



GfK NOP Social Research

GfK. Growth from Knowledge



Millennium Cohort Study – Sweep 2 – Technical Report

Written for



Prepared by:
Your contact person:

GfK NOP Social Research
Nick Moon
Director
Phone: +44 (0)20 7890 9830
Fax: +44 (0)20 7890 9589
E-mail: Nick.Moon@GfK.com

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1. INTRODUCTION

The Millennium Cohort Study (MCS), known in the field as Child of the New Century, is expected to be among the most important social surveys to be conducted in the United Kingdom during the twenty-first Century. It will seek to track the lives of some 19,000 people born in 2000 and 2001, recording their family background, development, health, education and working lives to explain patterns of opportunity and well-being, barriers and disadvantage. It thereby resumes, after a break of 30 years, Britain's enviable post-war chronicle of longitudinal birth cohort studies.

There is, though, greater emphasis on social and economic matters than in the early sweeps of the previous British national birth cohort surveys, reflecting the core sponsorship of the Economic and Social Research Council (ESRC) and the additional funding from departments of national governments. The MCS is a resource of great richness for social scientists and policy makers as well as epidemiologists.

Lead responsibility for the MCS was awarded to a consortium headed by The Centre for Longitudinal Studies at the Institute of Education. Data collection for Sweep One was awarded to the National Centre for Social Research, and was carried out between June 2001 and January 2003. In all 24,180 households were issued into the field, though 1942 were subsequently rejected as ineligible or of doubtful eligibility. Interviews (full or partial) were conducted at 18,553 households, representing a fieldwork response rate of 81%.

Following competitive tender in October 2003, GfK NOP Social Research (then known as NOP) were commissioned to conduct the second sweep of MCS, with responsibility for assisting in questionnaire development, piloting the field documents, conducting a supplementary sample in England when eligibility for the first survey had subsequently been established, conducting fieldwork and preparing a data file for analysis by CLS.

2. DEVELOPMENT WORK

2.1 *Overview of the development work*

GfK NOP's core tasks during the development stage for Sweep Two were to contribute to the design of the survey instrumentation, especially those parts that had not been present at Sweep One, and to prepare and conduct both a pilot survey and a dress rehearsal ahead of main stage fieldwork. As on Sweep One, the interviews with parents were to be conducted using computer-aided personal interviewing (CAPI), and there were also several elements of data collection – involving the Cohort Child him or herself – that were not present in Sweep One.

Responsibilities for the different elements of the questionnaire design process were as follows:

Task	Responsibility
Questionnaire content	CLS and sponsors
Question wording	CLS and GfK NOP
Questionnaire ordering, filtering etc	CLS and GfK NOP
Production of CAPI script	GfK NOP
Testing to CAPI script	CLS and GfK NOP

The questionnaire was developed originally in a Microsoft Word format, and looked very much like a “traditional” paper questionnaire. As no Computer Aided Personal Interview (CAPI) program has an entirely user-friendly method of producing a hard copy version of the script, all the original discussions about which questions should go where, and which filters should be applied to each questions, were made based on the Word version of the questionnaire, and the Word questionnaire was constantly updated as changes were made.

Once the basics of the questionnaire had been agreed (and when the point was reached that further delay would result in delay to fieldwork), the Word questionnaire was supplied to the GfK NOP CAPI scripting team to begin production of the CAPI version (using In2itive software). Changes continued to be made as a result of further discussions between CLS and the sponsors, and between CLS and GfK NOP, and as these were made the Word version was updated, and change sheets sent to the CAPI team for implementation.

In the very final stages before main fieldwork started there was no time for this dual approach, and last-minute changes were submitted directly to the CAPI team. After fieldwork was underway, there were further changes to the CAPI script. Some due to routing errors discovered by the interviewers and others due to last minute alterations made by the

sponsors to the way the childcare section was administered and to the introduction of a Welsh translation of the child cognitive assessments. (These changes have implications for the data that are discussed further below.) Once it was decided that no further changes would be made to the CAPI script, the GfK NOP executive team worked closely with the CAPI team to update the Word version of the questionnaire so that it was a true reflection of the final CAPI script.

One of the key new elements for Sweep Two was testing of the cognitive skills of the Cohort Child. This was measured using two standard assessments bought in by CLS from outside suppliers:

- The British Ability Scale (BAS)
- The Bracken Basic Concepts Scale

In each case only part of the assessment was used – that deemed suitable for children aged around thirty-six months. Although designed for administration and scoring on paper, this was changed at GfK NOP's suggestion to paper administration but with CAPI scoring. The standard presentation material from the assessments was shown to the Cohort Children, but a CAPI script was written to record their answers and follow the rules to determine when to stop an assessment based on the number and pattern of wrong answers. This removed the need for the interviewer to keep track of the sequences of correct and incorrect answers, which added greatly to the reliability of the data, but required a lot of work to make the CAPI script match exactly the functionality of the traditional administration. Transferring the whole process to CAPI – so that the images themselves were on the computer screen and the Cohort Children could respond to the “pointing” questions by just tapping the screen – was considered but was determined to be too radical a step at this stage.

2.2 Testing the Adult Mental Health Scales

The main parent and partner self-completions were to include a standard adult mental health self-assessment scale, but there was a choice to be made between three possible scales - Malaise, CES-D8 and Kessler. To help in the decision process all three scales were tested on a single wave of GfK NOP's face to face Omnibus survey, with the scales tested only on those people who were mothers or fathers of children aged 11 or under.

The test was carried out on the Omnibus with fieldwork from 3-8 April 2003, and 533 interviews were conducted.

Following the pre-test the decision was made to use both the Malaise and Kessler scales in the first main pilot study.

2.3 The Child Assessment Pre-Pilot Survey

Because the child assessments had never been carried out using CAPI before, and rarely if at all by interviewers, some pre-piloting was carried out solely on these instruments.

Two interviewers were used on the pre-pilot, each of whom had a lot of interviewing experience but little or no directly comparable experience. Because the target respondent group was so small, the workplace nursery of the Institute of Education was pre-recruited by CLS to provide a source of suitable respondents on 9 April 2003.

A member of staff from the National Evaluation of Sure Start, who was experienced in using BAS and Bracken (though not on CAPI), briefed the interviewers about the administration of the assessments, and then carried out the assessments on one child while the interviewers watched. The interviewers then each carried out three further assessments between them in the nursery, and all three of these assessments were recorded on video for use at interviewer briefing sessions.

Each interviewer then spent a further day free-finding further children of the qualifying age and conducting further assessments. Where possible these too were recorded on video. Seven additional interviews were conducted, and the interviewers reported back on their experiences at a personal debrief at the Institute of Education on 14 April 2003.

At the same time, GfK NOP executives conducted assessments on two other children of the qualifying age.

The pre-piloting exercise showed that it was possible to conduct the cognitive assessments with non-specialist social survey interviewers. Most of the lessons learned from the pre-pilot interviews concerned practical issues surrounding implementation of the assessments, such as dealing with older/younger siblings or physical placement of the easel and computer, rather than the actual assessments themselves.

2.4 *The Pilot Study*

By the time the pre-pilot study was completed the questionnaire design stage for the main interview was almost complete, and all the survey instruments were tested in a small-scale pilot study in May 2003

The main purpose of the pilot was primarily to establish the time taken to administer the early drafts of the interview, self-completion and assessments. It was also designed to identify any other problems in terms of flow, application of definitions, question wording, recall of dates of past events, pre-codes, filters etc.

In total, six interviewers were briefed, and interviews took place in six areas of southern England. The sample had not been interviewed as part of the CNC Sweep One, and were free-found by interviewers using a process of door knocking, approaching pre-schools and nurseries, and snowballing. All interviewers attended a face-to-face briefing, which took place over the course of an entire day, and was attended by both the CLS and GfK NOP CNC teams.

Interviewers were briefed to carry out interviews at 5 households that contained a child aged between 2 years 11 months and 3 years 11 months. Within these households, at least one household had to contain at least one older sibling aged between 10 – 15 years, at least two households had to contain at least one older sibling aged between 4 – 15 years, and at least two households had to contain a partner who was willing to complete the partner interview.

As is often the case when having to free-find respondents in a short time period, the interviewers were not able to reach all their targets. For the main interview components, the following numbers of interviews were carried out.

Main	28
Partner	14
Older Sibs Self Completion	16
BAS	27
Bracken	26

A full debrief took place on 23rd May 2003. Interviewers had been asked to complete Interviewer Feedback Forms to aid their recall of issues that they wished to raise at the debrief, and they were interrogated fully about every aspect of the survey, from carriage of the equipment to the content of the entire questionnaire. The initial stages of the debrief involved the interviewers reporting on what they considered to be major issues, and this was then followed by a detailed step through all the survey instruments, so the interviewers could report on more minor problems as well.

2.4.1 Components of the Pilot Interview

Other than the saliva sample collection, which had not yet been agreed upon, all elements of what proved to be the final main stage instrument were tested in the pilot. These were as follows:

- Main parent interview + self-completion
- Partner interview + self-completion
- BAS assessment
- Bracken assessment
- Height and weight measurement
- Home observations
- Neighbourhood observations
- Self-completion questionnaire for older siblings

It should be noted that the height and weight elements of the interview were developed by the Institute of Child Health (ICH).

2.4.2 Timings

Interviews were timed automatically using the CAPI program though, as always in these cases, the advantages of entirely accurate time recordings between any two pre-designated points in the questionnaire need to be set against the fact that if interviewers postpone an interview and return to it, or simply forget to save the interview until later, the clock will keep running and the end timing will be wholly misleading.

To counter these problems, the timing of each individual section was looked at and any obvious false outliers excluded. In this way interviews that had simply not been saved till later on could provide timings for each of the sections up until the last.

The shortest main interview (excluding the older siblings questions) was 52 minutes, while the longest was 2 hours 13 minutes. The average overall length was 91 minutes (including self-completion) – considerably longer than the target length of 70 minutes.

The self-completion section accounted for 25 minutes on average, more than twice as long as any other section. The next two longest sections were those on parental involvement with the child and on employment and education.

The table below shows the distribution of interview lengths for the main interview element, excluding cases where the timings were unreliable.

Main Interview timings - Pilot

Length	Cases
Under 1 hour	1
1 hour to 1 hour 15	3
1 hour 15 to 1 hour 30	9
1 hour 30 to 1 hour 45	7
Over 1 hour 45	6

The average length of the partner interview was 37 minutes, of which 15 minutes, on average, was accounted for by the self-completion section. The longest partner interview was just over an hour while the shortest was just 11 minutes. The distribution of lengths is shown below.

Partner Interview timings - Pilot

Length	Cases
Under 20 minutes	1
20-30 minutes	4
30-40 minutes	4
40-50 minutes	2
Over 50 minutes	3

Timings for BAS and Bracken were acknowledged to be less reliable because of the set-up time and confidence building with the child, which might or might not have been done after the computer interview script had been started, but the averages were 6 minutes and 15 minutes respectively

Interviewers were unanimous that the questionnaire was too long as it stood. The length was particularly problematical if the mother had a young baby in addition to the Cohort Child who she was trying to take care of. Respondents did seem to be flagging at the end of the survey, and the self-completion section was definitely too long, but a self-completion section at the costed length of 10 minutes was felt by interviewers to be acceptable.

2.4.3 Identified problems

The interviewers reported few major problems with any of the survey instruments. The section on relationships between household members was hard to administer, and amendments were agreed to make it easier for interviewers to keep track of who was who within large households.

In the employment questions there was confusion about the nesting of spells of maternity leave within spells of employment, and the decision was taken to treat maternity spells separately.

There were several routing errors within the childcare section, and the questions on costs were too simple to cope with the complexity of actual charging arrangements. More importantly, there was confusion among respondents about what should be included in these questions, most notably whether childcare only counted as such if it was carried out while the main parent was at work.

In the questions asked of the main parent about older siblings, interviewers reported that both they and their respondents found the questions on all the different Children's Fund services both repetitive and tedious, especially in cases where none of them were used.

For the child assessments and measurements there were few problems with the instruments, but interviewers reported a number of useful tips on how to administer them, which were subsequently incorporated into briefings and instruction manuals.

2.5 The Dress Rehearsal

The 'dress rehearsal' for the study took place in June 2003. All of the procedures planned for main stage sampling and fieldwork were tested.

The sample used for the Sweep Two dress rehearsal consisted of respondents from the Sweep One dress rehearsal. These were all households which contained a child who had either just turned or was just about to turn three, but were not members of the cohort. There were 88 leads in total, in 13 wards in England, Scotland and Wales. No tracing had been carried out on these households since the original contact.

These cases were allocated to 13 GfK NOP interviewers. All the interviewers attended two days of personal briefing in London, on 23 June and 26 June 2003. The briefing was primarily given by members of the CLS and GfK NOP teams, but height, weight and saliva testing were briefed by staff from the Institute of Child Health. In between the two days of the briefing, interviewers were asked to carry out practice cognitive assessments with two 3-year-olds, whom the interviewers had to pre-recruit themselves. After carrying out the fieldwork, the interviewers attended a personal debriefing in London.

Interviewers were provided with an advance letter for each household in their sample, which they were asked to post a few days in advance of attempting to make contact.

In total a sample of 88 cases were issued, of which 24 had moved away from the area and, given the limited number of interviewers, could not be interviewed. Of the remaining 64, 48 completed all of the relevant interview elements, and a further 6 completed at least some of the interview elements. Only 4 households refused, and there were a further four other reasons for non-response. Ignoring the movers, the response rate was 75% for complete interviews or 84% for full or partial interviews.

Dress Rehearsal Response Rates

	Cases	%	%
Issued sample	88	100	
Moved out of area	24	27	
Eligible sample	64	73	100
Full Interview	48		75
Partial interview	6		9
Refusal	4		6
Other non-interview	6		9

2.5.1 Components of the Dress Rehearsal

The dress rehearsal was a complete rehearsal for the main stage, with all the main stage survey instruments being tested, as shown below:

- Main parent interview + self-completion
- Partner interview + self-completion
- BAS assessment
- Bracken assessment
- Height and weight measurement
- Collection of saliva sample
- Home observations
- Neighbourhood observations
- Self-completion questionnaire for older siblings

2.5.2 Timings

Dress rehearsal interviews were timed in the same way as those on the first pilot, so the same caveats apply. In particular it proved impossible to get anything more than an interviewer guess for the time taken for the height and weight measurement. This was partly because interviewers did not always remember to open the CAPI script before starting the process, and so had no start timing point, but also because the process was often somewhat chaotic. With so much interaction between interviewer, child and parent, sometimes involving a familiarisation stage at a quite different time before the actual measurements were taken, it was not always easy to tell when the attempt to measure heights and weight began or ended.

The overall length of the average dress rehearsal main interview was 63 minutes, including 13 minutes for the self-completion element. The three longest sections, all similar in length, were employment and education, parental involvement with the child, and child health, each of which took between 7 and 9 minutes.

The longest main interview took 1 hour 43 minutes, while the shortest was just 37 minutes. Twenty of the dress rehearsal main interviews took between one hour and one hour fifteen minutes.

Main Interview Timings – Dress rehearsal

Length	Cases
Under 45 mins	3
45 mins to 1 hour	19
1 hour to 1 hour 15	19
1 hour 15 to 1 hour 30	7
Over 1 hour 30	2

The average lengths of BAS and Bracken were 6 minutes and 15 minutes respectively. The averages for these were obviously brought down by those cases where the child failed to grasp the idea properly, or was unable to answer questions successfully and the assessment ended prematurely, but there were few very long cases. The longest Bracken assessment took 35 minutes, but there was only one other case over 30 minutes, and half of all assessments took between 15 and 25 minutes. The longest BAS assessment was 23 minutes, but this was a clear outlier as there were no others over 15 minutes, and only three were over 10 minutes.

Bracken Timings – Dress Rehearsal

Length	Cases
Under 10 mins	7
10 to 15 mins	16
15 to 20 mins	12
20 to 30 mins	10
Over 30 mins	2

The average length of the partner interview was 22 minutes, with the longest 44 minutes and the shortest – presumably a not very involved parent – was just 6 minutes. All but four partner interviews took between 15 and 25 minutes. The partner self-completion averaged 9 minutes out of the total average of 22 minutes, with almost all cases between 6 and 10 minutes.

Partner Interview Timings – Dress Rehearsal

Length	Cases
Under 15 mins	3
15 to 20 mins	14
20 to 30 mins	12
Over 30 mins	4

The net result of the timing calculations was to show that the total 'contact time' with the mother was 12 minutes over the budgeted amount, the partner time was 7 minutes over budget, and there was an excess of 6 minutes of other interviewer time. This was addressed by a combination of cutting the length of some interview components and increasing the interviewing budget.

2.5.3 Identified Problems

One key change recommended by the interviewers was that the child's name used in text substitution throughout the questionnaire should be based on the name the child was known by, rather than the child's full or formal name, which was recorded on the sample received from CLS. A question was therefore introduced at the start of the interview, asking what name the Cohort Child was usually known by.

In similar vein, questions needed to be added to allow for the correction of names of other household members wrongly recorded at Sweep One.

Interviewers felt strongly that where the interview was being administered by an interpreter – whether from inside the household or outside – it was inappropriate for some elements of the questionnaire to be asked. The decision was taken that part of the self-completion questionnaire (specifically, questions after the SDQ items) should be skipped if the interview was being done through an interpreter, and some of the more difficult conceptual questions were also skipped as being hard to translate.

At the questions on vaccinations, several respondents were unable to remember whether the Cohort Child had had one, two, or three vaccinations, but they were insistent that their child had had all the vaccinations he or she was supposed to have, and the questionnaire was amended to allow this as an option.

The Employment History section proved difficult for those respondents who had changed jobs several times since the birth of the Cohort Child, but it was accepted that this would always be the case in any job history questionnaire.

The interviewers requested more guidance on when they were supposed to complete the Home Observation section, and how to proceed when they had observed little or no parent/child interaction. This was dealt with by increased written instruction, and it was also covered in the briefings.

Interviewers also felt that it was vital to tell parents before the assessments started that it would invalidate the whole process if the parent assisted the child in any way. The question was also raised of how to deal with bi-lingual children who answered particular pictures in BAS with a word in the non-English language. It was subsequently decided that interviewer should prompt for the English word, and if it was not given should code the answer as incorrect.

2.6 The Final CAPI Script

Following the production of the dress rehearsal report, discussions were held between CLS and GfK NOP and between CLS and the sponsors over the changes to be made to deal with the problems highlighted above.

There were also continuing discussions about matters of principle concerning which questions should be dropped for reasons of timing, and which questions should be changed better to meet the sponsors' information requirements.

These latter discussions continued right up until the time of the briefings, particularly concerning the childcare section. This was a very complex section, with some multiple looped filters that took a long time to get right, and there were also concerns about whether the questions as asked were getting exactly the kind of information that was required.

One particular concern was whether respondents may think the questions were only about times when the Cohort Child **had** to be cared for by someone else – for example while parents were at work – whereas in fact the question was intended also to cover parents who did not work outside the home but felt that their children would benefit from attending play-group, nursery and so on.

As these discussions went on so long the script was not finalised until during the briefing process itself, and inevitably this meant that some errors remained in the script when it was released at the start of fieldwork. These were corrected as soon as they were reported by interviewers, and there were also some final modifications made by CLS as to how questions were asked or recorded. This is discussed further in section 4.11 below.

3. The Sample

3.1 *The Main and New Families Samples*

There were two separate types of sample, each with its own questionnaire: the main sample, and the new families sample. The former consisted of all respondents from Sweep One, apart from any that had subsequently contacted CLS to say that they no longer wished to take part in the survey, and so long as the Cohort Child was still alive and living in the UK every sample member was eligible for interview. The latter was a new sample designed to compensate for problems in the sampling process for Sweep One and referred to as 'New Families'.

It had come to light that there were a number of families who were eligible for interview at Sweep One, but who had not been included in the original sample because, at the time the sample was drawn, they were not listed as living at a qualifying address by the Department for Work and Pensions (DWP), the body responsible for supplying the original sample. When the DWP records caught up, it was too late for these addresses to be issued for Sweep One, but they were issued to the field for Sweep Two.

Interviewers had to check at the initial contact with a New Families sample member that the family was indeed living at an address within a sampled area at the time the Cohort Child was 9 months old (the age that the main sample were first contacted).

The New Families sample also had a slightly different questionnaire, as it had to include some of the information missed through them not taking part in Sweep One, especially questions on the background of the Cohort Child's parents, and also on birth weight and early health.

3.2 *Managing the Sample*

The sample was divided into seventeen waves each one basically covering a four week range of birth dates, the first three waves covering only England and Wales and the last four covering only Scotland and Northern Ireland, because at Sweep One fieldwork started later in those two countries.

The original sample had been clustered into 398 wards, and though most respondents still lived in the same wards a significant proportion had notified CLS of a change of address

before the start of Sweep Two, and so the sample had already started to uncluster to some extent.

One particular ward had been removed from the sample part of the way through fieldwork at Sweep One because the area was felt to be too dangerous for interviewers to visit. Due to a CLS administrative error the interviews from this ward were issued to the field again for Sweep Two, but fortunately no further problems were reported.

Each wave was issued to the field separately, with a month gap between each so that interviews did not take place before the Cohort Child was aged two years and eleven months.

The sample was supplied to GfK NOP by CLS, using details from the dataset supplied after Sweep One by NatCen and updated from ongoing CLS tracing operations. Each month the sample data consisted of an identification serial number – the FID – plus the address, name and date of birth of Cohort Child, name and date of birth of main respondent at Sweep One, name of the main respondent's partner at Sweep One, and some key data from the Sweep One interview to be fed forward into the interview such as type of childcare used, whether the main respondent's parents were alive at the time of interview, and whether the Cohort Child was still breastfeeding.

As the sample was sent to GfK NOP each month it was loaded into a cumulative sample file and sent to the interviewers so that they were able to access it at the appropriate time.

The sample was added to a cumulative CAPI sample file and sent to the interviewers' computers when they dialled in, and thus every interviewer had access to every piece of sample issued to date. This of course raised more risk of interviewers using wrong ID numbers but was essential to allow interviewers to be able to interview any respondents who had moved from another interviewer's area into theirs.

The sample was also supplied to interviewers in the form of paper Cover Sheets. These were pre-printed with the FID numbers, the address and telephone number (where known), the name of the Cohort Child (or Cohort Children in the case of twins/triplets), and the name of the main parent from the Sweep One interview.

Interviewers also received a set of sticky labels for each sample member, with the serial number (FID) on in both numerical and barcode form. These were used for labelling all the other paper documents relating to that sample member, and for the oral fluid materials. The label for the oral fluid collection was supplied in triplicate, numbered child 1, child 2 and child

3, for use in cases where there were twins or triplets. There were also two labels for the Older Siblings self completion questionnaire, labelled child 1 and child 2.

Interviews recorded details of all calls made at the address on the Cover Sheet, and also recorded outcomes at the household and individual level. As well as recording whether the main parent and partner interviews were conducted, and giving reasons why not, there was space to record similar outcomes for each of the separate elements of data collection from the Cohort Child and older siblings.

The Cover Sheet was also used to record any changes of address. In cases where the Cohort child no longer lived with the Sweep One main parent the interviewing was carried out at the Cohort child's new address, with whomever they were now living with taking the role of the main respondent.

The Cover Sheet also included the Neighbourhood Assessment questionnaire, which is discussed in more detail in the next section. A copy of an example Cover Sheet is included as Appendix 16.

During the interview name and address details were all checked and, if necessary, updated, and these details supplied to CLS to form the sample for Sweep Three. Names and addresses from the CAPI data were cleaned to make them suitable for future use, and were supplied to CLS progressively during fieldwork.

3.3 *Thank You Letters*

Thank You letters were sent to every family who completed at least one section of the interview (see section 4 for discussion about which sections the interview covered).

The letter was addressed to the main parent and (where appropriate) the partner of the main respondent (regardless of whether an interview took place with them).

The names and addresses of the family were collected from the CAPI program so that we could be sure we were using the most up-to-date information. Where an address was not collected on CAPI, we went back to the sample file and the Booking In Program (BIP) (see 6.5.2 for further discussion) to get the most up-to-date address.

For extra clarification of the address, and as a means of cleaning the data, we ran the address through PAF software (Post Office Address Finder). This program looks at the

postcode and the house number of an address and matches the road and locality to the given information. This provided us with an address that was spelt correctly and that showed all of the lines of the address. Following this, we checked the original CAPI data against the PAF address to ensure that PAF had not given an incorrect address (due to an incorrect postcode for example). Where the PAF address did not match CAPI, we went back to the BIP and the original sample to try to identify the correct address.

We originally planned to send both an English and a translated thank you letter to all cases where an interpreter had been used at the interview. However, it soon became apparent that the time taken to match the translated letters with the addresses proved too costly to pursue. Therefore, we sent the English version of the letter to all respondents.

Respondents from the New Families sample were sent a separate letter that highlighted CLS's appreciation of them taking part at this stage of the research.

GfK NOP collated all of the addresses where a letter was sent to a family and recorded any "gone aways" (where the letter is returned to sender) on this sheet. This sheet was given to CLS for tracing purposes for the next wave.

A copy of the main and new families thank you letter is included as Appendix 19.

4. The Final Data Collection Instruments

The final interview schedule consisted of the following elements:

- Main parent questionnaire + self-completion
- Partner questionnaire + self-completion
- BAS
- Bracken
- Height
- Weight
- Home Observation
- Older siblings self completion
- Neighbourhood assessment
- Saliva sample equipment

Apart from the older siblings self-completion questionnaire and the neighbourhood assessment, which were on paper, and the saliva sample which had no questionnaire as such at all, all elements of the questionnaire were collected via Computer Aided Personal Interviewing (CAPI) and Self-completion (CASI), using the In2itive CAPI software used by GfK NOP for many years.

Interviewers were able to administer the various questionnaires in any order, to fit in with the requirements of the household, and in particular to enable interviewers to administer the assessments at a time when the Cohort Child was likely to be alert and receptive.

As discussed in Section 2, a Word version of each script was developed alongside the CAPI script, and these are included in the Appendices, as are the questionnaires that were only on paper, such as the older siblings self-completion questionnaire.

4.1 *The Main Parent Questionnaire*

Wherever the main parent from Sweep One and the Cohort Child were still living in the same household, the Sweep One main parent was again selected as the main parent interview, wherever possible. This was the case even if the main parent at Sweep One had been selected under special circumstances, and the person who better fit the original definition of main parent was now available, the reason being to maximise continuity between sweeps.

If the main parent from Sweep One was no longer in the Cohort Child's household, but at least one biological parent of the child was, then that person was selected as the new main parent, even if he or she was not in fact the main carer of the child. If there was no biological parent in the household then whomever was the main carer for the Cohort Child was selected for the main parent questionnaire.

The final version of the main parent questionnaire comprised the following elements:

- Household Composition
- Parental Situation
- Parent's involvement with child
- Child Health
- Grandparents and friends
- Parents' health
- Housing and local area
- Employment and education
- Employment history
- Child care
- Other matters
- Self completion section
- Older siblings

For the self-completion section the interviewer turned the computer round so that the screen was facing the respondent, explained briefly how to answer the questions, and then the respondent completed the section on their own. There was an example question at the start of the section, and at the end there was an instruction to give the computer back to the interviewer.

The older siblings section was asked of all main parents who had children older than the Cohort Child but aged under 16. There was also a self-completion section within the older siblings section, which operated in the same way as the other self-completion section described above. This self completion section asked about 2 selected older siblings (randomly chosen by CAPI) in households where more than 2 older siblings were present.

4.2 *The Partner Questionnaire*

Anyone who was described by the main parent respondent in the household grid as their spouse or partner was eligible for the partner questionnaire, whether or not there was any biological relationship with the Cohort Child. If the Cohort Child's biological parent(s) had left the household, no attempt was made to follow them up at their new address.

Families where the partner was incapable of doing the interview, for example, through ill health or from being away at the time, were offered a proxy interview. So that some data about the partner could be obtained from the main respondent. This was offered to both Main and New Families.

The final version of the main partner questionnaire comprised the following elements:

- Household Composition
- Parental Situation
- Parent's involvement with child
- Grandparents and friends
- Parents' health
- Employment and education
- Employment history
- Other matters
- Self completion section

4.3 *The BAS Assessment*

All Cohort Children were eligible for the BAS and Bracken assessments, with the following exceptions. In the case of children with any physical or mental disability the interviewer sought advice from the mother as to whether it would be appropriate to attempt to administer the assessment. It was essential for the working of the test that the parent played no part in coaching or encouraging the child, and this meant, for example, that parents were not able to sign for deaf children.

Similarly, the assessment could only be administered in English and Welsh (special measures having been taken to translate the CAPI instruments into Welsh). Parents were not allowed to translate for children whose main language was other than English, and again if necessary,

the interviewer discussed with the parent whether it was worth attempting the assessment in English, or whether the child would not be able to cope with it at all.

In all cases where the child was able to participate, written parental consent was obtained before the assessment took place.

Because the assessments were very different from standard interviewing, interviewers were given special instructions, both written and through the briefings, and these are discussed in more detail in the section on briefings.

The BAS assessment as used on Sweep Two involved showing pictures of objects to the Cohort Children, and asking them to say what each picture showed. The interviewer recorded on the CAPI screen whether the answer given was one that was deemed correct according to the BAS manual, one that was deemed partially correct, or one that was deemed incorrect. If the answer was partially correct the interviewer asked the Cohort Child for clarification, along the lines of

Do you know another word for it?

or

That's what it does, but do you know what it's called?

and the subsequent answer was again coded as correct, partially correct or incorrect. If the answer was again partially correct this was accepted as the final code for that object.

The CAPI screen replicated as far as possible the paper version of the assessment more usually used. Because the entire assessment is copyright, Appendix 11 contains an example of the practice page, used to familiarise respondents with the exercise.

The BAS protocol sets conditions about when the assessment should be stopped, based on the number and pattern of incorrect answers given. This was all handled by the CAPI script, so the interviewer just continued showing more pictures until the script announced that the assessment had finished. The interviewer was also able to end the assessment at any time if the Cohort Child seemed to be becoming distressed by it.

4.4 *The Bracken Assessment*

In all cases where the child was able to participate, written parental consent was obtained before the assessment took place.

The elements of the Bracken Basic Concepts Scale used on Sweep Two were as follows:

- Colours
- Letters
- Numbers
- Sizes
- Comparisons
- Shapes

The exact tasks varied but, in essence, the Cohort Children were shown a page with a number of visual stimuli, and asked to point to the one that matched what the interviewer read out. Thus, they might be asked to pick out the letter “H” from scattered letters on a page, or to say which one of four pictures showed a triangle. For copyright reasons, we are unable to show the Bracken assessment.

As with BAS, the CAPI script managed the scoring system for the assessments, which determined when one sub-test was terminated and the next one begun, based again on the patterns of correct and incorrect answers. Unless the interviewer over-rode the script, each Cohort Child attempted at least some of each of each sub-test. Interviewers also had the option, based on how the Cohort Child was reacting, to terminate any sub-test, or the whole assessment, at any time.

The administration of the assessment was changed in one way because of differences between US and British pre-school education practice (Bracken is a US-designed instrument). In the letters sub-test, upper case letters were shown before lower case ones, and yet in the UK pre-school children are usually taught lower case letters first. This caused some problems with parents, who were upset that their children were being asked about upper case letters that they could not identify, when they were actually quite good at identifying lower case ones. We were unable to change the order of presentation of the letters, but we did secure permission to change the administration rules so that all Cohort children got shown the lower case letters regardless of how well or badly they had scored on the upper case ones.

4.5 *Measuring Height*

In all cases where the child was able to participate, written parental consent was obtained before this assessment took place.

Interviewers attempted to measure each Cohort Child's height using the Leicester Height Measure Stadiometer. They were encouraged to enlist the help of parents in reassuring the child and also ensuring that the child was standing upright on the stadiometer.

Interviewers were given special instructions on using the stadiometer, and these can be found in the main interviewer instructions in appendix 13.

Height was recorded to the nearest **completed** millimetre. Although the data were ultimately recorded on CAPI, using a very short stand-alone CAPI questionnaire script, interviewers were given the option of making a written note of the height first and transferring it to CAPI later, as in some circumstances it might be difficult or disruptive to have the computer in use at the same time as the stadiometer.

4.6 *Measuring Weight*

In all cases where the child was able to participate, written parental consent was obtained before this assessment took place.

Cohort Child weight was measured using Tanita HD-305 scales, with parental assistance again requested by the interviewer. In cases where the child was unwilling or unable to stand still on the scales long enough for the weight to be read, it was possible for the parent to get on the scales first, and the scales reset to zero by the interviewer. If the parent then held the child while still standing on the scales, the display on the scales gave the weight just of the child.

Weight was measured without shoes or outdoor clothes. Special instructions were again given on using the scales, and these can also be found in the interviewer instructions (appendix 13).

Weight was recorded in kilograms to one decimal place, with interviewers again allowed to make a written note at the time prior to entering it into the CAPI script.

4.7 The Home Observation

After completing the BAS and Bracken assessments the interviewer answered this small set of questions about the interaction between Cohort Child and parent (if observed) and also about safety and other aspects of the Cohort Child's home, such as the presence of trailing wires, or the absence of visual stimulation for the Cohort Child.

The Home Observation was designed as a separate CAPI script, so interviewers could complete it when they got home, or when they were between interviews, so there was no chance of their answers being observed by respondents.

4.8 The Older Siblings Self Completion Questionnaire

Any older siblings of the Cohort Child aged between 10 and 15 were asked to complete a paper self-completion questionnaire (once the interviewer had obtained written parental consent for the sibling to do so). Adopted, step-siblings, half siblings and foster siblings were all eligible for the questionnaire. A maximum of two older siblings were selected for these elements of the survey. If there were more than two older siblings two were selected by the CAPI system according to the following algorithm based on age.

If there were more than two siblings aged ten or older, the youngest two of these were selected. If there were two or more under 10, and one ten or older, then the one over ten was selected and one of the younger ones based on first letter of first name. If there were over two under ten and none ten or older, then two were selected based on name. In all cases twins were treated as a single sibling, and this took precedence over all the other rules, with the number selected remaining at two.

Once two siblings had been selected, no replacements were possible in the case of refusal or non-availability.

If the selected siblings aged over 10 were present at the time of initial selection, the interviewer gave them a copy of the questionnaire – with the FID and a child identifier, plus the child's sex and date of birth written on by the interviewer - and an envelope in which the completed questionnaire could be placed. If the sibling was not available the questionnaire and envelope were left with a parent to be handed over as appropriate.

Completed questionnaires were collected by the interviewer, ideally at a time when another part of the data collection task was being undertaken, but if necessary via a special visit.

4.9 Neighbourhood Observations

This set of twelve questions was completed by the interviewers every time they visited an address, not just on the occasion they did an interview, and so it was completed for non-interviewed addresses as well as for interviewed ones. The questions concerned the condition of the area in terms of matters such as litter, graffiti, abandoned cars, and included a question on how safe the interviewers would feel living or shopping there.

The Cover Sheet contained space for the Neighbourhood Observations to be completed on up to six visits, and continuation sheets were given to interviewers for use if more than six visits were made to an address.

4.10 Saliva Collection

Although the saliva collection exercise was not an interview as such, it was part of the interviewer's task, and so it is logical to include it in this section.

Technically the exercise involved a collection of oral fluids, but for ease of understanding it was referred to by interviewers as saliva collection.

Respondents were given a separate explanation leaflet about the task, and if they agreed to participate (having signed a written consent form) they were given a small swab, and asked to rub it gently over the Cohort Child's gums for one minute. Children who wanted to were able to do this themselves.

The swab was then placed and sealed inside a small tube, which was itself then placed in a larger tube. The larger tube was labelled with a sticky label containing the FID in barcode form, and the interviewer wrote on the date and time of collection. The interviewer then placed the tube in a pre-addressed postage paid envelope and sent it to the Public Health Laboratory.

In a small number of cases the swab, tubes and return envelopes had to be left with the Cohort Child's parent for subsequent use and return.

4.11 CAPI script versions

As discussed in section 2.5 above, changes were still being made to the questionnaire right up until the time the main fieldwork started, and inevitably this meant that errors remained in some of the filtering, necessitating the release of a new, revised script. There were also changes made by CLS, following further discussions with the sponsors, to the way the childcare section worked.

In all, five different versions of the script were released, the last one being released on 19 December 2004.

The version of the script is identifiable in the data, by the variable "version", and the number of interviews conducted on each version is as follows:

Version number	Date Issued	Interviews conducted
1	08/09/2003	16
2	13/09/2003	1,430
3	31/10/2003	530
4	18/11/2003	999
5	19/12/2003	11,807

Because fieldwork on the New Families sample did not begin until the final version of the main parent script had been released, all New Families were conducted using the same version of the script.

There were also six different versions of the partner questionnaire, the last being released on 19/12/03.

The numbers achieved on each version of the partner interview are shown below.

Version number	Date Issued	Interviews conducted
1	13/09/03	56
2	19/09/03	300
3	03/10/03	671
4	31/10/03	389
5	18/11/03	702
6	19/12/03	8,000

5. Briefings

All interviewers were personally briefed before starting work. Because of the scale and complexity of the task the briefings lasted two days rather than the more usual one. Also, because the BAS and Bracken assessments were unlike the kind of work interviewers were likely to be familiar with, they had a day between the two briefing days on which they practiced the assessments and height and weight measurements on children of around the right age. Interviewers were instructed at the time of being booked to attend the briefing that they would need to make their own arrangements to find two families with children aged between two years nine months and three years and three months for these practice assessments to be carried out on the day between briefings.

The briefings were all led by members of the GfK NOP executive team, and the content was presented jointly by GfK NOP executives and members of the CLS team. Briefings ran from 10.30 till 15.00 each day. There were 13 briefings around England and Wales before the start of fieldwork there, followed by 3 in Scotland and just one in Northern Ireland. There were 5 further briefings during the course of fieldwork as new interviewers were added. There were around 15 interviewers per briefing on average.

5.1 *Briefing Content*

The topics covered in the briefings were as follows. A copy of the briefing slides is included as Appendix 1.

Day one

- Introduction and Agenda:
- Outline of MCS
- Summary of the interviewers' task:
- Basic approach to the cognitive assessments/dealing with parents and children:
- Administering Bracken
- Administering BAS
- LUNCH
- Home observation questionnaire
- Consent Forms
- Height and weight measurement
- Saliva testing
- Introduction to practice interview day
- Practice height/weight measurements
- Interviewer Questions

- **Day Two**
- Day Two Agenda
- Feedback and questions relating to practice of cognitive assessments
- Interviewers' task – recap
- The contact procedure and the Cover sheet
- Neighbourhood Assessment Form
- Translated interviews
- Collecting stable addresses
- Field administration
- Dummy mother interview start
- LUNCH
- Dummy mother interview complete
- Explanation of Partner Interview
- The self-completion questionnaire for Older Siblings
- Interviewer queries

A script was created for the dummy interviews, to ensure that areas of particular interest in the questionnaire were covered, and that all briefings followed the same path through the questionnaire. Interviewers were also encouraged to do further dummy interviews at home before starting work, giving different answers to see which different questions then appeared.

6. Fieldwork

Interviewing in England and Wales began in September 2003 and continued until December 2004. In Scotland and Northern Ireland fieldwork began on November 2003 and continued until February 2005.

All interviewers working on the survey, except in Northern Ireland, were fully trained members of GfK NOP's fieldforce. In Northern Ireland fieldwork was subcontracted to Millward Brown Ulster. All GfK NOP and Millward Brown interviewers had previous experience of working on social surveys. At the start there were approximately 150 interviewers working on Sweep Two. Given the length of the fieldwork period some of these inevitably dropped out and were replaced by others. By the time fieldwork was complete around 200 interviewers had worked on the survey altogether.

All interviewers attended personal briefings before starting work (see section 5.1 above for details of briefings), and also all sent letters to the local police station informing them that the survey was taking place.

6.1 *Interviewer materials*

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

Police letters

Personalised advance letters for every address

Survey information leaflets

Extra copies of advance letters to show as necessary

Personalised Cover Sheets

Sample cover sheet

Postcode listings for each sample ward

Forwarding letters with contact form, blank envelopes and reply-paid envelopes

Appointment cards

Show cards

Consent forms – Respondent and Office copies

Laptop computer with CAPI questionnaire

Project Instructions

Translations of the advance letter, shortened leaflet and consent forms

Colouring books, crayons and height charts as incentives for children

Scales with spare batteries

Leicester height measure

Equipment for saliva test

6.2 *Contact Procedure*

Each main parent in the sample was sent a letter by the interviewer a few days before he or she anticipated calling on the address, to remind them about the survey, to give further information and standard reassurances about confidentiality, and to warn them to expect an interviewer visit. The letter was accompanied by a four-page survey information leaflet, which gave further information about the different parts of the interview, including the rationale behind the saliva collection and how it would be carried out. In Wales this also included the offer to arrange for an interview in Welsh on request, and after 18/05/04 (when the Welsh BAS and Bracken script were released into field) to arrange for the child assessment to be done in Welsh.

Interviewers were instructed to stagger the mailing of the letters so that ideally they would be able to make contact with the household within a few days of receiving the letter. Interviewers also had spare copies of both the letter and the leaflet, to show to any respondents who had not received one, or could not remember what it said.

The information leaflet contained details of how to contact CLS. While the advance letter was on CLS headed paper, it also had a space for the interviewer to write in his or her own name plus phone number. In this way respondents who wanted to make an appointment rather than be 'cold called' (i.e. having the interviewer knocking on their door) were able to do so. Interviewers unwilling to give out their private number were instructed to give the GfK NOP Field Office number instead.

When interviewers made contact at an address they first asked to speak to the named main parent from their sample details, and before going any further checked that the Cohort Child was still living at that address. If the sampled person was not available the interviewer asked whomever answered the door if the Cohort Child still lived there.

If the Cohort Child was no longer at the address the interviewer attempted to obtain a new address, and if this was not possible, the Cover Sheet was returned to GfK NOP so that the details could be passed to CLS for tracing. If a new address was found to be local to the area, the interviewer carried on the same process at the new address, while if the new address was not local the Cover Sheet was re-allocated to a new interviewer.

We knew from previous experience that in some cases the family would have moved, and the new residents of the address would know the forwarding address but would be unwilling to give it to the interviewer for confidentiality reasons. To cope with these cases, interviewers were supplied with an explanatory letter asking for the new address and a reply paid envelope. These were given to the new resident, in a blank stamped envelope, and the interviewer asked the new resident to send the letter to the sample family.

Once the interviewer was speaking to a parent or other carer in the Cohort Child's household, he or she reminded the respondent about the letter, repeated some of its assurances about confidentiality, and offered to answer any questions arising from the letter and information sheet. The respondent was then asked if they would like to make an appointment for a later interview visit, or if they preferred to start the interview process straight away.

Before beginning any of the actual data collection, the interviewer asked the main parent (or other alternative main respondent) to give formal consent to the process by completing a Consent Form. The Consent Form consisted of three separate sections – one for the parental interview, one for the Cohort Child covering the assessments, measurements, collection of oral fluids and gathering of administrative data on hospital admissions, and one for the material relating to older siblings, including permission for CLS to collect statistical data from the relevant authorities from school records. It was made clear to respondents that they could give permission to some elements and refuse permission for others and the Consent Form made provision for this. An example of a Consent Form is shown as Appendix 16.

Duplicate copies of the Consent form were supplied, watermarked "Your Copy" and "Office Copy". Each copy was signed by both the interviewer and the respondent, and one copy left with the respondent while the other was sent back to GfK NOP with the Cover Sheet and other paperwork. There was space on the front page of the Office Copy version for interviewers to attach a serial number label.

6.3 *Languages other than English*

The sample file recorded the main language of the main parent at Sweep One and, in most cases, where it was not English, translated versions of the letter and leaflet were sent out. The letter and leaflet were translated into the following languages:

- Urdu
- Punjabi
- Gujarati
- Hindi
- Bengali
- Somali
- Tamil
- Turkish
- Kurdish
- Arabic

All sample members in Wales received letters and leaflets in both English and Welsh.

Respondents were also informed that it was possible for the interview to be conducted in languages other than English. GfK NOP has a number of interviewers who speak Welsh and the main Asian languages, but some of the languages were spoken by none of the GfK NOP interviewers. Also, there were of course many respondents speaking a language that their allocated interviewer did not speak.

In the first instance, if the other parent did speak English, then that person was chosen to be the main respondent. Otherwise, interviewers attempted to find another household member aged 16 or over who was able to act as interpreter. If that was not possible, GfK NOP attempted to allocate another interviewer with the relevant language skills, but in most cases there was not such an interviewer within reasonable travelling distance. In these cases GfK NOP attempted to provide an external translator, using translation agencies.

Because the cost prohibited formal translation of such a lengthy questionnaire instrument into different languages, all translation, whether by household members or outside translators, was carried out “on the fly” (apart from the Welsh cognitive assessments).

The actual number of interviews conducted in languages other than English was as follows:

Language	Main Parent	Partner
Urdu	71	43
Bengali	50	31
Punjabi	50	40
Arabic	19	13
Gujarati	15	11
Somali	13	4
Tamil	7	4
Turkish	4	1
Hindi	4	7
Sylheti	3	1
Cantonese	1	-
Welsh	1	3
Other Asian Lang	11	8
Other European Lang	5	5
Other African	3	2

6.4 *Fieldwork Dates*

The original intention was for all respondents to be interviewed while the Cohort Child was aged between two years eleven months and three years and three months so that the children would be at broadly the same stage of development, thus making the data more comparable. This was seen as particularly important for the BAS and Bracken assessments, where a large part of the analysis is based on the progress of the respondent against the average for all respondents of the same age. At such a young age development can be very rapid, and so this seemed particularly important.

The planned fieldwork dates on this basis were as follows:

Wave	Birth Date range	Start Fieldwork	End Fieldwork
A	1 st – 28 th Sept 2000	8 th Sept 2003	1 st Nov 2003
B	29 th Sept – 26 th Oct 2000	29 th Sept 2003	29 th Nov 2003
C	27 th October – 23 rd Nov 2000	27 th Oct 2003	27 th Dec 2003
D	24 th Nov – 21 st Dec 2000	24 th Nov 2003	24 th Jan 2004
E	22 nd Dec 2000 – 18 th Jan 2001	22 nd Dec 2003	21 st Feb 2004
F	19 th Jan – 15 th Feb 2001	19 th Jan 2004	20 th March 2004
G	16 th Feb – 15 th March 2001	16 th Feb 2004	17 th April 2004
H	16 th March – 12 th April 2001	16 th March 2004	15 th May 2004
J	13 th April – 10 th May 2001	12 th April 2004	12 th June 2004
K	11 th May – 7 th June 2001	10 th May 2004	10 th July 2004
L	8 th June – 5 th July 2001	7 th June 2004	7 th Aug 2004
M	6 th July – 2 nd Aug 2001	5 th July 2004	4 th Sept 2004
N	3 rd Aug – 30 th Aug 2001	2 nd Aug 2004	2 nd Oct 2004
P	31 st Aug – 27 th Sept 2001	30 th Aug 2004	30 th Oct 2004
Q	28 th Sept – 25 th Oct 2001	27 th Sept 2004	27 th Nov 2004
R	26 th Oct – 23 rd Nov 2001	25 th Oct 2004	25 th Dec 2004
T	24 th Nov 2001-11 January 2002	22 nd Nov 2004	22 nd Jan 2005
U	Mop Up		

However, it soon became apparent that if we continued to restrict fieldwork to this narrow window based on Cohort Child's age, then we would miss out on interviews with people who had moved and who proved difficult to track down. A decision was taken to allow interviews but not assessments to be conducted when the child was aged over three years and three months, and then this was later amended to allow assessments to be conducted outside the nominal window as well. Because we knew the Cohort Child's date of birth and the date the assessment took place, it was possible to calculate an exact age at date of interview and adjustments to be made in analysis for the unplanned variation in age at interview.

The distribution of age at interview across the waves is shown in the following table. It should be noted that some outliers have been removed where the date of birth is improbable or the date of interview has been recorded incorrectly on CAPI.

Wave	Under 36 months	>36 - <40 months	>40 - <43 months	>43 - <46 months	>46 - <49 months	Over 49 months
A	58	856	16	22	32	14
B	92	765	11	16	19	18
C	152	723	13	31	31	16
D	217	866	25	22	54	13
E	110	980	20	23	36	18
F	130	907	37	41	20	9
G	166	855	39	25	34	9
H	123	859	63	43	29	4
J	100	881	92	35	21	1
K	111	943	84	30	9	0
L	116	885	109	56	4	0
M	119	813	114	54	0	0
N	115	883	78	35	0	0
P	27	170	34	5	0	0
Q	20	163	66	0	0	0
R	23	217	42	0	0	0
T	48	263	14	0	0	0
U	0	4	1	0	0	0
Total	1727	12033	858	438	289	103

6.5 *Fieldwork Management*

Close controls were kept throughout the project on the progress of fieldwork using three different methods. Firstly, progress was reported by interviewers to the Area Managers using weekly paper chase sheets – the AM then reported back to GfK NOP Field. Secondly, as the Cover Sheets for each sample member were returned by interviewers through GfK NOP's Chelmsford data centre, the information contained was keyed into a Booking-In Programme (BIP). This was effectively the front end for a comprehensive bespoke sample management programme, written by GfK NOP's IT development team to a specification developed in consultation between GfK NOP and CLS. Finally, as CAPI interviews were dialled back by interviewers onto GfK NOP's head office computer, details of interviews received were merged with the field reports on progress and the data from the BIP.

It should be noted that part way through the fieldwork, it became apparent that the normal reporting system used by GfK NOP would not accommodate the entirety of fieldwork management that was required on the project. For example, the usual fieldwork progress did

not account for the vast number of movers that were experienced and so BIP was, therefore, amended mid way through the fieldwork to accommodate the need for extra analysis and management information.

6.5.1 Progress Chasing

Interviewers were briefed on the importance of progress chasing in enabling us to keep control of fieldwork. This was stressed to them at the briefings. Each day that interviewers worked, whether they were successful in getting any interviews or not, they recorded the outcome of all addresses worked on their weekly progress chase sheet. In the case of outcomes involving any kind of interview, they also recorded whether interviewing at that address had been completed or whether there were still items yet to be done.

Weekly reports were produced by the AMs and were then telephoned through to GfK NOP Field Management and the Executive team. From the point of view of Executives, these figures were used to give the most up-to-date information possible on progress on the survey as a whole, and also wave-by-wave, and country by country. They also gave a very early indication of response rates.

From the point of view of field, these figures are looked at in much more detail, the aim being to spot as quickly as possible any interviewers that were falling behind the expected rate of progress. Where this occurred, GfK NOP field office passed details on to the relevant area managers who then made direct contact with the interviewers themselves.

While the Area Managers were doing the progress chasing, they also were on hand to offer encouragement and to answer any problems or queries that may have arisen.

6.5.2 The Booking In Programme (BIP)

All the information contained on the Cover Sheets, including the neighbourhood assessments at the end, were keyed into the BIP at GfK NOP's Chelmsford Data Centre. In the case of interviewed households, once all the data had been keyed the contact sheets were boxed up ready for supply to CLS. All returned non-interview cases were put to one side once keyed so that decisions could be taken concerning possible re-issue to the field for conversion attempts.

In cases where an interviewer established that a sample member had moved from the issued address, and was able to obtain a new address but the new address was too far away for the original interviewer to continue with, the Cover Sheet was returned to Chelmsford. It was entered into the BIP as a mover, and the new address details were also entered into the BIP. It was then issued to the nearest interviewer to the new address.

In cases where the interviewer established that the sample member had moved from an address but was unable to find a new address, once the details had been entered into the BIP, the information was supplied on a daily basis to CLS by email so that the tracing progress could begin as soon as possible.

In order to insure that the BIP was as up-to-date as possible, Milward Brown Northern Ireland entered their own Cover Sheets directly onto the BIP using a web-based link before returning the paper documents to GfK NOP. The BIP was updated every day, and tables from it were produced every week.

6.5.3 CAPI data

A weekly file was supplied by the GfK NOP CAPI team, detailing all the FIDs of interviews that had been dialled back to date. This data was reconciled with the BIP. This CAPI data was not a simple list of interviewed sample members, but a more detailed list of FIDs of main parent interviews, Partner interviews, Child assessment cases and so on. Whilst this inevitably lagged behind with the figures, since this contained interviews that could actually be used, it was the most accurate representation of the state of interview progress.

6.5.4 Fieldwork progress tables

The weekly tables produced from the BIP provided a useful monitor of the exact status of the sample. The total number issued was updated each month as another wave of sample was issued, and each sample member was allocated each week into one of a number of categories ranging from not yet issued, issued but not yet attempted, attempted but not yet interviewed, partially interviewed to complete. The latter cases were divided into full interviews, partial interviews, refusals, moves, other reasons for non-contact, and so on.

These detailed figures were provided on a total basis, separately for each wave of the sample, and also separately for each of the 9 main sample strata, that is to say the 4 separate countries, further subdivided into disadvantaged and non-disadvantaged wards (and ethnic wards in England).

As well as the production of simple tables there was a constant process of reconciliation being carried out on the various different progress streams. Wherever the weekly chase sheets contradicted the BIP data, the Cover Sheet was double checked and, providing it was correct, it was assumed that the chase sheet must simply have been an interview error and precedence was given to the BIP data. In cases where the chase sheet suggested that a household had been completed but no Cover Sheet had been received back at GfK NOP within the prescribed period, checks were made with the interviewer to insure the Cover Sheets had indeed been sent back.

There was also detailed reconciliation between the CAPI data and the BIP data. Where CAPI data existed and the BIP suggested that no interview had taken place again detailed checks were undertaken on the CAPI data to ensure it was representing the correct FID, and once

this had been ascertained the BIP was updated to reflect the CAPI. More importantly, in all cases where either the chase sheets or the BIP suggested an interview had been conducted but no CAPI interview was present, details were supplied to GfK NOP Field Management immediately so they could check with the interviewer to see if the interviewer was aware of any problems.

However, it is a sad inevitability of CAPI surveys that a very small percentage of interviews will either fail to be saved or will fail to be transferred to the host computer, and this survey was no different in that respect. By using the early warning system from the sample management system we were able to retrieve many interviews that had not been dialled back but were still present on the interviewer's computer. On many other cases we were able to establish quickly that the interview had in fact been lost, and in these cases the interviewer attempted to re-contact the respondent and repeat the interview.

At the end of the survey, some 58 main interviews had been lost and were not replaced. Of the other sections, 112 partner interviews, 179 Bracken interviews and 125 BAS interviews were reported as complete on the coversheet but no CAPI was received.

6.5.5 Field quality control

In line with standard procedures – GfK NOP is a member of the Interviewer Quality Control Scheme and meets or exceeds all the Scheme's requirements – a proportion of all interviews and completed non-interview cases were subject to back-checking.

In most cases this was conducted by telephone by GfK NOP's specialist checking team based in Chelmsford, but a proportion of non-interview cases were checked by means of personal visit by an area manager or her deputy. In total, we validated 1635 cases by telephone from Chelmsford (8% of issued sample).

The back-checking interview established whether the interview had indeed taken place, and at what date, and roughly how long it had taken. Respondents were also asked if they recalled having received the advance letter, and also asked if the interviewer had been polite, had shown them showcards, and had used the BAS/Bracken materials.

In addition to the back-checking, and again in line with GfK NOP's normal practice, a proportion of interviews were conducted by an interviewer accompanied by his or her area manager or deputy. This accompaniment is mainly used to ensure that interviewer behaviour

matches the required protocols – that verbatim answers are fully recorded, that respondents are not rushed to answer, that questions are read out exactly on the script and so on.

6.6 *Response*

The importance of achieving a high response rate was stressed to interviewers at the briefing, and the survey design involved a number of standard techniques to maximise response, such as the use of advance letters, feedback from the previous wave and so on, and as a result of these approaches the challenging target for response rate was achieved, and the Field Response Rate for the main sample was 86%.

6.6.1 **Response maximisation**

Although it was clear from a fairly early stage that response rates were going to be good, extra steps were taken to boost response. There is almost no survey, however successful, that could not be improved by judicious use of reissuing non-interviewed cases for conversion attempts. In this particular case the very extended field period meant that, once the decision had been taken that interviews did not **have** to take place within a month of the Cohort Child's third birthday, in some cases several months could have elapsed between the original interview attempt and the second attempt, and this undoubtedly had an influence on the conversion attempts. There were, for example, people from early waves who had said that they would be quite happy to take part at a later date, and as the reissuing process took place several months after the early waves, these were reissued and generally with a high success rate.

All sample members who had not been contacted after six or more calls were reissued to the field, unless a very high number of calls had already been made. All refusals were examined, and were reissued except in cases where it was clear from the "Reason for Refusal" that it was an adamant refusal, or where there were special circumstances such as the death or serious illness of a family member.

A new letter was sent to all cases identified for conversion, and people were given the opportunity to opt out before the interviewer called.

In total, 748 refusals and 917 non-contacts were reissued to the field. The success rates of the two types were surprisingly similar, with 24% of refusals and 23% of non-contacts being successfully interviewed, producing an extra 391 interviews – 180 from refusals and 211 from non-contacts. This similarity of success between the two sources of reissue sample is striking, but the much longer than usual delay between initial and conversion attempt almost certainly increased the conversion rate of non-contact households considerably.

The overall effect of the reissue process was to raise the final response rates by 2%.

6.6.2 Response rates

Calculating response on a survey such as this is not simple. While the only complication in calculating the numerator is how to deal with interviews that were conducted but the CAPI data were lost, calculating the denominator is more complicated. There are, in effect, two separate response rates. The Field Response Rate is a measure of the success of the fieldwork agency in achieving interviews at valid addresses, while the Sample Response Rate is a simpler calculation of the proportion of all sample members from the previous sweep – excluding those who were no longer eligible – who were interviewed again at the next sweep. The former can be seen as measuring the performance of the Fieldwork agency, while the latter gives an indication as to the likely extent of sample degradation, and includes the untraced in the denominator.

In this case there are two categories of outcome that lead to sample members being removed from the denominator for calculating Sample Response Rate – cases where the Cohort Child has died, and cases where the Cohort Child has emigrated. In addition, for the New Families sample, there were cases where the Cohort Child was not eligible because he or she had not in fact been living in one of the sampled wards at the time the Sweep One interview should have been conducted.

For the Field Response Rate, sample members who had moved and for whom CLS was unable to obtain a new address had to be removed from the denominator, as did sample members who informed CLS on receipt of the advance letter to say that they did not wish an interviewer to call on them.

On this basis the Sample Response rate for the main sample was 81%, and the Field Response Rate 86%. For the New Families sample the figures were 50% and 66% respectively. Across the entire sample this averages out at 79% and 85%.

The sample response rate is thus the number of interviews achieved as a percentage of the eligible sample.

The table below shows the Field and Sample Response Rates for the various strata of the sample, while the full breakdown of response is shown as Appendix 21.

Stratum	Issued Addresses	Eligible Addresses	Eligible Field Addresses	Sample Response Rate %	Field Response Rate %
Total Sample	19866	19652	18364	79	85
Total Main	18482	18355	18364	81	86
Total New Families (NF)	1389	1302	1058	50	66
England Total	12881	12714	11786	78	85
England Main	11492	11412	10728	81	87
England NF	1389	1302	1058	50	66
England Ethnic Total	2783	2751	2503	70	78
England Ethnic Main	2384	2372	2189	74	80
England Ethnic NF	399	379	305	49	64
England Advantaged Total	5005	4949	4648	84	91
England Advantaged Main	4598	4550	4351	87	92
England Advantaged NF	407	368	297	52	71
England Disadvantaged Total	5088	5039	4630	76	84
England Disadvantaged Main	4510	4490	4179	80	86
England Disadvantaged NF	578	549	451	50	63
Wales Total	2751	2740	2597	82	87
Wales Advantaged	830	823	791	83	88
Wales Disadvantaged	1922	1917	1806	81	87
Scotland Total	2325	2298	2160	78	84
Scotland Advantaged	1136	1119	1063	82	88
Scotland Disadvantaged	1189	1179	1097	74	80
N Ireland Total	1913	1905	1821	77	81
N Ireland Advantaged	662	659	637	82	85
N Ireland Disadvantaged	1253	1248	1186	74	78

7. CODING and DATA PREPARATION

7.1 Coding

The questionnaire contained many open-ended questions where answers were recorded verbatim for subsequent coding at GfK NOP's Chelmsford Data Centre. These can be broadly categorised into 3 types:

- Those using standardised code frames such as SOC, ICD and so on
- Those questions that were repeated from Sweep One and where the same code frames could be used again
- New questions requiring code frames to be developed

There were very few of the latter type, and for each of these, lists were made by Chelmsford coders to the answers to the first 100 cases and draft code frames drawn up for approval by CLS.

Coding of CAPI interviews at GfK NOP is normally done in one of two ways. There is a coding module available within the In2itive CAPI software, but the scale and complexity of the coding on this project meant that it could not be used. The alternative approach is to export the data from the In2itive files in to Excel with a spreadsheet consisting of the FID, the verbatim text itself, and any other relevant information needed for coding. The coders code directly on to these spreadsheets using the next available column or columns to store the codes, and the completed spreadsheet is then sent back for merging back into the CAPI data. However, early on in the process it was discovered that this, too, would not be possible for this study. The sheer size of the data file for each respondent – mainly a function of the Children's Fund part of the older siblings section of the questionnaire – meant that with only a few hundred interviews completed, it took almost an entire day to download the data into Excel for just 1 subset for the questions that required coding.

It would clearly be impossible to code the whole survey on this basis, and so GfK NOP IT development staff wrote some routines that extracted all the verbatim data plus other key data from each respondent, and then wrote it out into a series of spreadsheets on a question-by-question basis.

These spreadsheets were sent to the coders, each of whom worked on a single question at a time, adding their codes to the columns at the end.

When the coding process was complete a series of separate spreadsheets, one for each question, were transformed to a single spreadsheet with one row for each respondent and a set of pre-assigned columns for each question that had been coded, showing the original verbatim text and up to five separate codes applied to it. To reduce the size of this spreadsheet, blank columns were removed at this stage. So, if the coding manual allowed for the allocation of up to five codes at a particular question, but no respondent had in fact been allocated more than two codes, only three columns were allocated for the text plus codes for that question.

At the end of the survey this file was validated against the original CAPI file to ensure that all occasions where there was verbatim text at a question to be coded there were equivalent data in the coded data file. Once this process had been completed the coded data file was supplied to CLS for merging into the main data. There were further checks at CLS which generated 3 further iterations to ensure the coding was complete.

Most of the coding was carried out in the traditional way, with coders using printed code frames or in the case of the International Classification of Diseases (ICD) using look-up tables. The coding of Standard Occupational Classification (SOC) was conducted using the CASCOT Programme, developed by the Institute for Employment Research at Warwick University, and which GfK NOP had been involved in beta testing. This programme takes the text of the respondent job description and matches it against a look-up directory of the SOC coding structure. The CASCOT programme offers coders a number of suggested alternatives in decreasing order of likelihood, and the coder has the opportunity either to accept the first code offered, to choose one of the alternatives, or to interrogate the database in more detail to get more information on which exact job titles fit particular SOC codes. Once SOC codes had been produced using the CASCOT programme NS-SEC were also derived by the coding team.

Copies of all code frames used are contained in appendix 20.

7.2 *Verification*

All coding was subject to a minimum of 5% verification, however, in most cases the coding was reviewed at several stages for queries, additional codes and scanning for mis-punches or out of range. A final check was made by sorting the codes and scanning the text.

The main purpose of the verification is to ensure that suitable action is taken if a coder is found to be making consistent errors at any question, and so there is no formal record of the exact number of changes that had been made during the verification process. So long as a coder made no more than two errors at any question then the verification report simply described the coding at that questions as good – it had passed verification.

Full details of the number of codings checked at each question are included as Appendix 20.2, and show that of the 82 questions coded, 64 were classified as good (78%).

Once we had delivered the coding, CLS raised a query regarding the coding for the occupation questions (Mother and Father occupations (questions F14 and F16) as well as Main Parent and Partner (questions J5/6). There were a large number of cases where teachers had been coded to an incomplete code, rather than to the complete code for either a primary or secondary school teacher, and other cases where incomplete codes were also used, with the final digit in the SOC coding being set to 0.

In the case of the Main parent and Second parent's occupation, GfK NOP realised that the output given to the coders had included the text from the first occupation question J5 – "what is your job title?" but had not included the second occupation question J6 - "What do you mainly do in that job". Evidence from the BHPS has shown that in fact many interviewers combine the answers to both questions into a single answer anyway and leave the second question blank, but for those who did not, the coders did not have access to the full answer. Once this was rectified, almost all of the teacher cases could be coded to a correct code, as could many of the other codes ending in 0, and the new codes were passed to CLS for input into the final data set.

To investigate whether this problem over the J6 responses was likely to have led to wider errors, GfK NOP agreed to re-code 300 cases of Main Parent occupation and 100 cases each of Mother and Father occupation (where this problem had not been an issue as there was only one occupation question). This validation was carried out blind – that is to say the coders did not have access to the code that the previous coder had inputted. The result of this coding was as follows:

J5/J6 – Main Parent Occupation - there were 54 differences in cases (18%), of which 38 (13%) were different at the 3 digit level. Thirteen of the total error cases were ones where an invalid (partial information) code was used by the first coder because they could not see all the information, but most of these were code 2310 – teacher (unspecified) which had already been corrected as described above.

F14 – Mother occupation – there were only ten differences at the four digit level and nine at the three digit level.

F16 – Father occupation - there were 16 differences at the four digit level, and 13 differences at the three digit level.

Thus the Main Parent occupation coding, where only partial information was displayed to the original coder, had a higher difference rate than the mother and father questions where this problem did not occur. The difference rates between Main Parent and Father questions were very small, and the overall validation difference rates were similar to those seen in validation on other surveys such as BHPS.

To provide a further comparison of coder consistency, a similar verification exercise also took place on the ICD codes. It should be noted that, originally, the ICD questions were subject to higher than 5% verification because of the complexity of the code frame.

The blind recode, based on 100 random cases from each of these questions, found the following discrepancies on the first code (to eliminate any false negatives – for example, if code 1 on the original had been coded code 3 on the recode):

DAS 21%

DBS 24%

D21 17%

D36 11%

D38 22%

G13 9%

These figures show some noticeably higher difference rates than on the occupational coding, and some lower. GfK NOP then looked at a number of random cases to try to understand why some of the questions had much lower coder consistency. It transpired that the level of detail required by the ICD code frame meant that we could not expect even skilled coders to

distinguish between "Congenital malformations of eyelid, lacrimal apparatus and orbit" and "Disorders of lacrimal system" on the basis of the descriptions given by the respondents.

7.3 *Data processing*

The use of CAPI interviewing means that, by definition, all filters and routing specified as part of the script were followed by the interviewers, since the CAPI script would simply take them to the specified questions. There is thus no opportunity for redundancy (except in the case of scripting errors) and although the possibility for missing data still remains – the interviewer has the opportunity to enter what is effectively a null response – at least we know that this was consciously rather than unwittingly omitted data. Range checks were also placed on all numerical data, such as money amounts, although interviewers were given the opportunity to override these if the respondent was adamant they were correct.

The CAPI script cannot reasonably contain every possible logic check on the answers given, or the script would become unmanageably large, and so there remains the need for editing to correct for any logical errors outside the scope of the questionnaire logic, but this editing was the responsibility of CLS. GfK NOP supplied to CLS an SPSS file of all the CAPI data, to agreed maps, plus the coded data as discussed above, data from the older sibling self-completion questionnaires, and data from the BIP. CLS have the responsibility for producing the final survey data file from these files for archive as the survey data record.