partner)
- Consent form - Child Elements
- Consent form - Main parent
- Consent form - Partner
- Measurement postcard

Copies of the above can be found in the appendices.

6.4 Additional languages

Other language materials were provided to support participation of parents with limited English. These were not provided or required for children because all cohort children were born in the UK or already living in the UK when they were babies and therefore have good spoken English.

Parents' materials were provided in the eight languages most commonly needed at previous sweeps of the study:

- Urdu
- Punjabi (Gurmukhi script)
- Punjabi (Urdu script)
- Gujarati
- Bengali
- Somali
- Tamil
- Arabic.

Specifically, all of the materials required to secure study participation and informed consent from parents were provided in another language (the advance letter and leaflets, the partner letter and parent consent forms). As discussed in more detail in section 7.5.1, the advance mailing was sent out in both English and one of the eight minority languages if required. Survey tools and other study materials were not translated.

Copies of these can be found in the appendices.

6.5 Pre-notification of cohort families

All cohort families were sent a pre-notification mailing from CLS before the start of fieldwork. The mailing was sent 3-4 weeks prior to fieldwork and contained a letter for parent(s), an update for parents comprising a timeline covering the first 10 years of MCS, and a 'thank you' card for children for their participation.

The purpose of the letter was to highlight to families that fieldwork for the Age 11 survey was about to start, and that they could expect contact from an interviewer, as well as thanking them for their previous participation. The letter also introduced respondents to the new survey organisation, Ipsos MORI and to the new Principal Investigator of MCS. The pre-notification letter also signposted the Child of the New Century cohort members website: www.childnc.net (Child of the New Century being the name by which cohort members know the study).

The card and letter was sent in Welsh and English in Wales; and the timeline was available in Welsh on the Child of the New Century website. Interviewers were provided with copies of

the timeline and card in their work packs. Copies of the pre-notification letters are included in the appendices and copies of the pre-notification leaflets can be found at www.childnc.net.

6.6 Informing the Police

Before starting work, all interviewers were instructed to check in at a local police station to inform them that the study was taking place. The reason interviewers were asked to contact the police is that it is reassuring for suspicious families, as well as other people interviewers come into contact with, to be told that the police are aware the interviewer is working in the area.

Interviewers were required to provide a copy of the police notification form and show a copy of the advance letter. Procedures for recording this tended to vary across the country. However, regardless of how the details of the visit were recorded, all interviewers were required to make a note of the time and date of the call, and the name of the officer spoken to. No visits to any of the cohort families were allowed to be made until interviewers had registered with the local police.

7. Conduct of fieldwork

7.1 Interviewer assignments

The sample was grouped into interviewer assignments, or points. These points reflected local geography, but addresses in some, particularly rural, areas were widely spread. The number of addresses allocated to each sample point varied but on average contained 15 addresses.

In terms of productive interviews, each interviewer on average achieved 43 productive interviews (see Figure 13). Six per cent of interviewers achieved 10 or fewer interviews, and one per cent achieved more than 110.

Figure 13: Number of productive interviews per interviewer

Number of productive interviews	Number of interviewers	% of all interviewers
1 to 10	18	6
11 to 20	32	10
21 to 30	52	17
31 to 40	52	17
41 to 50	52	17
51 to 60	42	14
61 to 70	28	9
71 to 80	13	4
81 to 90	10	3
91 to 100	4	1
101 to 110	3	1
111 or more	3	1
Total	**309**	100
Mean	43	
Median	41	

7.2 Issuing sample to interviewers

Interviewers were issued their sample assignment at the beginning of each wave.

Sample information was provided on a Contact Sheet, supplemented with a Sample Information Sheet (SIS). The information printed on these documents came from the sample files provided by CLS.

All interviewers were instructed to review their assignments when they received them in order to plan their work. They were advised to prioritise the contact of some cohort families, such as those who were not interviewed in MCS4 and may therefore have needed tracing, those who were known to no longer be living at the address given, and so would require tracing, and those whose addresses were furthest away from where the interviewer lived, or who were most isolated from others in the point.

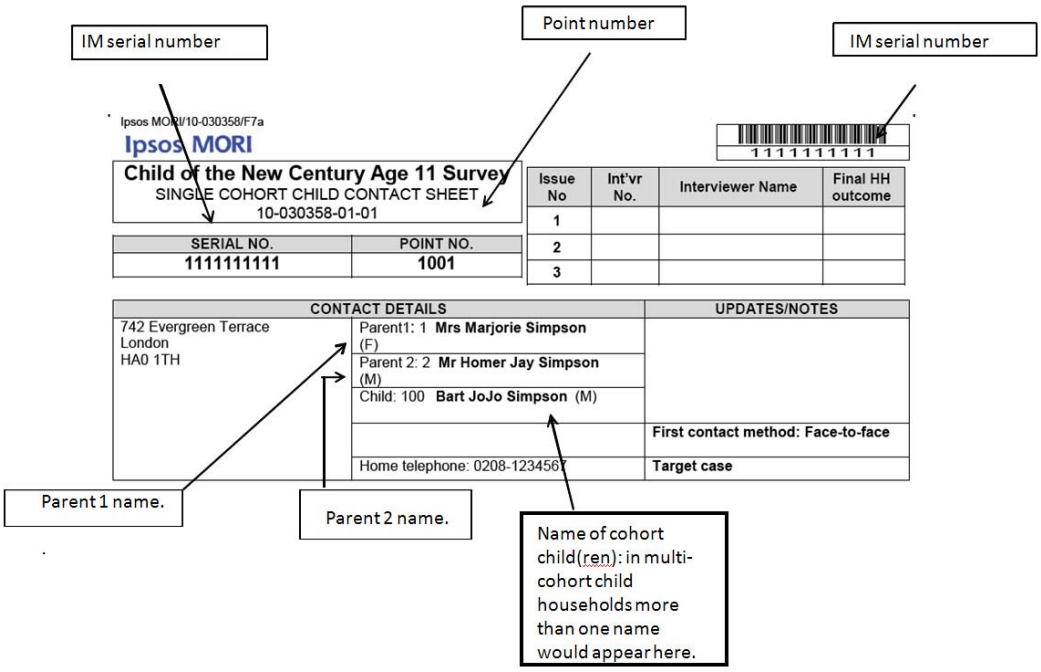
Additionally, interviewers were also told that 'target cases' should be prioritised. As discussed in section 7.4, target cases were identified as having a lower propensity to cooperate.

7.2.1 The Contact Sheet

Two versions of the contact sheet were produced: one for families containing a single cohort child, and one for families containing more than one cohort child.

The sample information on the contact sheet was displayed on the front page, showing in Figure 14.

Figure 14: Sample information provided on the contact sheet (fictitious example)



The top portion of the contact sheet displayed the Ipsos MORI serial number and sample point number. Underneath contained contact details about the cohort children and their parents: address, parent names, person number and sex, the cohort child's name, person number and sex and the home telephone number.

The parents were labeled as Parent 1 and Parent 2 (if there was more than one parent in the household). Parent 1 was usually the main respondent from the last sweep of the study that the family had participated in, and Parent 2 the partner respondent. In some cases the partner respondent, and not the main respondent, was labeled as Parent 1, and vice versa; this usually happened when CLS had been asked to address correspondence to the partner.

As well as the sample information, the contact sheet contained space for interviewers to record the following:

- All attempts made to contact the respondents, including any tracing done
- Interview outcomes (both for the household as a whole and individual outcomes)
- Reasons for refusal (if the family refused)
- Whether the family wished to permanently withdraw or said they were happy to continue
- If the cohort child had died or the family has refused, or emigrated, and who gave the interviewer this information.

A copy of the contact sheet can be found in the appendices.

7.2.2 The Sample Information Sheet

The Sample Information Sheet included the following information:

Contact details

This contained the last known address for the household. It also contained two additional fields: address status, and the date that status was assigned. This indicated that on the date shown, the household had either been confirmed as being resident at that address, that the family was no longer resident at the address, or that the address is unconfirmed, but CLS has reason to believe this is the correct address. Two additional fields indicated when the family was first confirmed at the address and when it was last confirmed at the address.

This section also contained further details for the interviewer to use when making contact with the family. It told which method to attempt to make contact with the family (either via face-to-face or telephone), whether the family has indicated previously that they need translated materials and whether the family is a 'target case'.

Cohort child details

This contained each cohort child's full name, person number, sex and date of birth. In addition, it contained the preferred name for the child, if known, such as Tony for Anthony or Katie for Katherine.

Resident parent details

This contained each resident parent's title, full name and preferred name, if applicable, person number, sex, date of birth, and the relationship to the cohort child. The relationship to the cohort child was indicated as 'natural parent', 'step parent', 'grandparent', etc.

Resident parent contact details

This contained the last known telephone numbers for the resident parents – mobile or work numbers. It also contained any known email addresses so that interviewers could confirm they were correct, but interviewers were not permitted to contact the resident parents by email.

Information to be used for tracing

The first set of information to be used for tracing was stable contact details, i.e. contact details provided by respondents, usually of a close relative. The email address was also provided in order that the interviewer could confirm it was still correct, but interviewers were not permitted to contact the stable contacts by email.

The second set of information was the school name and address the cohort child was attending at the last sweep the family participated in.

Information from previous surveys – household information

This section contained the following information:

- Address at last interview
- Sweep the family last participated in
- Day and date of last interview

- Number of younger siblings in the household at the last interview
- Household outcomes from the first through fourth sweeps of the survey
- If the family refused at the last sweep issued, the reason for refusal as coded by the interviewer at the time

Information from previous surveys – respondent information

This section contained the following information:

- Name, sex, date of birth and person number of the main and partner (if applicable) respondent at the last sweep the family participated in
- The last individual outcome of the main and partner respondent
- Language used if an interview was achieved at the last sweep the family participated in

Memos

This contained useful interviewer notes from MCS4, e.g. address directions, best time to contact respondents, etc, as well as information CLS had received since the last sweep that might be useful to the interviewer. Some of the information provided was particularly sensitive, and thus was not printed on the Sample Information Sheet. Instead, this information was given to Region Managers who then verbally gave the information to the relevant interviewer.

7.3 iProgress

iProgress is the programme Ipsos MORI uses to monitor interviewer progress. Interviewers electronically recorded all attempted contact via any method (telephone, face-to-face or post) to the family, and any tracing steps taken. In the programme they also record any changes to sample details; for instance, if the interviewer discovers the main respondent's mobile number has changed before interviewing, the interviewer records this in iProgress. Additionally, any amendments or changes to the family address are recorded in iProgress.

7.4 Who to contact

Interviewers were provided with details of which contact method and who to contact 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) on the Contact Sheet and Sample Information Sheet. If there were two parents listed on the Sample Information Sheet, and both took part in MCS4, then interviewers were instructed to attempt to make initial contact with the person who was the main respondent in MCS4. 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 Sample Information Sheet indicated that only one parent took part in the last sweep, interviewers were instructed to contact the parent who took part at the last sweep first.

If the Sample Information Sheet indicated that neither parent took part in the last sweep, interviewers were able to attempt to contact either parent.

In cases where the cohort child's parents were no longer living together, interviewers were briefed to try to find out who the child now lived with and interview at that address. If the child lived with both parents for some of the time, interviewers were asked to try to establish

where the child mainly lived and 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.

7.4.1 Interviewing children in care homes

If an interviewer established that the cohort child was now residing in a care home they were required to find out as much information as possible so that CLS could make contact and try to arrange an appointment with the child and their main carer (i.e. the person who knew the most about the cohort child).

Unlike the main interview, interviews in care homes were administered by the interviewer using a paper questionnaire rather than in CAPI. The care home questionnaire was designed as a subset of the main MCS5 parent CAPI script that could be administered on paper. The content of the questionnaire was tailored so that it was applicable for interviews within a care home setting. Consequently, this meant that not all sections/questions included in the main respondent CAPI script were asked.

Cohort children living in care homes were invited to complete the physical measurements, cognitive assessments (and observations) and child self-completion, if they were able to do so. The assessments and measurements were completed in CAPI as usual. A household grid was required to be completed prior to starting interviewing in order to access the scripts (interviewers were provided with information in order to be able to do this). The 'other elements' section was also to be completed for care home interviews, however, data linkage consent was not asked. Consent to contact the child's teacher was asked in England and Wales (providing the child was at school).
Once completed, all paperwork was sent back to Ipsos MORI and a copy of the completed questionnaire was provided to CLS to process.

In total, 2 interviews were conducted in care homes. Children of this age who are 'looked after' by the local authority tend to be more likely to be living in a private residence rather than in residential care.

7.5 Contact procedures

7.5.1 Advance mailing

An advance mailing was produced for each family in the sample. The mailing was used in order to provide respondents with information to consider in advance of agreeing to an appointment and to forewarn them of the fact that an Ipsos MORI interviewer would be making contact. The advance mailing contained materials for both the parent and the child and consisted of:

Two items for parents:

- An advance letter for parent(s). This letter introduced the survey to the parent, signposted the advance leaflet, informed the parent of next steps and invited parents to actively make contact with the interviewer. Interviewer details such as names and contact numbers were also provided. All letters to parents were pre-printed with the name(s) and address of the cohort child(ren)'s parent(s) and the reference number. The advance letter was also versioned:
    - The option of Welsh language interviews was highlighted in Wales
    - Text was tailored on the basis of sample outcomes at MCS4 to help maximise response rates by acknowledging the families last participation status and emphasising the important role they have to play in the study.

Specifically, the wording was tailored for families who could not be contacted at MCS4 and for families who refused to take part at MCS4.

- An advance leaflet that provided an overview and requirements of the study. The advance leaflet was versioned depending on country. Specifically, only those in England and Wales referred to the teacher survey; and only those in Wales referred to Welsh language interviews.

A smaller envelope for the parent (pre-fulfilled in each mailing to the parent(s)) to give to the child:

- A letter for the child which was used to introduce the survey to the child, signposted the advance leaflet and informed the child about what would happen next. Interviewer details such as name and gender were also provided to give the children advance information about the interviewer visiting them. All letters were pre-printed with the child's name and reference number. Children had received leaflets at previous sweeps, however, this was the first time they had received their own letter.
- A leaflet for the child which was designed specifically to be used to engage the child and to be accessible, with the purpose of providing summary information about the study. The child leaflet for England and Wales contained information about the teacher survey, whereas this was absent from the Scotland and Northern Ireland version.

For households in Wales, all materials were provided in Welsh and English and some households were provided with pre-fulfilled copies of parent materials in one of eight minority languages as well as English. Minority language materials were provided for the eight most commonly used languages at the last wave. In total, 4.4% of the sample were identified as requiring translated advance materials. (See section 6.4 for more details).

Copies of the advance letters and leaflets can be found in the appendices.

Interviewers were asked to send out an advance letter and leaflet to each of the families in their assignment as soon as possible after receiving their workpacks (providing interviewers were available to work immediately) and were required to record when the advance mailing was sent on both the contact sheet and in iProgress. Interviewers were instructed not to make contact until they had waited at least three days after the advance mailing had been sent.

7.5.2 Making contact with cohort families

In approximately 75% of cases first contact was to be made over the telephone, for the remaining 25% of cases interviewers were required to make first contact in person.

7.5.3 Personal visits

Families deemed as likely to be harder to engage (based on prior response history) were allocated face-to-face contact as a first method. Specifically face-to-face as a first contact method was indicated for:

- Families who refused at MCS4
- Families who were unproductive at MCS4 due to language problems or because a family member was away or ill
- Target families
- Families where a telephone number was not known for them

Interviewers were required to make at least eight face-to-face visits to achieve contact (and further visits to achieve all study elements if necessary). At least four of these visits were required to be made during the evenings and weekends.

If no one was at home, interviewers were instructed to leave a calling card to inform the residents of their visit, and try again at a later date.

If when contacting a household interviewers were greeted by a child or young person who said there were no adults present or available for the interviewer to talk to, the interviewer was instructed to leave the household, and not to ask a child or young person for information about household residents, or their likely availability, or for a telephone number.

If contact was made with someone, interviewers were required to try to speak to the partner as well (if applicable) in order to engage them with the study.

If interviewers were not able to contact respondents by telephone or through the personal visit, then they were expected to make reasonable attempts to trace the respondents, as outlined in the next section.

7.5.4 Telephone contact with cohort families

For all families who did not meet the face-to-face criteria outlined in section 7.5.3, first contact was to be made by telephone as these families were likely to be "warm" and would require less work to engage them. Interviewers were also required to make first contact with the family by telephone (as indicated on the Sample Information Sheet) for:

- Families who did not take part at MCS4 because it was not possible to contact them or because they had moved and a new address could not be found for them.
- Families known to be no longer resident at the last known address held
- All geographical outliers

When making contact by telephone, interviewers were required to try all numbers provided on the Sample Information Sheet (up to five times per phone number on different days of the week and at different times). If contact was not made after a week interviewers were instructed to start making contact attempts face-to-face. In addition to this, 'soft refusals' were not to be accepted over the telephone so these also required a face-to-face visit.

Guidance was provided to interviewers as part of the briefing and in their interviewer instructions on making contact by telephone (both practical guidance such as leaving voicemails and guidance on how best to maximize cooperation and how to avoid refusals).

Details of all telephone calls were recorded fully on both the contact sheet and in iProgress.

7.6 Tracing cohort members

7.6.1 Overview

If an interviewer found that a cohort family had moved, they were expected to attempt to find their new address, and there were several steps they had to follow before returning a case to Ipsos MORI for further tracing by CLS.

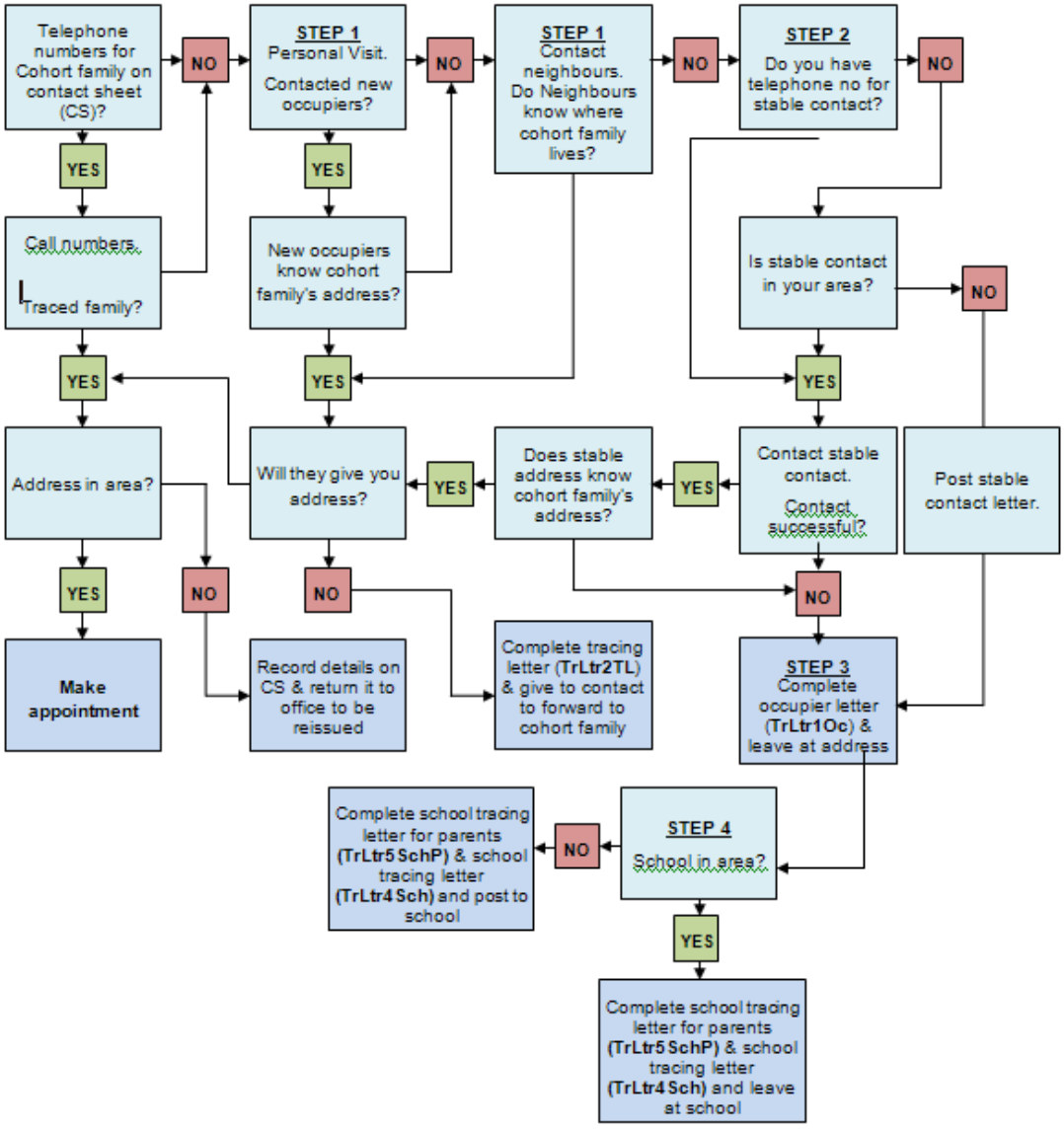
Individual tracing actions involved:

- Making multiple phone calls to the cohort family – interviewers were required to try all telephone numbers provided on the Sample Information Sheet for the cohort family and Parent 1 and Parent 2. A minimum of five phone calls to each of the telephone numbers were required to be made.
- Making multiple visits to the cohort family's last known address. A minimum of eight face-to-face visits were required.

- Speaking to current residents of the last known address or neighbours who may know the whereabouts of the cohort family or who might be able to direct interviewers to friends or relatives nearby who would know how to contact the cohort member.
- Contacting nominated stable contact(s). Contact details for stable contacts were provided on the Sample Information Sheet 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 child was attending when last interviewed (if information was available).
- Contacting the address at which is the cohort family was last interviewed (in certain circumstances).

The following diagram illustrates the tracing process.

Figure 15: Overview of the tracing process



All interviewers were required to record all contacting and tracing attempts (including any new addresses established) and tracing outcomes on their contact sheets and in iProgress.

If interviewers were successful in finding a new address for a family that had moved, they would follow the contact procedures outlined in section 7.5 at the new address. If the new address was outside of the interviewer's area, the case would be returned to Ipsos MORI to be reallocated to another interviewer.

If it was established that the cohort child was no longer living with their parents, interviewers were required to try to find out where the child was now living. If it was established that the child had been taken into care and was living in a private residence, then interviewers were to proceed to interview their new carers as normal (e.g. grandparents, foster parents, adoptive parents or others). If an interviewer was informed that child had been taken into care and was now living in residential care or some other institution they were to find out as much information as possible so that the it could be investigated further to see whether interviewing could still be conducted (see section 7.4.1 for further details). Ipsos MORI forwarded this information to CLS so that a letter explaining the study could be sent to the foster parent(s) or CLS could make contact with the child's social worker. CLS provided updates on progress on care home and foster care cases via the daily update (e.g. refusal by social worker or foster parent) or the sample update (e.g. confirmation of eligibility or new contact details). Nearer the end of fieldwork a list of all in care cases was compiled to check that all had been dealt with, although not all cases were resolved due to time constraints.

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 will therefore be eligible to participate in the study once more – see section 4.11).

7.6.2 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 explained that MCS5 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 intended for the cohort family. Interviewers were instructed to seal the envelope before giving it to the person passing it on in order to protect confidentiality.

7.6.3 Stable contact letter

If interviewers were unable to make contact by telephone or face-to-face with the stable contact(s) provided on their Sample Information Sheet then a stable contact letter could be used.

The letter explained that MCS5 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 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 are part of the study.

7.6.4 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 of the letter to contact Ipsos MORI, or to forward the letter to the addressee, if their new address was known. Interviewers completed the letters and placed them 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 did not mention the study name or cohort child's name as it was intended for the current occupiers who may not know that the family was involved in the study. The email address in the letter and the address on the Freepost return envelope were also anonymous.

7.6.5 Contacting schools

If the cohort child and their family participated at either Age 5 or Age 7 the Sample Information Sheet also included the name and address of the school they were attending (if this was provided at the interview). If the school was local to the interviewer then they were asked to visit and enquire as to whether the child 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 child who previously 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 child's family.

These letters mentioned the child'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.

7.6.6 Incomplete addresses and Non contacts

If any of the addresses provided were incomplete, or could not be found, interviewers were asked to check the address with local residents, maps, directories, the police, etc. to seek to find the correct address.

If interviewers were unable to make contact with anyone at the address, or were not able to make contact with the 'right' person (i.e. they were not able to establish whether the cohort member was living there) they were to attempt to trace the family using the steps outlined above before coding a final non contact outcome code.

7.6.7 Successful and unsuccessful tracing

If interviewers successfully managed to trace a family, and confirmed their new address they were required to do one of two things.

- If the family was a local mover (i.e. in the area the interviewer was working in) the interviewer was to make up and send an advance mailing using the spare materials provided and attempt to contact the family as normal

- If the family had moved out of the interviewer's area, the case was sent back to Ipsos MORI for reallocation.

Where interviewers were unable to trace the family to a new address, all tracing attempts were recorded in full in iProgress so that the case could be passed to the CLS Cohort Maintenance Team for further tracing. See section 7.9 for further details.

7.6.8 Future addresses and change of address card

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).

7.7 Making appointments

7.7.1 Appointment mailing

Interviewers were aware before they started work that it might be necessary to make more than one appointment to cover all elements of the survey, depending on the availability of the survey respondents.

If interviewers were successful in making an appointment they were then required to either send or give the cohort family an appointment mailing. If interviewers contacted a respondent and made the appointment by telephone, then they were required to post the appointment mailing. If the timing of the appointment meant 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 purpose of the appointment mailing was to confirm the appointment in writing and to provide parent(s) with more detailed information about the child elements of the survey and about linking respondents' data to records held by the DWP. Interviewers were required to encourage families to read the information in advance of the visit.

The appointment mailing contained the following:

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

- Child elements leaflet for parent(s) ("More information about the visit") which provided a fuller, more detailed explanation of what the child was being asked to do.

- Data linkage leaflet for parent(s) ("Is there any other information we would like?") which explained why permission was being asked to link survey responses to DWP records. This leaflet was designed specifically to ensure that fully informed consent could be achieved. It is worth noting that this leaflet was sent by the interviewer in the appointment mailing unless it was felt it was more appropriate to introduce it at the time of the visit (i.e. once more of a rapport had been established). Specifically it provided answers to likely questions respondents may have, such as;

- "What am I being asked to give permission for?"
- "What will happen if I give permission?"
- "What will the research be used for and who will use it?"
- "What if I do not want to give permission?"
- "What if I change my mind?"
- "Who do I contact?"

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

7.7.2 Partner letter

A partner letter was used for the first time at MCS5. The letter was designed specifically to try to engage partners in the study and encourage cooperation in order to achieve as high as possible response rate 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
- Giving them the option of arranging an appointment directly with the interviewer

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

A copy of the partner letter can be found in the appendices.

7.7.3 Reminder mailings

Due to the overrunning of Wave 1 fieldwork, reminder letters were sent by interviewers in July 2012 to remind families about the study and encourage them to contact interviewers directly to arrange an appointment. This was in order to help interviewers achieve as many interviews as possible before children started secondary school.

Interviewers were provided with a memo providing guidance on how and when to send the reminder mailing and Region Coordinators were required to monitor that all letters had been sent in a timely manner and also to ensure that interviewers were following the criteria set.

7.8 Return of work

Interviewers recorded the progress of each case on the contact sheet, iProgress and in the CAPI. Once interviewers had finished with a case, an outcome code was assigned to it, the interviewer transmitted the case electronically to Ipsos MORI, and returned all the associated paperwork.

Details of the outcome codes used can be found in the appendices.

Ipsos MORI checked each case individually once it was returned, and then processed the case as described in the following sections.

7.8.1 Productive and partially productive cases

All cases were checked at the booking stage to ensure that all necessary consent forms had been returned and were correctly completed (with the correct barcodes added, signed

and dated) and also that cohort child self-completion questionnaires were returned where applicable and were correctly completed. The booking in process also ensured that all paperwork was returned for productive and partially productive cases and that the serial numbers were correct.

If any problems came to light during the checking, the interviewer was contacted so the problems could be rectified as soon after the case was completed as possible.

Once a case was complete, the data was coded and edited. This process is described in section 10.

7.8.2 Unproductive cases

The course of action taken when cases were returned with unproductive outcomes was dependent on the type of unproductive outcome.

- Refusals: these were checked to ensure that interviewers had made face-to-face contact with the respondents unless there was a valid reason why this had not happened. Interviewers were initially instructed not to accept 'soft refusals' over the telephone. However, during fieldwork Ipsos MORI received some correspondence from families unhappy with being contacted face-to-face after they had already refused over the phone. It was reiterated to interviewers that 'firm refusals' could be accepted over the phone and also that if the interviewer sensed that the respondent did not want to be contacted again but they had not firmly refused that their wishes should be respected. If there was not a valid reason why face-to-face contact had not been made, the case was returned to the interviewer. In addition, if a case was returned to Ipsos MORI as a refusal, checks were also made on any refusals made by someone other than the cohort family.
- Non-contacts: these were checked to ensure interviewers had made the required contact attempts with the family, that is that they had tried to make contact by telephone and in person, and had called on different days of the week and at different times of the day. If this had not been done, the case was returned to the interviewer to progress further.
- Movers - no address found: these cases were checked to ensure that interviewers had completed sufficient tracing attempts. If the interviewer had not followed the tracing steps outlined in section 7.6, the case was reissued to them for further tracing. If sufficient tracing had been done, then the case was referred to CLS's tracing team for further tracing.
- Movers - new address found: if the interviewer had located a new address, but it was outside his or her area, then the address was checked to ensure it was complete. If it was complete, the case was reallocated to another interviewer. If the address was not complete, then the case was returned to CLS for further tracing by CLS's tracing team in a 'mover file' (discussed below).

7.9 Transferring untraced mover cases to CLS

All cases which were returned as untraced movers were collated into a single file (referred to as a 'mover file') and sent to CLS on a weekly basis. The mover file contained all iProgress data for each case. Occasionally mover files were sent to CLS twice a week (i.e. if the number of cases became too large or near to the end of fieldwork).

The iProgress data contained all information about contact attempts as well as all tracing steps completed. Any additional relevant information on the contact sheet, on the sample information sheet, or logged in the respondent communication was also added to the mover file.

CLS returned cases with updated contact information in the sample update twice a week. This is described in detail in section 7.10.1. The number of cases sent to CLS in the mover file and returned to Ipsos MORI in the sample update is detailed in Figure 16. Details of successful tracing are recorded in Figure 37: Tracing outcomes for movers.

The first mover file was sent to CLS on the 16th January 2012 and the last one was sent on the 13th December 2012 to allow CLS time to trace. The last sample update was received on the 22nd January 2012.

The following table shows the number of cases that were sent to CLS in the 'mover file' and the number of cases sent to Ipsos MORI in the sample update file.

Figure 16: Number of cases in 'mover file' and sample update file, by month

Month	No of cases in Mover file sent to CLS	No of cases in Sample Update file received
January 2012	0	170
February 2012	8	105
March 2012	38	98
April 2012	87	36
May 2012	80	52
June 2012	155	101
July 2012	191	304
August 2012	62	224
September 2012	65	109
October 2012	53	71
November 2012	252	114
December 2012	35	191
January 2013	0	33
Total	**1026**	**1608**

7.10 Sample management during fieldwork

7.10.1 Sample updates from CLS

CLS ceased active tracing of cohort members once the sample file was sent to Ipsos MORI prior to the start of fieldwork for each wave. However, information was sometimes received by CLS once the sample had been sent to Ipsos MORI.

CLS provided Ipsos MORI with a file containing sample updates twice a week during fieldwork for cases where they received updates on the original issued sample. How the information was handled depended 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. It also depended on the progress of the case, i.e. whether the case had been issued to an interviewer, the case was being worked or the case had been returned to Ipsos MORI from the interviewer with a final outcome code. The actions taken are summarised in Figure 17.

In July 2012 CLS provided Ipsos MORI with a list of addresses from tracing via NHS records. If interviewers had already made contact with these families then no further action

was taken. If the family had not been successfully contacted, then the interviewer was asked to check the new address if it fell within their area. If the new address was outside of their area and it appeared that the family had moved, then they were asked to code the case as a mover and return it to Head Office as soon as possible.

Any movers returned to Ipsos MORI by interviewers were reallocated using the NHS contact information if available. For Scotland and Northern Ireland, NHS contact information was only provided for cases that had been sent to CLS in the mover file.

Changes to other contact information, such as names, sex, dates of birth, etc. were not normally provided to Ipsos MORI.

Respondents sometimes contacted Ipsos MORI's Head Office with updated contact information (e.g. returned tracing letters). This information was handled in the same way as the sample updates from CLS. A respondent communication log was set up between CLS and Ipsos MORI so that any updates received by CLS could be sent to Ipsos MORI on a daily basis. (Discussed in more detail in sections 7.10.4 and 8.5)

Figure 17: Summary of actions taken as a result of sample updates

Type of update	Status of case		
	Not issued to interviewer	Issued to interviewer, but not yet returned to Ipsos MORI	Issued to interviewer and returned
Change of eligibility status (i.e. cohort child died or emigrated)	The appropriate outcome code was assigned by Ipsos MORI, and the case was not issued to an interviewer.	Ipsos MORI notified the interviewer of the change, and the interviewer assigned the appropriate outcome code before returning the case to Ipsos MORI.	If the case had been returned with a productive outcome code (i.e. if the outcome was achieved prior to receiving the sample update), no action was taken. If the case had been returned with an
Change of participation status	As above	As above	No action, and Ipsos MORI ensured that cases with unproductive outcomes were not reissued.
Change of address status (e.g. cohort family no longer resident at address, but new address unknown)	The case was issued to an interviewer for tracing.	Ipsos MORI notified the interviewer of the change, and the interviewer would enter the appropriate information into iProgress and start tracing.	No action

Change to contact information	The case was issued to an interviewer with the new details.	As above	If the case had been returned with a productive outcome code, no action was taken and the address was given to CLS at the end of fieldwork. If the case had been returned with an unproductive outcome code, then Ipsos MORI assessed if the case could be reissued.

7.10.2 Additional sample from CLS during fieldwork

Following the delivery of the original sample, CLS provided Ipsos MORI with a number of additional cases to issue, namely as a result of tracing carried out by CLS' cohort maintenance team. These were sent in the same way as the twice weekly sample updates.

A large sample update was provided to Ipsos MORI based on updated addresses from data from the National Pupil Database (NPD). In addition to this, new addresses from tracing via NHS records were also provided.

CLS also provided a subsequent update for some cases that had previously been designated as refusals and for a number of families who had recently returned to the UK having previously emigrated.

Figure 18: Overview of changes to sample illustrates the dates each of these additional sample files were delivered to Ipsos MORI to be issued.

7.10.3 Changes to the sample and wave allocations during fieldwork

Throughout fieldwork changes were made to the sample for a number of different reasons, often as a result of sample updates mentioned in section 7.10.2 from CLS to Ipsos MORI. The main changes were as follows:

- NHS updates: In England and Wales, the Medical Research Information Service (via the NHS Information Centre) provided CLS with patient home addresses for cases previously classified as 'Permanently Untraced'. In Scotland and Northern Ireland GP's were asked to send out mailings to MCS families where they were on their books. However these were for cases sent specifically to CLS by Ipsos MORI after unsuccessful tracing attempts had been made.

- National Pupil Database (NPD) updates: CLS traced children via the National Pupil database and provided Ipsos MORI with new contact details.

- Changes in country: In some instances it was discovered by interviewers during their mover tracing in the field or by CLS that the cohort family had moved to another country. This resulted in the case transferring country (and in some cases a change in wave). After a case was delivered to Ipsos MORI the fieldwork wave it was assigned to was fixed i.e. the wave was not updated again, even when the case was conducted in another wave.

- Wave 1c: It was decided during fieldwork that a new wave would be included (Wave 1c).

- Permanent withdrawals: During fieldwork it was established that a number of cases that had been issued at the start of fieldwork had evidence from MCS4 memos to suggest that they should be coded as permanent withdrawals. Due to this, a number of cases were withdrawn during fieldwork.

- Returning emigrants: In some cases, CLS received correspondence during fieldwork from some families who had emigrated (and therefore were not included in the issued sample) informing them of their return to the UK and of their wish to continue participation in the study. These cases were then allocated to interviewers to be worked

Figure 18 illustrates changes in the sample during fieldwork.

Figure 18: Overview of changes to sample

Date	Description	Wave 1A	Wave 1B	Wave 1C	Wave 2	Change (+/-)	Total sample
26/10/2011	Original Live Sample cases					16,072	16,072
25/11/2011	Additional cases from NPD					154	16,226
25/11/2011	Additional refusal conversion cases					144	16,370
	Initial issued sample						**16,370**
13/12/2011	Wave allocation	7,970	6,078		2,322	16,370	16,370
30/01/2012	Transfer of 14 cases from Wave 1b to Wave 1a	7,984	6,064		2,322	14	16,370
15/02/2012	Transfer of 199 Welsh cases from Wave 1b to new Wave 1c	7,984	5,865	199	2,322	199	16,370
17/02/2012	Additional cases from NPD	7,984	5,872	199	2,322	7	16,377
17/02/2012	NPD update causing case transfer from Wave 2 to 1b (country change)	7,984	5,873	199	2,321	1	16,377
21/02/2012	Permanent withdrawal cases	7,981	5,860	199	2,321	16	16,361
19/04/2012	Returning emigrants	7,981	5,868	199	2,322	9	16,370
14/06/2012 & 19/06/2012	Wave 2 permanent withdrawal cases	7,981	5,864	198	2,297	30	16,340
27/07/2012	Additional sample from health records information	7,998	5,893	199	2,297	47	16,387
11/10/2012	Returning emigrant	7,998	5,894	199	2,297	1	16,388
23/10/2012	Returning emigrants	7,998	5,896	199	2,297	2	16,390
03/01/2013	Additional sample from health records information	7,999	5,896	199	2,298	2	16,392
11/02/2013	Permanent withdrawal case[4]	7,999	5,896	200	2,298	1	16,393
	Final sample						**16,393**

7.10.4 Updating sample information

Interviewers were responsible for updating the contact information for all the cases issued to them. For productive cases, the sample information was checked, and updated if necessary, during the interview. For unproductive cases, interviewers would sometimes obtain updates to the sample information during the course of contacting the respondents, and this information was recorded on their contact sheet and in iProgress.

On a daily basis CLS sent an update of the respondent communication they had received to Ipsos MORI. Once received, Ipsos MORI logged all information centrally together with any communication received from respondents directly. Updates for cases which were actively traced by CLS were excluded from these daily updates and included in the sample update (see section 7.10.1).

Any changes to contact information were provided to interviewers via a fieldwork management system at the end of each day so that interviewers could update their records. Interviewers were immediately informed about any communications received that were deemed to be more urgent in nature (such as complaints, refusals or broken appointments) as to prevent any further contact attempts or to rearrange an appointment.

[4] This case was a productive case that was initially removed from the sample as a permanent withdrawal but was subsequently reinstated at the end of fieldwork.

7.11 Fieldwork progress

Fieldwork was initially due to run from January 2012 to December 2012.

Each wave of fieldwork started on time, but all waves finished later than originally timetabled, particularly Wave 1. Figure 19 shows the timetabled and actual fieldwork dates. A summary of timetabled fieldwork dates by country can be found in Figure 3: Summary of wave structure for MCS5.

Figure 19: Proposed and actual fieldwork dates

Wave	Country	Timetabled fieldwork dates	Actual fieldwork dates
1a	All	January 2012 - July 2012	30 January 2012 - 3 February 2013
1b	England, Wales & Northern Ireland	January 2012 - July 2012	24 March 2012 - 3 February 2013
1c	Wales	January 2012 - July 2012	30 April 2012 - 20 January 2013
2	Scotland	August 2012 - December 2012	18 August 2012 - 3 February 2013
2	Northern Ireland	August 2012 - December 2012	1 September 2012 - 3 February 2013

Figure 20 shows the interviews achieved each month, with the timetabled fieldwork dates highlighted, and Figure 21 shows the proportion of interviews that were delayed.

Figure 20: Interviews achieved by month

Month	England Wave 1a-b	Wales Wave 1a-c	Scotland Wave 1a	Scotland Wave 2	N Ireland Wave 1a-b	N Ireland Wave 2	Total
January 2012	11	1	0	-	0	-	12
February 2012	2031	246	50	-	124	-	2451
March 2012	1448	221	179	-	123	-	1971
April 2012	1789	323	48	-	109	-	2269
May 2012	1174	173	7	-	95	-	1449
June 2012	854	223	1	-	109	-	1187
July 2012	587	241	3	-	68	-	899
August 2012	399	218	7	45	29	0	698
September 2012	178	61	1	332	6	197	774
October 2012	122	51	0	441	3	216	833
November 2012	54	37	0	228	5	163	487
December 2012	33	24	0	79	0	35	171
January 2013	3	13	3	40	5	17	81
February 2013	1	0	0	2	0	1	4
Total	**8684**	**1832**	**299**	**1167**	**676**	**629**	**13287**

Figure 21: Proportion of interviews delayed

Month	England Wave 1a-b	Wales Wave 1a-c	Scotland Wave 1a	Scotland Wave 2	N Ireland Wave 1a-b	N Ireland Wave 2	Total
	%	%	%	%	%	%	%
Interviewed within timetabled fieldwork dates	91	78	96	96	93	97	90
Delayed, but interviewed in same school year	5	12	0	4	4	3	5
Delayed to next school year	4	10	4	0	3	0	5

The majority of interviews were conducted within the timetabled fieldwork periods. Overall, only a small proportion of interviews were delayed to the next academic year.

England and Scotland had over 90% of interviews achieved within the timetabled fieldwork period. However in Wales (Wave 1), over 10% of fieldwork took place in the next school year.

7.12 Progress reporting

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

The weekly report showed response at household level by fieldwork wave. Response was broadly split into categories of productive, non-productive, ineligible, uncertain eligibility (i.e. movers and outstanding cases). The first weekly report was provided on 16th February 2012.

During fieldwork it was agreed that household response by wave within country would also be provided to CLS on a weekly basis. The first of these reports were sent to CLS on 31st July 2012.

A number of monthly reports were provided to CLS during fieldwork, as follows:

- Individual elements – Main
- Individual elements – Partner
- Individual elements – Physical measurements
- Individual elements – Cognitive assessments
- Individual elements – Child self-completion

  Outcomes of individual elements were provided for productive households within each country (England, Wales, Scotland and Northern Ireland)

- Consent to teacher survey and data linkage: Shows consent given to the teacher survey for children in productive households within England and Wales and consent for DWP data linkage given by main and partner respondent in productive households within each country

- Household response by sweep of last participation: Shows household response at MCS5 against the last time the family participated in MCS

- Household Response by Stratum: Shows household response at MCS5 within country for each stratum (advantaged, disadvantaged and Ethnic)

- Household response by MCS4 outcome: Shows household response for MCS5 against outcomes at MCS4 (productive, ineligible non-contact, refusal and other unproductive)

- Household response by case within wave: Shows household response at MCS5 within fieldwork wave (1a-c and 2) for priority, target and other cases

- Household response by prior response history: Shows household response at MCS5 against previous productive survey sweeps

- Telephone contact by fieldwork wave: Shows advised method of contact in each wave. Also indicates if the contact attempt was successful and if an appointment was arranged via the telephone

- Language of interviews and assessments: Shows language used for the main and partner interview, as well as if English or Welsh was used for the child elements for children in Wales

- Household response for traced movers by survey wave: Shows household response for movers who have been traced by CLS or Ipsos MORI within each fieldwork wave

- Movers by Fieldwork Wave: Shows the number of movers within each fieldwork wave and if they were been traced by Ipsos MORI or CLS

- Within Household Response - Re-issues by survey wave: Shows the household outcome of cases which were reissued (refusals, non-contacts or 'other reason' at first issue) within each fieldwork wave

The first monthly reports were provided in April 2012.

All reports continued to be sent throughout fieldwork, with the last weekly report provided on 12th February 2013 and the last monthly reports provided in April 2013.

7.13 Translations

7.13.1 Welsh households

At the appointment making stage, families were asked if they would like parent and child elements to be administered in English or Welsh. If the family requested for the interview to be conducted in Welsh, the address was reallocated to a Welsh speaking interviewer.

7.13.2 Addressing other language support needs

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

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 be used. In order to meet the criteria a 'household interpreter' had to be:

- Another household member, or neighbour/friend/family member who the family feel comfortable with being present, and who is fluent in both English and the other language

- Aged 16+

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

Interviewers recorded the nature of any language support given to respondents in the Other Elements 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. Interviewers in Wales were also asked to record whether any of the child cognitive assessments or child questionnaire were done in Welsh.

The number of interviews conducted in languages other than English is shown in Figure 22.

Figure 22: Number of interviews conducted in languages other than English

Language	Main respondent	Partner respondent
	N	N
Total productive sample	**13176**	**8815**
Not translated	**12957**	**8662**
Translated	**219**	**153**
Welsh	18	7
Gaelic	2	0
Urdu	58	39
Punjabi	31	29
Gujarati	9	10
Hindi	10	4
Bengali	53	38
Sylheti	0	1
Cantonese	1	0
Somali	6	2
Tamil	6	3
Turkish	0	0
Kurdish	0	0
Arabic	12	10
Other European language	2	1
Other African language	0	1
Other Asian language	4	5
Other	7	3
	%	%
Not translated	**98.3**	**98.3**
Translated	**1.7**	**1.7**

Cohort members in Wales were offered the option of doing cognitive assessments in Welsh. This included carrying out Verbal Similarities, Memory Task and Decision Making Task. Figure 23 shows the number of assessments conducted in English and Welsh. Other language options were not offered for any of the assessments.

Figure 23: Number of cognitive assessments in Wales conducted in English and Welsh

Language	Self Completion	Verbal Similarities	Memory Task	Decision Making Task
	N	N	N	N
Total productive sample	**1801**	**1794**	**1782**	**1779**
English	1780	1774	1762	1749
Welsh	21	20	20	20
	%	%	%	%
English	98.8	98.9	98.9	98.3
Welsh	1.2	1.1	1.1	1.1

Cohort members in Wales were also offered the option of completing the Welsh language version of the child self-completion questionnaire. Out of the 1801 child self-completion questionnaires completed in Wales (see Figure 23) 21 used the Welsh language questionnaire.

7.14 Thank you mailing

All families that took part in the study were sent a thank you letter for the parents and a thank you certificate for the child.

The thank you certificate was designed by Ipsos MORI's in-house graphics team. A separate Welsh thank you certificate was also produced. Children in Wales received a thank you certificate in Welsh and English. The thank you letter was also translated into Welsh and the eight additional minority ethnic languages.

Thank you mailings were sent out approximately every two weeks after the commencement of main stage fieldwork. Contact information was cleaned and thank you mailings were dispatched before the contact information was returned to CLS to ensure a prompt turnaround.

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.

Figure 24: MCS5 thank you mailing

Mailing	Date of dispatch	Quantity
1	08 March 2012	1,081
2	15 March 2012	1,181
3	29 March 2012	1,118
4	13 April 2012	593
5	26 April 2012	939
6	14 May 2012	1,115
7	25 May 2012	767
8	01 June 2012	294
9	12 June 2012	296
10	22 June 2012	606
11	05 July 2012	639
12	19 July 2012	540
13	06 August 2012	386
14	16 August 2012	410
15	31 August 2012	363
16	13 September 2012	291
17	28 September 2012	363
18	12 October 2012	453
19	27 October 2012	401
20	08 November 2012	362
21	22 November 2012	356
22	05 December 2012	241
23	29 December 2012	171
24	13 January 2013	146
25	03 February 2013	78
26	22 February 2013	63
27	11 March 2013	33
28	20 May 2013	2
	Total:	13,288[5]

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[5] One household was included at mailing two and mistakenly again at mailing five. In addition, two mailings were delayed being sent as it was established that the household was productive during finalising the data.

8. Quality control and reporting

8.1 Overview

Throughout fieldwork a range of measures were taken to monitor interviewing quality. These included interviewer accompaniment, validations and exception reporting, and are all discussed in more detail below. In addition, section 8.5 also discusses the approach taken to handling complaints. It is worth noting that a monthly report on this activity was provided during fieldwork, and that checks were made across all elements for consistency of individual interviewers' work.

As mentioned previously, in order to prepare for the study, all interviewers were required to attend the briefing and conduct two practice sessions with children aged 10-11 years old before starting work. In addition, interviewers were set homework with the equipment and contact sheet/iProgress before and during the briefing session and were required to conduct a minimum of two dummy interviews and to practice further at home.

Interviewers' work was checked when it was returned to the office to ensure that sufficient tracing was done where necessary, that outcome codes were assigned correctly, and that all necessary paperwork, such as consent forms and paper self-completion questionnaires, was returned. If it was felt that an interviewer had not tried hard enough to trace respondents that had moved, then the case was returned to the interviewer for further tracing. See section 7.6 for further details.

8.2 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 MCS5, interviewers were accompanied within their first four weeks of starting work. Interviewers were prioritised for accompaniment on the basis of experience as well as those identified as less confident in the briefings to ensure that appropriate support was provided in the early stages. A few accompaniments fell outside the four week window due to broken appointments or illness.

Accompaniments are an important source of communication and support, allowing coaching to be provided on an ongoing basis. To aid this, for MCS5 a tailored accompaniment form was produced to ensure that supervisors were able to pick up on and feed back issues relevant to the study. Supervisors attended a briefing session on the accompaniment process and, where possible, they were asked to include visits where the child elements were attempted.

On completion, each interviewer was given an overall score on a scale of 1-5 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 those scoring 3 and all scoring 4 or 5 had a second accompaniment to provide additional supervised practice and support. Overall, 17 interviewers had a second accompaniment and two had a third. As a result of this process, three interviewers were removed from the interviewing panel on the basis of their performance at the briefing and/or because their performance did not improve on further supervision.

Scores were cross checked against interviewer performance via the validations and exception reporting.

8.3 Validation

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

- 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
- Whether the interviewer was able to explain all the different elements of the survey clearly to the respondent and to the cohort child
- Whether the interview conducted the physical measurements and provided the child with the self completion questionnaire
- Whether the respondent was asked to sign a consent form

  Validators are also able to trigger an automated email to the Quality team if there is a serious issue to report.

In total, 1,314 validations were completed, 10% of the total number of interviews completed and covering the work of 185 interviewers. Over the course of MCS5 fieldwork, three assignments were flagged as of potential concern, but on further investigation no reason was found for concern about the interviewers' work.

8.4 Exception reporting

As a further check on the quality of completed interviewing, regular exception reporting was conducted. This analyses survey data and other background information recorded by CAPI at the interviewer level in order to identify any instances where interviewers are 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 MCS5 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 of initial contact, use of audio on the child self-completion, refusal rates for the physical measurements, 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 feedback to interviewers about performance, for example, collectively via newsletters, memos or text messages as useful reminders aimed at improving performance generally and resolving any apparent misconceptions. It was also provided in a more targeted way, highlighting interviewers with issues of particular concern and seeking direct feedback.

8.5 Fieldwork complaints

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 respondent communication log. They were then acknowledged within two working days with a standard response explaining that the matter would be investigated fully. Complaints made to either organization were passed on, where relevant, within a day of receipt. 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 follow-up action was complete, all complaints were assessed as being either valid or invalid and 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 in writing and any action required was also documented. Depending on the seriousness of the complaint, this would range from a formal verbal or written warning, extra coaching, additional supervision, to dismissal from the interviewer panel. A copy of this letter remains on the interviewer's file.

A letter (by post) was sent to the individual who complained in order to confirm the nature of their complaint and the actions undertaken as a result. All relevant details were logged electronically with respondent ID number references so that they could be matched into the sample file. At the end of fieldwork all documentation (spreadsheet and letters) were passed on to CLS for archiving.

Complaints were split into two broad types, explicit complaints and more general respondent enquiries/communication. The latter included queries such as verification of the study by foster parents, removal of consent, change of household details and requests for a replacement interviewer, for example. In total, during the fieldwork, Ipsos MORI responded to 13 explicit complaints and received 31 enquiries from respondents, 21 of which required a formal response. Of the 13 explicit complaints none of them were upheld with the interviewer. However, in three cases interviewers were reminded of the survey procedures.

These complaints were only a small proportion of all calls received from respondents about the study. In total, over 700 calls were received (direct to Ipsos MORI and CLS). CLS sent through any calls received daily using a respondent communication spreadsheet. These daily updates included c.160 booking/changing appointments, c.165 changing contact/household details, c.210 refusals and c.70 messages for interviewers (among others). In addition, there were 18 recorded calls by respondents wishing to withdraw their consent to data linkage and three respondents who requested deletion of all survey data provided including consents, following a successful interview. A further 600 items of returned mail were also logged.

9. Survey Response

9.1 Household response

The issued sample comprised a total of 16,393 families. Of these, 78 were not eligible because the cohort child had died or emigrated. A further 388 were of uncertain eligibility.

A total of 13,287 families were successfully interviewed, giving a survey response rate[6] of 81.4% of the eligible sample, and a co-operation rate[7] of 83.4%. The survey response rate is comparable to the MCS4 response rate (81.9%).

Overall, 12.4% of contacted cohort families refused to participate in the survey. Figure 25 provides a detailed breakdown of the response to the survey.

Figure 25: Summary of contact and response

	No.	Survey response rate	Co-operation rate
Total sample	**16393**		
Total ineligible	**78**		
Died	2		
Emigrated	76		
Total eligible sample	**16315**	**100.0%**	
Uncertain eligibility	**388**	**2.4%**	
Untraced movers/ Other unknown eligibility	382	2.3%	
Traced movers/ ran out of time	6	*	
Total sample traced and eligible	**15927**	**97.6%**	**100.0%**
Productive	**13287**	**81.4%**	**83.4%**
Fully productive	11622	71.2%	73.0%
Partially productive	1665	10.2%	10.5%
Refusals	**2026**	**12.4%**	**12.7%**
Office refusal	207	1.3%	1.3%
Refusal to interviewer	1819	11.1%	11.4%
Other unproductive	**614**	**3.8%**	**3.9%**
Non-contact	326	2.0%	2.0%
Broken appointment - no recontact	170	1.0%	1.1%
Ill during fieldwork period	17	0.1%	0.1%
Away/ in hospital during fieldwork period	9	0.1%	0.1%
Language difficulties	3	*	*
Other reason	86	0.5%	0.5%

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

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

Productive - but respondent asked for data deletion	3	*	*

9.1.1 Household response by response at prior sweeps

Figure 26 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 (89.7%). Co-operation rates steadily dropped the longer ago the household last participated. The co-operation rate was 54.0% for families who participated in MCS3, 46.7% for MCS2 and 38.8% for families who had only participated at the first sweep.

Figure 26: Summary of response by sweep of last participation

	Total	MCS4	MCS3	MCS2	MCS1
	N	N	N	N	N
Total sample	**16393**	**13649**	**1645**	**647**	**452**
Total ineligible	**78**	**54**	**17**	**4**	**3**
Died	2	1	1	0	0
Emigrated	76	53	16	4	3
Uncertain eligibility	**388**	**168**	**107**	**58**	**55**
Untraced movers/ Other unknown eligibility	382	164	106	57	55
Traced movers/ ran out of time	6	4	1	1	0
Total sample traced and eligible	**15927**	**13427**	**1521**	**585**	**394**
Productive	**13287**	**12039**	**822**	**273**	**153**
Fully productive	11622	10660	628	212	122
Partially productive	1665	1379	194	61	31
Unproductive	**2640**	**1388**	**699**	**312**	**241**
Non-contact	326	172	86	25	43
Office refusal	207	109	55	27	16
Refusal to interviewer	1819	942	498	230	149
Broken appointment - no recontact	170	101	39	16	14
Ill during fieldwork period	17	8	2	3	4
Away/ in hospital during fieldwork period	9	7	2	0	0
Language difficulties	3	2	0	0	1
Other reason	86	44	17	11	14
Productive - but respondent asked for data deletion	3	3	0	0	0
	%	%	%	%	%
Sample traced and eligible	**97.2**	**98.4**	**92.5**	**90.4**	**87.2**
Survey response rate	**81.1**	**88.2**	**50.0**	**42.2**	**33.8**
Co-operation rate	**83.4**	**89.7**	**54.0**	**46.7**	**38.8**

Figure 27 provides a more detailed overview of responses based on the full previous response history. Co-operation rates were also highest among those families that had taken part in all previous sweeps: 91.6 % for families that participated in all four sweeps and 88.3% for families recruited at MCS2 who had participated in every sweep since. Households which had only participated in three (out of four possible) previous sweeps had a co-operation rate of 67.5%.

Families which had taken part in two or one out of the four previous sweeps proved to be the least cooperative with co-operation rates of 50.1% and 38.8%, respectively.

[10] See section 2.1 for details

Figure 27: Summary of response by prior response history

	Total	Participated in all four sweeps response rate	Participated in three previous sweeps	New MCS2 families: Participated in three previous sweeps	Participated in two previous sweeps	New MCS2 families: Participated in two previous sweeps	Participated in one previous sweeps	New MCS2 families: Participated in one previous sweeps
	N	N	N	N	N	N	N	N
Total sample	**16393**	**11557**	**2661**	**461**	**1106**	**107**	**452**	**49**
Total ineligible	**78**	**43**	**15**	**4**	**11**	**2**	**3**	**0**
Died	2	1	0	0	0	1	0	0
Emigrated	76	42	15	4	11	1	3	0
Uncertain eligibility	**388**	**104**	**117**	**12**	**87**	**5**	**55**	**8**
Untraced movers/ Other unknown eligibility	382	102	116	11	85	5	55	8
Traced movers/ ran out of time	6	2	1	1	2	0	0	0
Total sample traced and eligible	**15927**	**11410**	**2529**	**445**	**1008**	**100**	**394**	**41**
Productive	**13287**	**10448**	**1707**	**393**	**505**	**57**	**153**	**24**
Fully productive	11622	9330	1376	345	382	48	122	19
Partially productive	1665	1118	331	48	123	9	31	5
Unproductive	**2640**	**962**	**822**	**52**	**503**	**43**	**241**	**17**
Non-contact	326	109	96	10	53	12	43	3
Office refusal	207	84	55	1	42	7	16	2
Refusal to interviewer	1819	653	589	37	357	22	149	12
Broken appointment - no recontact	170	69	51	3	31	2	14	0
Ill during fieldwork period	17	6	3	0	4	0	4	0
Away/ in hospital during fieldwork period	9	6	2	0	1	0	0	0
Language difficulties	3	1	1	0	0	0	1	0
Other reason	86	32	24	1	15	0	14	0
Productive - but respondent asked for data deletion	3	2	1	0	0	0	0	0

CONT'D

	Total	Participated in all four sweeps response rate	Participated in three previous sweeps	New MCS2 families: Participated in three previous sweeps	Participated in two previous sweeps	New MCS2 families: Participated in two previous sweeps	Participated in one previous sweeps	New MCS2 families: Participated in one previous sweeps
	%	%	%	%	%	%	%	%
Sample traced and eligible	**97.2**	**98.7**	**95.0**	**96.5**	**91.1**	**93.5**	**87.2**	**83.7**
Survey response rate	**81.1**	**90.4**	**64.1**	**85.2**	**45.7**	**53.3**	**33.8**	**49.0**
Co-operation rate	**83.4**	**91.6**	**67.5**	**88.3**	**50.1**	**57.0**	**38.8**	**58.5**

9.1.2 Household response by response at MCS4 outcome

Households' response by outcome at MCS4 is given in Figure 28. As may be expected, households which were productive at MCS4 were most likely to participate in MCS5 (89.7%) followed by non-contacts (61.4%), other unproductive outcomes (55.7%) and ineligibles (44.2%). Only 37.3% of families who had refused at MCS4 participated in MCS5.

Figure 28: Summary of response by MCS4 outcome

	Total	Productive	Ineligible	Non-contact	Refusal	Other unproductive
	N	N	N	N	N	N
Total sample	**16393**	**13649**	**245**	**852**	**911**	**736**
Total ineligible	**78**	**54**	**1**	**12**	**6**	**5**
Died	2	1	0	0	0	1
Emigrated	76	53	1	12	6	4
Uncertain eligibility	**388**	**168**	**13**	**117**	**39**	**51**
Untraced movers/ Other unknown eligibility	382	164	13	115	39	51
Traced movers/ ran out of time	6	4	0	2	0	0
Total sample traced and eligible	**15927**	**13427**	**231**	**723**	**866**	**680**
Productive	**13287**	**12039**	**102**	**444**	**323**	**379**
Fully productive	11622	10660	83	366	221	292
Partially productive	1665	1379	19	78	102	87
Unproductive	**2640**	**1388**	**129**	**279**	**543**	**301**
Non-contact	326	172	12	77	29	36
Office refusal	207	109	16	19	44	19
Refusal to interviewer	1819	942	86	148	445	198
Broken appointment - no recontact	170	101	7	17	14	31
Ill during fieldwork period	17	8	3	1	0	5
Away/ in hospital during fieldwork period	9	7	0	1	0	1
Language difficulties	3	2	0	1	0	0
Other reason	86	44	5	15	11	11
Productive - but respondent asked for data deletion	3	3	0	0	0	0
	%	%	%	%	%	%
Sample traced and eligible	**97.2**	**98.4**	**94.3**	**84.9**	**95.1**	**92.4**
Survey response rate	**81.1**	**88.2**	**41.6**	**52.1**	**35.5**	**51.5**
Co-operation rate	**83.4**	**89.7**	**44.2**	**61.4**	**37.3**	**55.7**

9.1.3 Household response by stratum

The sample was split into different strata for all countries: advantaged and disadvantaged. Families from the advantaged stratum were slightly more likely to participate in all countries. Families from disadvantaged wards in Wales and Scotland were among the least likely to cooperate (with co-operation rates of 79.3% and 77.0% respectively). In England there was also an ethnic minority stratum. With a co-operation rate of 81.6%, families from these wards were among the least likely to participate in MCS5.

Figure 29: Summary of response by stratum

	Total	England Ad-vantaged	England Disad-vantaged	England Ethnic	Wales Ad-vantaged	Wales Disad-vantaged	Scotland Ad-vantaged	Scotland Disad-vantaged	N Ireland Ad-vantaged	N Ireland Disad-vantaged
	N	N	N	N	N	N	N	N	N	N
Total sample	**16393**	**4160**	**4143**	**2161**	**717**	**1678**	**940**	**982**	**600**	**1012**
Total ineligible	**78**	**17**	**23**	**13**	**5**	**4**	**5**	**5**	**3**	**3**
Died	2	0	1	1	0	0	0	0	0	0
Emigrated	76	17	22	12	5	4	5	5	3	3
Uncertain eligibility	**388**	**44**	**97**	**59**	**22**	**53**	**24**	**60**	**6**	**23**
Untraced movers/ Other unknown eligibility	382	44	94	57	22	52	24	60	6	23
Traced movers/ ran out of time	6	0	3	2	0	1	0	0	0	0
Total sample traced and eligible	**15927**	**4099**	**4023**	**2089**	**690**	**1621**	**911**	**917**	**591**	**986**
Productive	**13287**	**3598**	**3316**	**1704**	**596**	**1285**	**774**	**706**	**500**	**808**
Fully productive	11622	3243	2891	1385	535	1122	686	619	439	702
Partially productive	1665	355	425	319	61	163	88	87	61	106
Unproductive	**2640**	**501**	**707**	**385**	**94**	**336**	**137**	**211**	**91**	**178**
Non-contact	326	49	85	80	14	60	10	19	2	7
Office refusal	207	51	55	23	5	14	16	15	7	21
Refusal to interviewer	1819	357	489	231	68	219	101	147	78	129
Broken appointment - no recontact	170	31	45	27	3	26	7	20	3	8

Ill during fieldwork period	17	3	6	3	0	0	2	1	0	2
Away/ in hospital during fieldwork period	9	0	3	2	1	2	0	1	0	0
Language difficulties	3	0	1	2	0	0	0	0	0	0
Other reason	86	10	21	17	3	15	1	8	1	10
Productive - but respondent asked for data deletion	3	0	2	0	0	0	0	0	0	1
	%	%	%	%	%	%	%	%	%	%
Sample traced and eligible	**97.2**	**98.5**	**97.1**	**96.7**	**96.2**	**96.6**	**96.9**	**93.4**	**98.5**	**97.4**
Survey response rate	**81.1**	**86.5**	**80.0**	**78.9**	**83.1**	**76.6**	**82.3**	**71.9**	**83.3**	**79.8**
Co-operation rate	**83.4**	**87.8**	**82.4**	**81.6**	**86.4**	**79.3**	**85.0**	**77.0**	**84.6**	**81.9**

9.1.4 Household response by case within wave

Household response by case within wave is illustrated in Figure 30. Priority cases (families with a low contact propensity) were most difficult to trace and had the lowest co-operation rate. Target cases (families with a low co-operation propensity) also had a lower co-operation rate than other cases. More detailed explanations of the different case types can be found in section 2.4.

Figure 30: Summary of response by case in wave

	Total	Wave 1a Priority	Wave 1a Target	Wave 1a Other	Wave 1b Priority	Wave 1b Target	Wave 1b Other	Wave 1c Target	Wave 1c Other	Wave 2 Target	Wave 2 Other
	N	N	N	N	N	N	N	N	N	N	N
Total sample	**16393**	**1234**	**1648**	**5117**	**39**	**1383**	**4474**	**62**	**138**	**642**	**1656**
Total ineligible	**78**	**19**	**9**	**17**	**0**	**6**	**14**	**0**	**0**	**3**	**10**
Died	2	0	2	0	0	0	0	0	0	0	0
Emigrated	76	19	7	17	0	6	14	0	0	3	10
Uncertain eligibility	**388**	**83**	**55**	**56**	**2**	**50**	**58**	**2**	**4**	**28**	**50**
Untraced movers/ Other unknown eligibility	382	80	55	54	2	50	57	2	4	28	50
Traced movers/ ran out of time	6	3	0	2	0	0	1	0	0	0	0
Total sample traced and eligible	**15927**	**1132**	**1584**	**5044**	**37**	**1327**	**4402**	**60**	**134**	**611**	**1596**
Productive	**13287**	**763**	**1152**	**4535**	**22**	**938**	**3928**	**39**	**114**	**424**	**1372**
Fully productive	11622	626	896	4111	18	746	3516	30	97	342	1240
Partially productive	1665	137	256	424	4	192	412	9	17	82	132
Unproductive	**2640**	**369**	**432**	**509**	**15**	**389**	**474**	**21**	**20**	**187**	**224**
Non-contact	326	83	45	68	7	39	48	3	4	11	18
Office refusal	207	31	39	37	1	23	36	1	1	18	20
Refusal to interviewer	1819	206	299	351	5	293	335	14	12	141	163
Broken appointment - no recontact	170	26	29	28	0	23	36	3	1	9	15
Ill during fieldwork period	17	3	3	4	1	0	5	0	0	1	0
Away/ in hospital during fieldwork period	9	3	1	2	0	1	1	0	0	0	1

Language difficulties	3	1	1	1	0	0	0	0	0	0	0
Other reason	86	16	15	17	1	9	13	0	2	7	6
Productive - but respondent asked for data deletion	3	0	0	1	0	1	0	0	0	0	1
	%	%	%	%	%	%	%	%	%	%	%
Sample traced and eligible	**97.2**	**91.7**	**96.1**	**98.6**	**94.9**	**96.0**	**98.4**	**96.8**	**97.1**	**95.2**	**96.4**
Survey response rate	**81.1**	**61.8**	**69.9**	**88.6**	**56.4**	**67.8**	**87.8**	**62.9**	**82.6**	**66.0**	**82.9**
Co-operation rate	**83.4**	**67.4**	**72.7**	**89.9**	**59.5**	**70.7**	**89.2**	**65.0**	**85.1**	**69.4**	**86.0**

9.1.5 Household response by country of issue

Differences in response and co-operation rates by country were only small. These are shown in Figure 31. The highest co-operation rate was in England (84.4%), with the lowest in Scotland (80.9%). It is worth noting that Scotland had the lowest number of addresses that were traced and eligible to take part (95.1% compared to 97.2% overall).

Figure 31: Summary of response by country of issue

	Total	England	Wales	Scotland	N Ireland
	N	N	N	N	N
Total sample	**16393**	**10554**	**2330**	**1905**	**1604**
Total ineligible	**78**	**54**	**9**	**10**	**5**
Died	2	2	0	0	0
Emigrated	76	52	9	10	5
Uncertain eligibility	**388**	**208**	**70**	**84**	**26**
Untraced movers/ Other unknown eligibility	382	202	70	84	26
Traced movers/ ran out of time	6	6	0	0	0
Total sample traced and eligible	**15927**	**10292**	**2251**	**1811**	**1573**
Productive	**13287**	**8684**	**1832**	**1466**	**1305**
Fully productive	11622	7584	1607	1293	1138
Partially productive	1665	1100	225	173	167
Unproductive	**2640**	**1608**	**419**	**345**	**268**
Non-contact	326	220	69	29	8
Office refusal	207	129	19	31	28
Refusal to interviewer	1819	1083	283	245	208
Broken appointment - no recontact	170	105	28	26	11
Ill during fieldwork period	17	12	0	3	2
Away/ in hospital during fieldwork period	9	6	2	1	0
Language difficulties	3	3	0	0	0
Other reason	86	48	18	10	10
Productive - but respondent asked for data deletion	3	2	0	0	1
	%	%	%	%	%
Sample traced and eligible	**97.2**	**97.5**	**96.6**	**95.1**	**98.1**
Survey response rate	**81.1**	**82.3**	**78.6**	**77.0**	**81.4**
Co-operation rate	**83.4**	**84.4**	**81.4**	**80.9**	**83.0**

9.2 Mode of contact

If a family had participated in MCS4 and a telephone number for that family was available, then interviewers were asked to attempt to make first contact with the family by telephone. Across all waves, if interviewers were advised to use telephone as the first contact method, this happened in the majority of cases (91.6% in Wave 1a, 91.9% in Wave 1b, 79.8% in Wave 1c and 88.2% in Wave 2).

For some families, where the interviewer was asked to make contact by face-to-face first, contact was still attempted by telephone. This varied between a tenth of the families in Wave 1a and a third of the families in Wave 1c. Families who were meant to be contacted face-to-face were less likely to be successfully contacted by phone, and if contact was established by phone appointments were only made in around 4 in 5 cases.

Overall, telephone contact was attempted for two-thirds of addresses (66.6%) of which 85.0% resulted in actual contacts. In 90.5% of cases where the interviewer made contact via telephone, they succeeded in making an appointment. This corresponds to half of the total sample. A detailed breakdown by wave is given in Figure 32.

If interviewers were not able to make contact by telephone, or were unable to make an appointment over the telephone after five attempts, they were required to make up to eight personal visits to the address, as described in section 9.3.

Figure 32: Summary of telephone contact by country of issue

	Total	Wave 1a Telephone advised	Wave 1a F2F advised	Wave 1b Telephone advised	Wave 1b F2F advised	Wave 1c Telephone advised	Wave 1c F2F advised	Wave 2 Telephone advised	Wave 2 F2F advised
Total sample	**16393**	**5414**	**2585**	**4101**	**1795**	**129**	**71**	**1523**	**775**
Telephone contact attempted	**10915**	**4961**	**254**	**3769**	**264**	**103**	**26**	**1344**	**194**
% of total sample	66.6	91.6	9.8	91.9	14.7	79.8	36.6	88.2	25.0
Telephone contact made	**9274**	**4213**	**192**	**3266**	**183**	**87**	**19**	**1155**	**159**
% of telephone contact attempted	85.0	84.9	75.6	86.7	69.3	84.5	73.1	85.9	82.0
Appointment made by telephone	**8390**	**3806**	**154**	**3021**	**148**	**84**	**14**	**1043**	**120**
% of telephone contact made	90.5	90.3	80.2	92.5	80.9	96.6	73.7	90.3	75.5
% of total sample	51.2	70.3	6.0	73.7	8.2	65.1	19.7	68.5	15.5

9.3 Interviewer visits to productive households

Figure 33 shows the total number of personal visits made by interviewers to each productive cohort family.Two-thirds of productive families were interviewed after one or two visits. On average 2.5 personal visits were required to each productive household.

Figure 33: Number of personal visits per productive family at MCS5

Number of personal visits	% of MCS5 productive families
1	44
2	23
3	13
4	7
5	5
6	3
7	2
8	1
9	1
10 or more	2

9.4 Reissues

Cases were reissued if families refused to the interviewer, the interviewer was unable to make contact with the family after 8 personal visits and 5 phone calls or for some other reasons (e.g. the respondent was busy or away from home). A total of 1,738 addresses were reissued to a new interviewer. Of these 21 cases were reissued twice. A total of 487 reissued addresses resulted in a productive outcome (28%).

Two thirds of the cases (1,143) were reissued after the family had refused to the original interviewer. 454 cases were non-contacts at the first issue and 141 households had an "other" outcome. This pattern was the same across all waves.

40.9% of households which were unproductive due to an "other" reason co-operated at the reissue. The co-operation rate for families that were a non-contact at the first issue was 33.4%. Refusals to the interviewer at the first issue were only converted in 26.0% of cases. As indicated in Figure 34 these response rates only vary slightly between fieldwork waves.

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.[8] The possible outcomes from highest to lowest precedence were: productive, data lost or deletion requested, cohort child 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 is worth noting that household outcomes illustrated in Figure 34 (Reissues) as well as Figure 35 and Figure 36 (Movers) do not have this hierarchy implemented, but instead use the outcome of the latest issue as the household outcome.

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

Figure 34: Summary of final issue outcomes of reissued households

	Total Non Contacts	Total Refusals	Total Other	Wave 1a Non Contacts	Wave 1a Refusals	Wave 1a Other	Wave 1b Non Contacts	Wave 1b Refusals	Wave 1b Other	Wave 1c Non Contacts	Wave 1c Refusals	Wave 1c Other	Wave 2 Non Contacts	Wave 2 Refusals	Wave 2 Other
	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Total sample reissued	**454**	**1143**	**141**	**259**	**564**	**72**	**144**	**386**	**41**	**10**	**19**	**3**	**41**	**174**	**25**
Uncertain eligibility	**32**	**12**	**14**	**20**	**7**	**9**	**6**	**4**	**3**	**0**	**1**	**0**	**6**	**0**	**2**
Untraced movers/ Other unknown eligibility	32	12	13	20	7	8	6	4	3	0	1	0	6	0	2
Traced movers/ ran out of time	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0
Total sample traced and eligible	**422**	**1131**	**127**	**239**	**557**	**63**	**138**	**382**	**38**	**10**	**18**	**3**	**35**	**174**	**23**
Productive	**141**	**294**	**52**	**78**	**169**	**27**	**48**	**85**	**15**	**6**	**4**	**1**	**9**	**36**	**9**
Fully productive	109	225	40	59	131	21	37	65	11	6	3	1	7	26	7
Partially productive	32	69	12	19	38	6	11	20	4	0	1	0	2	10	2
Unproductive	**281**	**837**	**75**	**161**	**388**	**36**	**90**	**297**	**23**	**4**	**14**	**2**	**26**	**138**	**14**
Non-contact	151	180	20	85	91	10	57	67	5	1	4	1	8	18	4
Office refusal	5	15	2	3	11	0	2	3	1	0	0	0	0	1	1
Refusal to interviewer	84	550	33	53	241	14	19	192	11	2	8	1	10	109	7
Broken appointment - no recontact	24	57	6	14	25	2	6	22	3	1	1	0	3	9	1
Ill during fieldwork period	2	8	0	0	5	0	2	3	0	0	0	0	0	0	0
Away/ in hospital during fieldwork period	3	6	2	1	4	2	0	2	0	0	0	0	2	0	0
Language difficulties	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other reason	12	21	12	5	11	8	4	8	3	0	1	0	3	1	1
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Survey response rate	**31.1**	**25.7**	**36.9**	**30.1**	**30.0**	**37.5**	**33.3**	**22.0**	**36.6**	**60.0**	**21.1**	**33.3**	**22.0**	**20.7**	**36.0**
Co-operation rate	**33.4**	**26.0**	**40.9**	**32.6**	**30.3**	**42.9**	**34.8**	**22.3**	**39.5**	**60.0**	**22.2**	**33.3**	**25.7**	**20.7**	**39.1**

9.5 Movers and tracing

Overall, 15.6% 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 were in Wales (18.2%) and the lowest in Northern Ireland (12.4%). Details of the steps interviewers took to trace respondents can be found in section 7.6.

Figure 35: Proportion of sample that no longer lived at issued address

	Total	England	Wales	Scotland	N Ireland
	N	N	N	N	N
Total sample	**16393**	**10554**	**2330**	**1905**	**1604**
Non-movers	13838	8951	1905	1577	1405
Movers	2555	1603	425	328	199
	%	%	%	%	%
Non-movers	84.4	84.8	81.8	82.8	87.6
Movers	15.6	15.2	18.2	17.2	12.4

Over three in five (62.0%) 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 53 families moved out of their original country of issue.

Figure 36: Movers between countries

Original country of issue	Total who moved to a different country	Country moved to			
		England	Wales	Scotland	N Ireland
England	28	-	14	10	4
Wales	17	17	-	0	0
Scotland	6	5	0	-	1
N Ireland	2	2	0	0	-
Total	**53**	**24**	**14**	**10**	**5**

If interviewers were not able to trace the respondents, the case was sent to CLS for tracing. CLS successfully traced 20% of movers.

In total, 456 families' eligibility was uncertain at the end of fieldwork:

- 428 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.

- 28 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 utilising the National Pupils Database and NHS GP records. Some families that had previously been untraced were found through these administrative data sources before fieldwork, while others were traced after Ipsos MORI had been unable to locate the family.

Figure 37 shows a breakdown of movers, and the tracing outcomes, by country of issue.

Figure 37: Tracing outcomes for movers

	Total	England	Wales	Scotland	N Ireland
	N	N	N	N	N
Total movers	**2555**	**1603**	**425**	**328**	**199**
Movers who were traced	**2099**	**1356**	**341**	**232**	**170**
Traced by interviewer	1584	979	269	183	153
Address within own area	*1300*	*774*	*230*	*154*	*142*
Address outside own area	*214*	*158*	*30*	*19*	*7*
Address overseas/ emigrated	*70*	*47*	*9*	*10*	*4*
Traced by CLS	515	377	72	49	17
New address/ information	*473*	*356*	*69*	*38*	*10*
Emigrated	*5*	*4*	*0*	*0*	*1*
Refusal/ ineligible	*37*	*17*	*3*	*11*	*6*
Untraced movers	**428**	**233**	**76**	**91**	**28**
Outstanding movers	**28**	**14**	**8**	**5**	**1**
	%	%	%	%	%
Traced by interviewer	62.0	61.1	63.3	55.8	76.9
Traced by CLS	20.2	23.5	16.9	14.9	8.5
Untraced	16.8	14.5	17.9	27.7	14.1
Outstanding	1.1	0.9	1.9	1.5	0.5

The survey response and co-operation rates for traced movers were lower in comparision to the whole sample. Movers traced by the interviewers were much more likely to participate than movers traced by CLS. Figure 38 shows a summary of household response for all traced movers by country of issue.

Figure 38: 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	**2099**	**979**	**269**	**183**	**153**	**377**	**72**	**49**	**17**
Ineligible traced movers	**75**	**47**	**9**	**10**	**4**	**4**	**0**	**0**	**1**
Died	0	0	0	0	0	0	0	0	0
Emigrated	75	47	9	10	4	4	0	0	1
Uncertain eligibility	**3**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Traced movers/ ran out of time	3	3	0	0	0	0	0	0	0
Eligible traced movers	**2021**	**929**	**260**	**173**	**149**	**373**	**72**	**49**	**16**
Productive movers	**1645**	**855**	**230**	**167**	**137**	**192**	**39**	**16**	**9**
Fully productive	1412	745	193	142	113	162	35	13	9
Partially productive	233	110	37	25	24	30	4	3	0
Unproductive movers	**376**	**74**	**30**	**6**	**12**	**181**	**33**	**33**	**7**
Non-contact	109	17	7	2	1	63	13	6	0
Office refusal	53	3	4	0	0	24	4	13	5
Refusla to interviewer	166	44	14	3	9	74	11	9	2
Broken appointment - no recontact	24	7	2	1	0	11	2	1	0
Ill during fieldwork period	1	0	0	0	1	0	0	0	0
Away/ in hospital during fieldwork period	5	0	0	0	0	4	1	0	0
Language difficulties	1	1	0	0	0	0	0	0	0
Data lost on laptop	0	0	0	0	0	0	0	0	0
Other reason	17	2	3	0	1	5	2	4	0
Productive - but respondent asked for data deletion	0	0	0	0	0	0	0	0	0
	%	%	%	%	%	%	%	%	%
Survey response rate	**78.4**	**87.3**	**85.5**	**91.3**	**89.5**	**50.9**	**54.2**	**32.7**	**52.9**
Co-operation rate	**81.4**	**92.0**	**88.5**	**96.5**	**91.9**	**51.5**	**54.2**	**32.7**	**56.3**

9.6 Response to individual survey elements

This section is based on the 13,287 households that took part in MCS5.

As described in section 4 the interview consisted of several elements. For a household to be classified as fully productive, all required elements of the study had to be either fully or partially complete. For a household to be classified as partially complete, some of the elements of the study were unproductive.

9.6.1 Main respondent interview

Main respondent interviews were completed with 13,177 respondents, and the vast majority of interviews were fully productive. There were only slight variations in response by country as illustrated in the Figure 39 below.

Figure 39: Response - main respondent interview

	Total	England	Wales	Scotland	N Ireland
	N	N	N	N	N
Total productive households	**13287**	**8684**	**1832**	**1466**	**1305**
Productive	**13177**	**8609**	**1812**	**1459**	**1297**
Fully completed	13011	8507	1782	1443	1279
Partially completed	166	102	30	16	18
Unproductive	**110**	**75**	**20**	**7**	**8**
Non-contact	9	5	2	2	0
Refusal	34	21	4	5	4
Broken appointment - no recontact	9	4	4	0	1
Ill during fieldwork period	4	3	0	0	1
Away/ in hospital during fieldwork period	1	1	0	0	0
Physically or mentally incapable/ incompetent	1	1	0	0	0
Language difficulties	2	2	0	0	0
Other reason	50	38	10	0	2
	%	%	%	%	%
Productive	**99.2**	**99.1**	**98.9**	**99.5**	**99.4**
Fully complete	97.9	98.0	97.3	98.4	98.0
Partially complete	1.2	1.2	1.6	1.1	1.4
Unproductive	**0.8**	**0.9**	**1.1**	**0.5**	**0.6**

The mean and median times for the main respondent interview, including the completion of the household questionnaire were 66.5 and 57.9 minutes respectively.

Figure 40 shows the individual module timings.

Figure 40: Module timings - main respondent interview

Interview block	Mean time (decimal minutes)	Median time (decimal minute)
HH - Household grid	9.6	6.1
FC - Parental Situation	2.1	1.2
ES - Education and Schooling	10.1	9.2
AB - Child and Family Activities	7.3	6.9
PA - Parenting Activities	0.7	0.6
CH - Child Health	5.7	5.2
PH - Parent's Health	1.5	1.2
EI - Employment, income and education/job history	11.7	11.0
HA - Housing and Local Area	3.2	2.9
OM - Other Matters	1.5	1.3
SC - Self Completion	10.8	10.3
CI - Check sample information	2.4	1.9
Main respondent total	**66.5**	**57.9**

9.6.2 Partner interview

Overall, just over two-thirds of households (76.4%) contained an eligible partner respondent, and interviews were conducted with partners in 86.8% of these. A further 1.1% of eligible households completed the partner interview by proxy.

Details of response to the partner interview by country can be found in Figure 41.

Figure 41: Response - partner interview

	Total	England	Wales	Scotland	N Ireland
	N	N	N	N	N
Total productive households	**13287**	**8684**	**1832**	**1466**	**1305**
Ineligible - no partner in household	**3134**	**2098**	**442**	**298**	**296**
Eligible households	**10153**	**6586**	**1390**	**1168**	**1009**
Productive	**8814**	**5708**	**1219**	**1010**	**877**
Fully completed	8712	5638	1196	1006	872
Partially completed	102	70	23	4	5
Proxy interviews	**113**	**65**	**15**	**21**	**12**
Unproductive	**1226**	**813**	**156**	**137**	**120**
Non-contact	160	103	16	20	21
Refusal	721	468	87	90	76
Broken appointment - no recontact	45	37	6	1	1
Ill during fieldwork period	11	6	2	1	2

Away/ in hospital during fieldwork period	56	41	7	7	1
Physically or mentally incapable/ incompetent	11	6	3	1	1
Language difficulties	26	25	1	0	0
Other reason	196	127	34	17	18
	%	%	%	%	%
Eligible households	**76.4**	**75.8**	**75.9**	**79.7**	**77.3**
Productive	**86.8**	**86.7**	**87.7**	**86.5**	**86.9**
Fully completed	85.8	85.6	86.0	86.1	86.4
Partially completed	1.0	1.1	1.7	0.3	0.5
Proxy interviews	**1.1**	**1.0**	**1.1**	**1.8**	**1.2**
Unproductive	**12.1**	**12.3**	**11.2**	**11.7**	**11.9**

Figure 42 shows the individual module timings. The mean and median times for the partner interview were 21.9 and 18.7 minutes respectively. The mean and median times for the proxy partner interview were 5.6 and 5.1 minutes respectively.

Figure 42: Module timings - partner interview

Interview block	Mean time (decimal minutes)	Median time (decimal minutes)
FC - Parental Situation	1.9	0.8
ES - Education and Schooling	0.8	0.7
PA - Parenting Activities	1.0	0.9
PH - Parent's Health	1.3	1.2
EI - Employment, income and education/job history	7.4	6.9
OM - Other Matters	1.1	1.0
SC - Self Completion	6.2	5.7
CI - Check sample information	2.2	1.5
Partner respondent total	**21.9**	**18.7**
Proxy partner interview	**5.6**	**5.1**

9.6.3 Child cognitive assessments

The 13,287 productive households contained a total of 13,469 cohort children, including several sets of twins and triplets. The vast majority of cohort children took part in the cognitive assessments (98.3%).

Figure 43 shows the breakdown of response for the cognitive assessments including by country of issue.

The mean and median times for the cognitive assessments were 26.6 and 25.0 minutes respectively.

Figure 43: Response - child cognitive assessments

	Total	England	Wales	Scotland	N Ireland
	N	N	N	N	N
Number of cohort children in productive households	**13469**	**8803**	**1849**	**1490**	**1327**
Productive	**13235**	**8646**	**1812**	**1470**	**1307**
Fully completed	12481	8156	1695	1386	1244
Partially completed	754	490	117	84	63
Unproductive	**234**	**157**	**37**	**20**	**20**
Non-contact	19	10	3	4	2
Parent refused	19	14	2	2	1
Child refused	60	38	13	3	6
Not eligible (one of the twins deceased)	0	0	0	0	0
Broken appointment - no recontact	8	3	4	1	0
Ill during fieldwork period	0	0	0	0	0
Away/ in hospital during fieldwork period	1	1	0	0	0
Physically or mentally incapable/ incompetent	41	30	4	3	4
Language difficulties	0	0	0	0	0
Other reason	86	61	11	7	7
	%	%	%	%	%
Productive	**98.3**	**98.2**	**98.0**	**98.7**	**98.5**
Fully completed	92.7	92.7	91.7	93.0	93.7
Partially completed	5.6	5.6	6.3	5.6	4.7
Unproductive	**1.7**	**1.8**	**2.0**	**1.3**	**1.5**

9.6.3 Child physical measurements

The vast majority of cohort children also took part in the physical measurements (98.4%). Figure 44 shows the breakdown of response for the physical measurements including by country of issue.

The mean and median times for the physical measurements were 11.4 and 10.8 minutes respectively.

Figure 44: Response - child physical measurements

	Total	England	Wales	Scotland	N Ireland
	N	N	N	N	N
Number of cohort children in productive households	**13469**	**8803**	**1849**	**1490**	**1327**
Productive	**13259**	**8663**	**1815**	**1474**	**1307**
Fully completed	12915	8446	1758	1424	1287
Partially completed	344	217	57	50	20
Unproductive	**210**	**140**	**34**	**16**	**20**
Non-contact	18	10	3	3	2
Parent refused	25	18	2	3	2
Child refused	69	44	15	2	8
Not eligible (one of the twins deceased)	0	0	0	0	0
Broken appointment - no recontact	8	3	4	1	0
Ill during fieldwork period	1	1	0	0	0
Away/ in hospital during fieldwork period	1	1	0	0	0
Physically or mentally incapable/ incompetent	20	14	4	1	1
Language difficulties	0	0	0	0	0
Other reason	68	49	6	6	7
	%	%	%	%	%
Productive	**98.4**	**98.4**	**98.2**	**98.9**	**98.5**
Fully completed	95.9	95.9	95.1	95.6	97.0
Partially completed	2.6	2.5	3.1	3.4	1.5
Unproductive	**1.6**	**1.6**	**1.8**	**1.1**	**1.5**

9.6.5 Cohort child self-completion questionnaire

The majority of cohort children completed the cohort child self-completion questionnaire, which had a response rate of 97.7%. Figure 45 shows the variation between response rates across the four countries of issue.

Figure 45: Response - child-self completion questionnaire

	Total	England	Wales	Scotland	N Ireland
	N	N	N	N	N
Number of cohort children in productive households	**13469**	**8803**	**1849**	**1490**	**1327**
Productive	**13160**	**8601**	**1804**	**1467**	**1288**
Fiully completed	12722	8292	1751	1422	1257
Partially completed	438	309	53	45	31
Unproductive	**309**	**202**	**45**	**23**	**39**
Non-contact	18	10	3	5	0
Parent refused	20	16	2	2	0
Child refused	72	43	17	4	8
Not eligible (one of the twins deceased)	0	0	0	0	0
Broken appointment - no recontact	6	2	4	0	0
Ill during fieldwork period	0	0	0	0	0
Away/ in hospital during fieldwork period	1	1	0	0	0
Physically or mentally incapable/ incompetent	46	34	4	3	5
Language difficulties	0	0	0	0	0
Other reason	146	96	15	9	26
	%	%	%	%	%
Productive	**97.7**	**97.7**	**97.6**	**98.5**	**97.1**
Fully completed	94.5	94.2	94.7	95.4	94.7
Partially completed	3.3	3.5	2.9	3.0	2.3
Unproductive	**2.3**	**2.3**	**2.4**	**1.5**	**2.9**

As shown in Figure 46, the vast majority of children completed the self completion questionnaire on paper without any additional support (96.4%). Only a small number of children completed the questionnaire using the audio or interviewer administered approach (1.8% and 1.0% respectively).

Figure 46: Mode of completion

	No.	%
Total number of completed questionnaires	**13160**	**100**
Paper version only	12690	96.4
Audio and paper	240	1.8
Administered by interviewer	130	1.0
Unknown	100	0.8

Interviwers were advised to use a specific mode for the child self-completion. These recommendations were based on information about each child from previous waves. It can be seen in Figure 47 that most interviewers complied with the recommendation to use paper only. However, a large proportion of interviewers who were advised to use audio or to administer the interview also used paper only.

Figure 47: Advised mode of completion

	No.	%
Total number of completed questionnaires	**13160**	**100**
Interviewer advised to use paper version only	**11441**	**86.9**
Used paper version only	11285	85.8
Used audio and paper	45	0.3
Administered by interviewer	44	0.3
Unknown	67	0.5
Interviewer advised to use audio and paper	**1676**	**12.8**
Used paper version only	1367	10.4
Used audio and paper	194	1.5
Administered by interviewer	82	0.6
Unknown	33	0.3
Interviewer advised to administer	**43**	**0.3**
Used paper version only	38	0.3
Used audio and paper	1	*
Administered by interviewer	4	*
Unknown	0	-

9.6.6 Consent rates for teacher survey

A teacher survey was conducted in England and Wales if consent was given by both the child and the parents. 10,652 children were in eligible productive households.

Figure 48: Consent rates for teacher survey

	Total	England	Wales
	N	N	N
Number of cohort children in productive households	**10652**	**8803**	**1849**
Consent for teacher survey given	9981	8259	1722
Have not provided enough data	146	103	43
Refused by parent	383	327	56
Refused by child	134	106	28
Consent withdrawn after interview	8	8	0
	%	%	%
Productive	93.7	93.8	93.1

9.6.7 Consent rates for data linkage

Overall, the majority of respondents gave permission and provided signed consent for their information from economic records to be accessed.

Of the main respondents, 87.9% gave permission to link to their DWP records. Consent rates were highest in Scotland (90.9%) and lowest in Northern Ireland (84.3%), as shown in Figure 49 below.

Figure 49: Signed consent rates for data linkage - main respondents

	Total	England	Wales	Scotland	N Ireland
Total productive households	**13287**	**8684**	**1832**	**1466**	**1305**
Signed consent during interview	11696	7599	1660	1335	1102
Consent removed after interview	16	10	1	3	2
Total number of consents for data linkage signed	**11680**	**7589**	**1659**	**1332**	**1100**
% of productive households	87.9	87.4	90.6	90.9	84.3

Smaller proportions of partners (than main respondents) provided signed consent to access their DWP records (76.3%). Consent rates among partners were highest in Wales (79.2%) and lowest in Northern Ireland (72.1%), as shown in

Figure 50 below. Out of partners who provided an interview and were hence asked for this consent, the consent rate was the same as it was for main respondents (87.9%).

Figure 50: Signed consent rates for data linkage - partner respondents

	Total	England	Wales	Scotland	N Ireland
Number of partners in productive households	**10153**	**6586**	**1390**	**1168**	**1009**
Number of productive partner interviews	**8814**	**5708**	**1219**	**1010**	**877**
Signed consent during interview	7757	5014	1102	912	729
Consent removed after interview	9	3	1	3	2
Total number of consents for data linkage signed	**7748**	**5011**	**1101**	**909**	**727**
% of partners in productive households	76.3	76.1	79.2	77.8	72.1
% of productive partner interviews	87.9	87.8	90.3	90.0	82.9

9.7 Return of sample to CLS at end of fieldwork

Ipsos MORI was responsible for updating sample information for families that are part of MCS5 during the fieldwork period and transferring this updated sample information to CLS at the end of fieldwork. Families were divided between productive families and unproductive families. Productive families were delivered periodically throughout the fieldwork period, with the first file delivered in September 2012. Unproductive families were delivered at the end of fieldwork, in March 2013.

The productive families dataset contained the following information:

- Cohort child person number, name, sex, date of birth, and confirmation that they are in the household
- Main respondent and partner (if applicable) person number, name, sex, date of birth, mobile, work number, email and relationship to cohort child
- Main respondent and partner stable contact name, address, telephone number, email and relationship to the cohort child
- Family address, telephone number, and whether or not this is an institution
- Future address and telephone number if the family intended to move within the next 12 months and knew these details
- Household, main respondent and partner interview date and whether the main respondent and partner were interviewed fully, partially or not at all
- Flags to indicate which information had changed

The unproductive families dataset contained the following information:

- Parent 1 and Parent 2 (if applicable) name, mobile number, work number and email address.
- Parent 1 and Parent 2 (if applicable) stable contact details (name, address, telephone numbers and email).
- Family address and telephone number.
- Household outcome, date outcome was allocated, wave the family was issued in, outcome of individual in the Household (if the family was interviewed).
- Flags to indicate which information had changed

10.Coding, Editing and Data Preparation

10.1 Editing CAPI data

In the Millennium Cohort Study, as in most CAPI surveys, most of the editing of data was carried out by interviewers in the field. The Quancept program ensured that the correct routing was followed through the interview questionnaire and applied range and consistency error checks. This enabled interviewers to clarify and query data discrepancies directly with the respondent during the interview.

The interviewer's route through the CAPI questionnaire was programmed so that all relevant questions came on route according to the cohort member's earlier answers. Several checks of values and measurements were also built into the CAPI. The 'hard' checks did not allow entries outside a given range (and must be resolved by the interviewer at the time of the interview), and the 'soft' checks asked the interviewer to confirm what he or she had entered. Soft checks were usually triggered where values were implausible but not impossible. These checks were suppressed by the interviewer and investigated at the coding and editing stage.

However, some data checking is too complex to be carried out in the field. In addition it is not always possible to include all possible consistency checks in the program. As a result, a separate in-house editing process was required.

First, interview data were checked by Ipsos MORI and CLS to ensure all intended routing had been adhered to in the script. These checks also flagged 'snapback' issues, where the interviewer goes back to previously-answered questions and amends a response. This can result in data which do not appear to adhere to the routing conditions. Edits were agreed with CLS where this occurred.

Second, 'soft' checks triggered throughout the script were analysed, with recommendations for edits if the data were unambiguously wrong. Further sense checks were carried out on the household grid relationships. These edits were agreed with CLS.

Third, all interviewer comments on the data/interview were reviewed and recommendations to edit the data were made to CLS if warranted. For example, if an interviewer realised they had made a mistake when coding a question. All approved recommendations were implemented in the data.

10.2 Quality Control

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

In the Millennium Cohort study, as in most CAPI surveys, the majority of answers given by respondents were coded during the interview by the interviewer into pre-specified code frames. Many questions had fully closed codeframes that is the interviewer had to code the respondent's answer to one of the existing 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 of 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.

10.2.2 The Codebook

A codebook from the previous sweep of MCS was provided by CLS to help keep variable names and coding consistent with the previous sweep. This was then adapted to include any questions that were new to this sweep. 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.

10.2.3 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 codeframe. If the coder was unable to back code or code into the specified codeframe 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 the research exec team before they could be finalized 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, coders assigned a new 'other' code as appropriate. These codes were:

- code 85 - other specific answer
- code 86 - vague/ irrelevant answer

Code 85 – 'other specific answer' was used for most of the responses that could not be coded using the existing/additional codes in the code frames.

Code 86 – 'irrelevant response' was only used for responses that did not answer the question.

10.3.4 Open questions

Open questions require 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 a new other code was allocated.

10.3.5 SOC Coding, drugs coding, ICD-10, Ethnic Group and ISO 3166

Some of the questions made use of pre-existing classification schemes: Standard Occupational Classification (SOC2010), drugs codes (taken from the British National Formulary No 58, September 2009) the International Classification of Diseases, 10th revision (ICD-10), Ethnic Group coding from the ONS 2011 Census classification and harmonisation guidlines and ISO 3166 country coding from the International Organization for Standardization.

SOC coding was applied to both the main parent's and partner's occupations asked in the EI script and also to the occupational question asked of the child in the self completion questionnaire. With the cohort child self-completion many children chose to give multiple answers, which required each occupation to be coded individually.

As with previous sweeps the drugs coding, in particular, proved to be problematic for coders. In the code frame used, all drugs are coded to six digits. Several drugs have multiple uses,

and the assigned code differs according to the use, for example aspirin and betnesol. In these cases the coder would only code the drug if the use of the drug was also specified. In addition, some drugs were hard to find, and many answers given by respondents were too vague to be allocated a code using this code frame.

In these circumstances, the editors were allowed to use the following codes:

- code 850000 - other specific answer
- code 860000 - vague/ irrelevant answer

10.3 Editing paper questionnaire data

All returned cohort child self-completion questionnaires were sent to Ipsos MORI's scanning department to scan and extract the data, which was then passed on to Data Processing to be delivered on a monthly basis.

A data quality report was produced in April 2012 once a large enough sample (1000 cases) had been collected. The report covered instances of high proportions of missing data, proportions of multi-coding, instances of potential satisficing, missed routing at the questionnaire's alcohol questions, and data inconsistencies compared to the Household data.

Editing rules were then developed based upon this report. The majority of these rules were to edit routing inconsistencies at the questionnaire's alcohol routing, and where child had multicoded answers to single response questions.

10.4 Issuing the CAPI script and script issues

The CAPI questionnaire was issued to interviewers once before the start of fieldwork and then issued a further two times throughout fieldwork:

- 29th March 2012 to correct previous interview dates feeding through into module EI and an issue with contact information for main and partner feeding through incorrectly in a small number of cases
- 30th August 2012 to account for the extension of Wave 1 fieldwork. This only affected questions in module ES. As well as the amendment made to the CAPI script, a memo was sent to interviewers to provide guidance on how children who at the time of the interview were already at secondary school should complete their self-completion questionnaire.

Interviewer queries during fieldwork mainly related to protocols over families with unusual circumstances, and there was the occasional problem with incorrect feed-forward data.

Other interviewer queries related to administering the CANTAB software. For some interviewers, this was done via an add-on touch screen, which froze and would not respond in a small minority of cases.

Additionally, 2.3% of Memory Task data and 2.9% of Decision-Making Task data was not received by Ipsos MORI servers. Of the data that was received, 2.4% of Memory Task assessments and 1.1% of Decision-Making Task assessments were aborted by the interviewer. This means assessments were successfully completed in 95.3% of cases for the Memory Task and 96% of cases for the Decision-Making Task.

10.5 Remapping the data

Once the data had been coded and checked, it was remapped according to CLS' specifications. The raw output of the data is formatted so that each element has one row of data. For instance, the main interview appears on one row of data. When delivered to CLS the data was transformed in different ways.

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

For the main interviews, data were transformed so that within a main interview questions pertaining to the cohort child were on one row of data (with a row for each cohort child if there multiple within one family) and questions pertaining to the main or family as a whole were on another row of data.

The partner data was similarly remapped.

For the module entitled 'Other Elements', data were remapped so data pertaining to the child were in one dataset, with a row per cohort child, and data pertaining to the household were in another dataset.

Physical measurements, cognitive assessments and cognitive observations were not remapped because the raw datasets fit CLS' specifications. All elements had variables with verbatim answers delivered in separate files.

11.Survey outputs

Various survey outputs were provided to CLS including the CAPI data, CAPI questionnaire documentation (including cognitive assessments and physical measurements), final response and survey data, teacher survey data, child self completion data and consent form data. All of which are detailed in Figure 51 below.

Figure 51: Survey outputs

Output	Date delivered	Notes
CAPI data		
Final data	17 May 2013	
CAPI questionnaire documentation (including cognitive assessments and physical measurements)		
Interim	27 February 2012	
Final	26 April 2013	
Contact Information		
Unproductive Contact Information File	19 April 2013	
Productive Contact Information File	21 February 2013	Final
Final response and survey process data		
Final household outcome	25 April 2013	File contains Ipsos MORI and CLS serial numbers and household outcome code for full sample of productives and unproductives.
Final household outcome codes	30 April 2013	A description of each household outcome code
Interviewer remarks	24 May2013	
Survey process data	24 May 2013	
Teacher survey		
Questionnaire data	27 March 2013	Final delivery
Paradata	11 April 2013	Final delivery
Technical report	17 April 2013	Final delivery
Coding and editing booklet	23 April 2013	Final delivery
Child self completion		
Final data file	28 March 2013	
Consent form data		
GB only	24 May2013	
GB &NI	24 May2013	