NCDS FIFTH SWEEP

Report on Survey Methodology

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1 INTRODUCTION

1.1 Background

The National Child Development Study (NCDS) is a longitudinal study of a birth cohort born in England, Scotland and Wales in the week 3-9 March 1958. The sample was originally selected for a study into perinatal mortality, designed to examine both obstetric and social factors. As the original study developed into a longitudinal survey, responsibility lay with the National Children's Bureau, which attempted to monitor the physical, educational, and social development of all surviving members of the original sample. The sample was also supplemented by the addition of all who were born in the same week outside the UK who became residents of Britain before their sixteenth birthday.

At first sample members were located through schools, with all schools in the country being asked to locate any students born in the relevant week. The first data collection was in 1965, when the cohort were aged seven, with the data being collected from schools and parents, supplemented by medical examinations and ability tests taken by the cohort. The first collection of data directly from the cohort took place in the second survey in 1969, when the cohort were eleven. Main data collection was still from parents and schools, but there was also a short personal questionnaire administered to the cohort members, along with the tests and medical. By the time of the third survey, in 1974, the cohort were aged sixteen and answered a longer personal questionnaire, as well as the tests and medical. This was the last stage on which information was collected from parents and schools.

The biggest change in the study, in terms of both data collection and sample management, came with NCDS Stage 4 in 1981. Given that the cohort was now aged 23 it was no longer possible to find them through schools. This meant that considerably greater resources were needed to locate and interview the cohort, and the National Children's Bureau commissioned a consortium consisting of NOP Market Research Limited and Social and Community Planning Research to conduct Stage 4.

The consortium was involved in the development and testing of the questionnaire, and was then responsible for locating the sample (using as a starting point the most recent address the Bureau had been able to obtain), conducting the interview, and then coding, data punching and data editing. A total of 16,021 sample members were issued to the consortium, of whom 13,870 could be traced to an address in Great Britain, and 12,538 interviews were conducted.

After Stage 4, responsibility for the study passed from the Bureau to the Social Statistics Research Unit at City University, and it was SSRU that was responsible for Stage 5 of NCDS, which began in May 1989. SSRU commissioned a consortium consisting again of SCPR and NOP, joined for this survey by RSGB. The three organisations had worked together previously on major surveys. The consortium was again responsible for locating the sample, using leads supplied by SSRU, and for data preparation and data entry, but not on this occasion for data editing.

Coverage in Stage 5 was much the same as in Stage 4, with questions on the cohort's educational and employment situation, their health, and their marital, fertility and housing history. A self-completion diary sought to fill in the gaps in the cohort members' lives between Stages 4 and 5, and this same questionnaire was completed by cohort members' spouses or partners. The most significant addition for Stage 5 was the data collected about the cohort members' children. This was achieved by means of an interview with the cohort member if female, or else with the spouse or partner, a self-completion questionnaire about each child completed by the mother, and the administering of developmental tests to the children. The tests used were similar to those used in American studies, and were administered by interviewers.

1.2 The work of the consortium

This report describes the work undertaken by the consortium over the period from May 1989 to August 1992. The first two stages of the project proceeded largely in parallel, these being the development of the various questionnaires and the preparation of the sample. At all stages there was very close liaison with the research team at SSRU, who were primarily responsible, in collaboration with the funding agencies and the NCDS advisory team, for all design aspects of the survey.

The sample was supplied by the SSRU in the form of a computerised listing of all the cohort not known to have died or emigrated. This was supplied sorted by postcode, and the first task was to break it down into interviewer allocations which were manageable in terms of size of area to be covered and total number of interviews expected. The sample was divided equally between the three organisations. Once interviewer allocations had been created they were fed into the computerised sample control system specially written for the project.

At the same time, work was being carried out on the development of the questionnaire. To avoid duplication of effort initial responsibility for working with SSRU to pilot and revise the questionnaires was taken by NOP and SCPR. At first the questionnaires were broken into sections and divided between NOP and SCPR. Development and initial pilots were carried out as if on separate surveys. Only after this first stage were the questionnaires put together as complete documents. After extensive piloting, questionnaires were tested on cohort members in a dress rehearsal for the main survey; at this stage RSGB became involved.

Each organisation briefed its own interviewers, and was responsible for field management and sample control, as well as quality control, coding, and data entry. The interviewers' task was two-fold: to locate the sample member, or if that was not possible to find as much information as possible about his or her new whereabouts, and to interview those who could be located. Questionnaires were returned to the three organisations for visual editing and coding. For the ordinary open-ended questions each organisation coded its own questionnaires, but the occupational coding for the whole sample was conducted by SCPR. Data entry took place in two stages, with the pre-coded data being punched first, before the coding stage, and the coded data punched separately.

Although no detailed data editing was carried out, a reconciliation edit was carried out before data were supplied to SSRU. This edit ensured that the content of the data set for

each cohort member matched the details on the outcome sheet, and that identification and card numbers were consistent for each cohort member. Data were supplied to SSRU on tape, along with the questionnaires.

1.3 Sample and response summary

SSRU issued names and addresses of 15,558 cohort members to the consortium, though nine subsequently proved to be duplicates. A further 32 were found during fieldwork to have died, and 288 had moved outside Great Britain, and therefore outside the scope of the survey.

Of the 15,229 effective issued sample, 1,718 cohort members (11%) could not be traced. A possible new address was obtained for a further 257 (2%), but could not be confirmed.

Thus in total 13,284 cohort members were located or traced to confirmed addresses, and of these 1,822 (12% of the total sample) were not interviewed for reasons of refusal, non-availability and so on.

Full interviews were conducted with 11,413 cohort members, although as 33 questionnaires were lost in the post, the data set contains only 11,380 full interviews, plus 33 partial ones.

11,303 cohort members completed the "Your Life" self completion questionnaire, and 11,027 completed "What Do You Think?".

9,197 interviewed cohort members had partners, and 7,528 of these completed the partner version of "Your Life".

Of the 5,167 cohort members in the mother and child sample, 2,574 had natural or adopted children living with them, and were thus eligible for the mother interview and "Your Child" self-completion, and 98% of them completed these questionnaires. Between them these mothers had 3,600 eligible children, and 96% of these completed the tests.

2 THE SAMPLE

2.1 Initial sample preparation

The starting point for the sample was all cohort members who had taken part in any NCDS survey round, excluding any who had subsequently died.

SSRU provided the consortium with an address file for 16,383 cohort members. These addresses were postcoded. After removal of those that had died, the file was reduced to 16,374 cohort members.

Each cohort member had been allocated by SSRU to one of 11 Status Codes, which reflected the current status of the address as a result of tracing exercises undertaken by SSRU. Only those status codes indicated by an * were included in the initial sample distributed to interviewers.

C*	Confirmed address	12203
D*	Demolished	39
E	Emigrated (not confirmed)	55
F	Forces (confirmed)	15
G*	Gone away, empty property	2625
P*	Parental address	40
Q	Forces address (not confirmed)	44
R	Refusal	480
T*	Temporary address	2
U*	Unconfirmed/untraced	697
Z	Emigrated (confirmed)	174

These amounted to 15,606 cohort members. 18 of these were subsequently removed due to inadequacy of address information. 15,588 addresses were therefore issued to fieldworkers (9 of these were subsequently found to be duplicates).

Cohort members were clustered into 595 points based on postcode districts. The aim was to average 26 cohort members per point. Where necessary adjacent postcode districts were grouped together, using maps.

2.2 Allocating cohort members to a sample type

As described in Section 1, this fifth sweep of cohort member data collection included collecting substantial information about the children of cohort members by interviewing the mothers of the children and by carrying out a series of development tests with the children themselves. Budgetary limitations did not allow for this additional information to be obtained from the full sample.

Cohort members were therefore allocated to two groups. Two-thirds were allocated to the **Main Sample** (eligible for a Cohort Member and Partner interview only) and one-third were allocated to the **Mother and Child Sample** (additional information collected about cohort member children).

This allocation was done by listing the 595 points in geographical order and systematically assigning two-thirds to the Main Sample and one-third to the Mother/Child Sample. The total number of cohort members falling into each sample type was:

Main Cohort Sample	10,421
Mother and Child Sample	5,167
Total 15,588	

2.3 Allocation of sample between consortium members

Each consortium member was allocated a third of the points - this was done systematically throughout the list in order to ensure a similar geographical distribution.
After allocation, fieldwork departments were allowed to exchange points in order to maximise fieldwork efficiency (some being stronger in some areas than others). A code was allocated to each cohort member to indicate the organisation to which he or she had been assigned. This was amended on being passed to another organisation to tackle.

2.4 Outlying addresses

All cohort members living within Great Britain were included in the sample issued to interviewers. Special steps were taken to obtain interviews with those living in the Channel Islands, the Scottish Highlands and Islands, the Isle of Man and the Isles of Scilly. Cohort members who were resident in Northern Ireland were not included in the survey.

2.5 Boost of mother and child interviews

Towards the end of fieldwork it became clear that the estimates of the numbers of cohort member children contained in a third of the sample was less than had been anticipated. This presented analysis problems. The consortium therefore agreed to go back to a sub-sample of Main Sample cohort members who had already been interviewed and were known to have their own children living with them. This was done by sampling half of the Main Sample points allocated to NOP. Each consortium member was allocated 11 of these points. In each point 6 cohort members (or less, if fewer with children) with children was passed to an interviewer to attempt to undertake interviews with the mother of the children and to carry out development tests with the children themselves.

Additional interviews were carried out with 116 mothers, 236 additional Your Child questionnaires were completed and 204 additional child tests administered.

2.6 Survey of Emigrants

It had been originally intended that the consortium should undertake a postal survey of cohort members living abroad. This was dropped through lack of funding. However, this survey was subsequently undertaken by the NCDS team at SSRU.

2.7 Sample definitions for each data collection instrument

The table below shows for each data collection instrument who was the data subject and who was the data provider (CM is used as a short-hand for Cohort Member).

	Data subject	Data provider
Cohort Member Your Life Since 1974	CM	CM
Cohort Member What do you Think?	CM	CM
Cohort Member interview	CM	CM
Partner Your Life Since 1974	CM's partner[1]	Partner
Mother Interview	Natural or adopted children of CM	Mother[2]
Your Child	ditto	ditto
Child Development Tests	ditto and aged 3 years 11 months or 16 days or more	Child

[1] The spouse or "live-in" partner of the cohort member. Same sex partners were included.

[2] The cohort member if female, or male with a same-sex partner, or a male single-parent. Otherwise the cohort member's female partner.

3 THE CONTROL SYSTEM

3.1 The control system

A menu-driven control system was developed by SCPR to provide management information on survey progress and to control and track the allocation of work between the three consortium members. It was based on SCPR's standard in-house survey control system but especially adapted for this survey and for simultaneous use by the three consortium members.

In addition to providing each consortium member a means of checking survey progress on a day-to-day basis, it allowed the production of summarised information in tabular form to be regularly produced for SSRU, showing progress overall and by consortium member. It also generated lists of cohort members currently scheduled to received Thank You Letters and lists of Partners requiring reminder letters in respect of their self-completion Your Life questionnaire.

The control system had its own in-built edit program to check data inputs.

3.2 Sample issue

Data for the 15,588 cohort members to be issued to interviewers were loaded onto the system, including serial number, a sample type code, sample point number and a consortium member code. These were then allocated as described in Section 2 to the three consortium members and three separate files created. As also described in Section 2, consortium members could exchange sample points if they so wished. The system had a facility which allowed for whole point switching.

Each consortium member was responsible for the day to day inputting and outputting of information for their allocation of cohort members.

3.3 Allocation of work to interviewers

As interviewers were allocated a quota of cohort members, the interviewer name and numbers were keyed in linked to the cohort members they had been allocated. The control system allowed this to be done either on a whole sample point basis or by an individual cohort member. The system allowed for the cohort member to be subsequently re-allocated to another interviewer - either to one of the organisation's own interviewers or to one working for one of the other two organisations. The system retained the details of the first interviewer's work as well as the recording the details of the work of the second interviewer. For response purposes the most up-to-date outcome was recalled.

The system could be used to determine which cohort members were designated for back-checking.

3.4 Recording work returned by interviewers

As work was returned by interviewers it was clerically checked for completeness and then an outcome code for each aspect of their work (see 5.6) recorded on the control system.

The system had a facility to allow up-dating of information held on the system about the cohort member, such as address and change of name details.

3.5 Progress reports

Certain reports could be obtained directly from the system, both on-screen and printed out. For example, reports could be produced by interviewer showing the work allocated and progress on each allocated sample member. Individual serial numbers could also be inspected and totals by outcome code called up.

Other reports could be run by analysing the control system using Quantum. The system outputted ready made Quantum axes containing interviewer names/numbers and points. This facility was used to generate weekly in-house progress reports.

Fortnightly progress reports were prepared by SCPR from a master-file, which had been up-dated on receipt of data from each consortium member. These fortnightly reports contained 20 tables and were circulated to SSRU as well as to consortium members. The tables contained in these reports analysed progress first by consortium member and then by standard region. The tables contained the following information:

* current status of each cohort member (not yet allocated to an interviewer, in field, completed, returned to SSRU for further tracing)

* the total number of telephone and personal visits to date made for completed cohort members - distinguishing between interviewed and not interviewed cohort members

* outcome details for cohort members reported as completed by the last interviewer to whom they had been allocated - this table was run in total and produced separately for the main sample and the mother/child sample

* outcome details for partners - based on cohort members with partners

* outcome details of attempts to interview the mothers of the cohort members' children - based on cohort members with "live-in" children; this included outcomes of attempts to obtain a Your Child questionnaire for each child

* outcome details of attempts to conduct tests with cohort member children

* two summary tables which showed the extent to which complete data had been obtained from a cohort member household.

3.6 Cohort Member Thank You letter and Partner reminder letter

Thank you letters to productive Cohort Members were despatched weekly (copy of letter appended). A list of productive cohort members booked-in within the last seven days was produced weekly in the form of an ASCII file. This contained the cohort members full name and latest known address. Each organisation used this to interact with their own Thank-you letter set-up.

A similar system was used to remind those partners they had not completed or returned their Your Life booklet.

4 QUESTIONNAIRE DEVELOPMENT

4.1 Division of Responsibility

Overall responsibility for initial questionnaire design and development lay with the SSRU team, who worked closely with consortium members at all stages.

With three organisations working together in consortium there is always a danger of duplication of effort. In order to use researcher resources in the most efficient way, it was decided that in the initial stages of questionnaire development only two consortium members would be involved, with the third being given copies of all draft questionnaires, but only playing an active role at the final piloting stage. It was felt unwise for one organisation to start on the main fieldwork without any pilot experience, for as well as testing the questionnaire, the pilots served to provide opportunities to test internal systems.

Since NOP and SCPR had both been involved in NCDS Stage 4, and particularly because some of the research team in each organisation had personal experience of Stage 4, it was decided that NOP and SCPR would be responsible, in conjunction with SSRU, for the initial questionnaire development stages.

The streamlining of the consortium team was taken a stage further with the decision, as in Stage 4, to divide the various questionnaires into sections, and then to allocate responsibility for each section to either NOP or SCPR. As with RSGB's role overall, each was copied in on the other's work, but NOP researchers did not attend meetings specifically about SCPR's sections, and vice versa. Nor were researchers from one organisation involved in the other's pilots in the early stages.

4.2 Questionnaire development

Questionnaire development began with the largest and most significant document, the individual questionnaire. SCPR took responsibility for the major sections on education and training, employment, and health, while NOP was responsible for the sections on housing, fertility, relationships, and finance.

From the very start of the project it had been acknowledged that a life history diary for self-completion by the cohort member would be a major data collection tool. A life history diary had been used in Stage 4, though on that occasion it was administered by the interview, and used mainly as a memory aid for other questions. A self-completion diary was seen as having two particular advantages for Stage 5. Given that cohort members were being asked to think back over a period of up to 17 years since they left full-time education, there was a lot to be gained by giving them a chance to think back at their leisure, to discuss events and dates with their partners, and to refer to documents where relevant. A subsidiary, but by no means insignificant, advantage of the self-completion diary is that it released interviewer

time to be spent on other questions, thus increasing the volume of data that could be collected for any given budget.

The diary covered the same areas as the questionnaire, with sections on partners, children, jobs, time out of employment, and housing. As the information being collected was potentially quite complex, physical design of the document was much more important than it would have been for an interviewer-administered questionnaire, and because of their in-house facilities for desk top publishing NOP were responsible for the production of the diary.

As the diary was going to be used as a starting point for some of the sections of the cohort member questionnaire, its development had to go hand in hand with that of the cohort member questionnaire, and it too was tested in some of the early pilots. There was also a partner version of the self-completion, which was effectively the same document.

As well as these principal questionnaires there were other documents which made up the interview package, and responsibility for the development of these was again split between NOP and SCPR. There was a partner questionnaire, which was basically a subset of the questions from the cohort member questionnaire, though at the end of the pilot process this was dropped from the study. NOP was responsible for a questionnaire for the mother of any children of the cohort member, whether the mother were the cohort member or his partner, and also for a self-completion questionnaire to be completed by the mother about each child. SCPR was responsible for the development of the child tests administered to natural children of the cohort member. These were based on tests used in the National Longitudinal Study of Youth in the United States. Copies of the tests were supplied from the States, and SCPR worked on a document for recording the results and controlling the process, and on Anglicising the wording where necessary.

Initial testing was fairly informal, with each of the organisations piloting just its own sections of the cohort member questionnaire, using anyone approximately the same age as the cohort as respondents. All interviewers working on the pilots attended personal briefing and debriefing sessions, which were also attended by SSRU staff. After each debriefing modifications were made to the questionnaire, following further discussions between the consortium members and SSRU. There was a separate pilot of the life history self-completion, in which interviewers placed the questionnaire, then returned later after respondents had completed it, to ask if they had found any problems filling it in.

After this initial pilot work on the separate sections, the sections relating to the cohort member were combined into a single document for the next stage of piloting, this time conducted by NOP and SCPR interviewers together. The self-completion diary was also tested alongside the questionnaire, to measure the success of the linking between it and the cohort member questionnaire. Respondents were people aged 30-35, who were not cohort members. interviewers from people aged 30-35.

The next pilot tested the same four documents - cohort member questionnaire, partner questionnaire, and the two self-completion diaries - but with a sample of cohort members.

The child tests, meanwhile, were tested together on another non-cohort sample, before the entire document set was brought together for the dress rehearsal early in 1991. Eighteen

interviewers worked on the dress rehearsal, six from each of the consortium members. They attended three full days of briefing, with home study and practice interviewing between the second and third days. The basic format of the briefings was much the same as for the main stage, detailed below in Section 5 below.

A very high response rate was achieved on the dress rehearsal: 100 interviews were achieved out of 108 issued cohort members. Response was understandably slightly lower from partners, with 71 of the 84 partners interviewed.

Further changes were made following the dress rehearsal, partly as a result of lessons learned from it, and partly because changes had to be made to the scale of the project for financial reasons. Among other changes, some of the material from the cohort member questionnaire, covering the cohort members' opinions rather than factual information, was moved into another self-completion questionnaire.

Because of these changes, further piloting was carried out later in 1990. In July the revised cohort member and partner questionnaires were tested along with the relevant self-completion questionnaires, on a sample of cohort members. The final round of testing was a second dress rehearsal conducted in October and November. Nine interviewers from the three organisations worked on this, and they again received a full three days of briefing. All the survey documents were tested, and these were effectively those as used on the main stage.

4.3 The final questionnaire set

A copy of all the various questionnaires used in the main stage are appended to this report. The list of documents used, and an outline of their coverage, is shown below. Section 2.7 of this report gives details of the data subject and data provider for each document.

The two cohort member self-completion questionnaires were posted to respondents by the interviewer, along with an accompanying letter. If the follow-up telephone call to arrange an interview revealed that the cohort member was living with a partner, the partner self-completion was posted as well. The intention was for these to be completed in advance of the interview, to act as a reference point for the interviewer and the cohort member.

The other questionnaires were administered by the interviewer in the cohort member's home, with the exception of the "Your Child" self-completion questionnaire, which was handed over to the mother at the earliest sensible time for completion.

Cohort member interview

Employment and unemployment
Education and training
Marriages and relationships
Pregnancy and childbirth
Housing
Income and savings
Health
Citizenship and participation

Cohort member life history self-completion ("Your life")

Marriages and relationships
Pregnancy and childbirth
Employment
Periods out of employment
Housing

Cohort member opinion self-completion ("What do you think?")

Attitudes on a wide range of political and social topics

Partner life history self-completion ("Your life")

As cohort member life history

Mother interview

Pregnancy
Childbirth
Children's health
Institutional care
Education
Children's behaviour
Daycare

Mother self-completion ("About your child")

Physical development
Behaviour
Family lifestyle

Child test document ("Child interview") (see Section 4.4 below)

Picture vocabulary test
Verbal memory
Maths
Reading
Memory for digit span
Self-image
Interviewer assessment of home environment

Home Environment Observations (if child too young for child tests)

Interviewer assessment of home environment

4.4 The Child Tests

The child tests were a new addition to NCDS5, but they were not in themselves new. They had been used for some years in the United States, most relevantly in the National Longitudinal Study of Youth. Originally designed to be administered by professionals, the tests had been modified so that they could be administered by lay people, such as interviewers. Their basic aim was to measure the child's development in a number of learning skills, concentrating mainly on vocabulary and mathematics. Since there was now a body of data from tests on American children, the intention was for NCDS to provide comparable data for British children.

The test documentation was supplied from the United States, and a researcher from the National Opinion Research Centre, who carry out the fieldwork on the American study, came over to train SSRU and consortium staff in its use.

In the American study simple tests are carried out on children as young as two, but after initial piloting it was decided on cost grounds to restrict the tests in NCDS5 to those for children aged four and over. In all of the tests the child's age was a crucial factor in determining whether or a child was eligible for that test, and which sections of the test should be undertaken. For the purpose of the tests, the child's age was calculated in a special way, known as PPVT age, after one of the tests - the Peabody Picture Vocabulary Test. The child's age was calculated exactly to the nearest month, so that a child four years, six months and eighteen days would have a PPVT age of four years seven months, while one aged four years six months and thirteen days would have a PPVT age of four years six months. Interviewers were given special training in the application of PPVT age during the briefing, to ensure comparability with the American data.

The tests were modified to produce anglicised equivalents. This varied from substituting "tap" for "faucet" in a vocabulary test to changing quarters and dimes to pence in a maths test.

Most of the tests were progressive in terms of difficulty, with the same basic task being given to teenagers as to primary school children, but with a higher degree of complexity or knowledge requirement. Where a child started in this long scale depended either on his or her PPVT age, or simply on his or her performance in the previous test. In order to avoid embarrassing or upsetting the child, if the initial question was answered wrongly, the interviewer would go back several steps in the scale of questions for that particular test, and try another start point. For each child, the number of questions answered depended on upper and lower limits known as basals and ceilings. The basal was the highest point on the scale where the child was able to get a certain proportion of answers right, such as six out of eight, in a consecutive stream, while the ceiling was the point at which the child got a certain proportion of consecutive answers wrong.

Interviewers working on the US National Longitudinal Study of Youth, conducted by NORC, are trained by field supervisors on how to conduct child tests. The field supervisors receive several days advance training. The consortium's view was that it would be preferable for the research team to be primarily responsible for this training. This view was confirmed after two consortium researchers, together with representatives of SSRU, visited a NORC training session in Dallas. Experience gained during child test piloting

suggested that three "trainers" were required at a child test training day, in order to give each interviewer close supervision, and to enable practice work to be checked simultaneously while further briefing was being conducted.

The three trainers comprised a consortium researcher (who was the lead trainer), a member of the SSRU team and a consortium field supervisor. The supervisors attended special pre-training sessions in order to gain the necessary skills.

4.5 Questionnaire length

Records were kept by interviews of how long it took to administer each questionnaire, and average lengths were calculated from these figures for each of the main questionnaires. The average lengths were as follows:

Cohort member interview	85 minutes
Mother interview	37 minutes
Child test	45 minutes

5 INTERVIEWER BRIEFING AND FIELDWORK PROCEDURES

5.1 Introduction

Instructions to interviewers with respect to the survey administration took several formats, the primary vehicle being personal briefing by members of the research team. Personal briefings play an important role in motivating interviewers to achieve good response rates and to collect full and high quality data. They were also particularly important in the context of this survey given the complexity of the interviewing task, particularly the inclusion of unfamiliar elements such as administration of development tests to children.

In addition to attending a briefing session, interviewers also received comprehensive written instructions. These included supplementary notes issued after the briefings to ensure that all problems raised at the briefing sessions were brought to the attention of each interviewer and resolved in an identical manner.

5.2 Organisation of the briefings

Each consortium member was responsible for briefing its own field force. It was essential that briefings were conducted in a consistent way and that interviewer queries were resolved in an identical way. The following procedures were therefore adopted:

1. A briefing of briefers prior to the first briefing of interviewers.

2. A briefing, conducted by each consortium member, of its own team of regional field managers and key supervisors. These were also conducted prior to the briefings for interviewers and acted as a "dress rehearsal".

3. A detailed briefing guide, to be followed by all briefers, which ensured that all important points were covered.

4. Standardisation of dummy interviews and child tests during the briefings.

5. Attendance by SSRU researchers at every briefing. Problems which arose at the briefings were then discussed by SSRU staff and decisions made centrally about appropriate procedures.

A mixture of one-day and three-day briefings were conducted. Interviewers working on a main sample point attended a one-day briefing which explained tracing procedures and documents relating to the cohort member and the partner. Interviewers working on a mother/child point were required to attend a further two formal briefing days and to spend one day at home revising what they had learned and carrying out trial tests. Briefing day two was devoted to the administration of the child tests. The following day was spent practising these tests on children in their own homes. Interviewers then returned for a third briefing day. Day three was designed to give feedback to interviewers on their trial tests of

the previous day, to discuss issues and problems raised by interviewers, and to take interviewers through the other documents administered to mothers and children.

The practice day included the administration of tests to three children, who were not familiar to the interviewers. One child had to be under seven years of age and one seven years or over. The other could be of any age.

27 one-day and 18 three-day briefings were conducted during April and May 1991. All were conducted by a member of the NOP, RSGB or SCPR research team and all had attended the briefing of briefers. In all, 599 interviewers were briefed, 230 of whom received the three-day briefing. Between nine and 15 (average 13) interviewers attended these extended sessions. For the one-day briefings, the attendance ranged from eleven to 20 interviewers (average 14).

5.3 Briefing procedures and instructions

It was debated as to whether interviewers should be sent a pre-briefing pack, to be studied before attending the briefing. Given the complexity of the survey, particularly for the mother/child sample, it was decided that such a pack would make some interviewers unnecessarily wary of the survey and decide to opt out. For this reason, such a pack was not issued.

The briefings followed a strict agenda to ensure that all the necessary points were covered. The content of each of the days is described below.

Day One

Following a brief description of the background to and purpose of the study (by a member of SSRU), the briefer described the sample, outlined the basic contacting and interviewing procedures for the cohort member documents and the partner self-completion questionnaire. A complete "dummy" interview was conducted for the main cohort member questionnaire. The researcher was the respondent and each interviewer conducted a small part of the interview. A standard "dummy" text, from which all briefers worked, was devised. This was designed to raise points which were thought to pose particular problems. Although queries were raised throughout the day, there was a final opportunity to discuss problems at the end of the briefing. A summary of critical points was also made by the briefer.

Day Two

This day was devoted to the child tests. Instruction for each test consisted of:

1. A video which showed a test in action.

2. A "dummy" interview, conducted by the briefer with the SSRU representative or a member of the field management team as respondent. Interviewers practised scoring the test.

3. Two further test examples, with interviewers working in pairs and taking turns to be interviewer and respondent.

Once again, the "dummy" and examples were standard texts designed to highlight the wide variety of outcomes which could occur during the course of the fieldwork.

Time at the end of the day was devoted to answering queries and highlighting main points.

Day Three

The day commenced with an explanation of the Mother Questionnaire and was followed by a "dummy" interview. While this was being conducted, representatives from SSRU and field management checked the practice child tests conducted by interviewers at home on the previous day. Feedback was then given on the practice tests and the principles of child testing recapped. The remaining child-related documents were then explained. The day finished with a summary of all the survey procedures and a question and answer session.

It was envisaged that, at the end of the three day briefings, some interviewers would decide not to participate in the survey as they did not feel sufficiently confident of their ability to carry out the child testing. It was also thought that some may be deemed unsuitable by the briefing team and not used for the survey. In the event, only two interviewers were rejected or opted out.

Interviewers were issued with comprehensive written instructions. The main instructions explained in detail the tracing and contacting techniques and the administration of the cohort member documents and partner self-completion questionnaire. There were also written instructions which stated procedures for the mother and child documents. These were supplemented by instructions which dealt with problems noted during the briefings, or after the first batches of completed questionnaires had been checked by staff at the head offices of the three consortium members. Copies of the instructions are appended to this report.

The instruction process continued during the early stages of fieldwork through reports made to individual interviewers on the results on checks of their work. These checks were conducted by clerical staff and are discussed more fully in Section 7.2. Where necessary, these were supplemented by supervisory visits and additional field accompaniment (see Section 7).

5.4 Contacting and interviewing procedures

For reasons of efficiency, interviewers were instructed to make their initial contact with respondents by telephone. The purpose of the call was to re-introduce the survey to the cohort member and to make an appointment for a visit. The cohort members were also told to expect to receive the Your Life and What do you Think? self-completion documents through the post, to be completed prior to the interview. Where possible, the interviewer also established in the cohort member was living with a partner. If this was the case, a Partner Your Life self-completion questionnaire was sent in advance of the interview.

If contact could not be achieved by telephone, personal visits were made. Interviewers were asked to make at least five visits, each to be made at different times of the day and days of the week in order to maximise the chance of a successful contact. The self-completion documents were then left with the cohort member and an appointment made to revisit to conduct the main interview.

In some cases, where contact could not be made either in person or by telephone, a letter was left at the address which asked the cohort member to contact the relevant head office in order to pass on a contact number so that the interviewer could contact them to arrange an appointment for an interview.

Wherever possible, prior to the interview appointment, the interviewer telephoned the cohort member to check that they had completed the Your Life questionnaire and to confirm the interview time. If the document had not been completed by the time of the visit, it was administered verbally by the interviewer prior to the main cohort member interview. After which, all cohort member documents were collected by the interviewer. If the partner had not completed the Your Life questionnaire and was present in the house while the main interview was taking place, he/she was encouraged to complete it at that time. Failing that, the interviewer arranged a collection time if she was likely to be in the area again (visits solely for the collection of these documents were not allowed) or else left a reply-paid envelope so that the partner could return the completed document by post.

Interviews were conducted wherever the respondent found it most convenient. Interviewers were asked to make every effort to conduct this main interview in private. At the end of the section on the family (Section C) interviewers recorded whether or not any person aged over three years was present. As a further means of ensuring frankness, interviewers were not permitted to interview anyone known to them, however slightly. In these cases the respondent was re-allocated to another interviewer.

Interviewers were encouraged not to accept without question proxy refusals by, for example, a spouse or parent of the cohort member. They were asked to speak to the cohort member themselves to check that they were genuine refusals. Occasionally, interviewers needed to speak to wardens of institutions such as hospitals, prisons and Armed Service establishments. These cases were referred to SSRU who sought permission for an interview. Otherwise, interviewers were responsible for all tasks necessary to obtain an interview.

If an interviewer found that a cohort member was handicapped to a degree that made interviewing difficult, advice was sought from SSRU. Where permission was given by SSRU the help of a third party was allowed or, in some cases, the interview was conducted entirely by proxy.

For cohort members included in the mother/child sample, one or more other visits were sometimes necessary for the completion of these elements of the survey.

Once contact had been made, co-operation with the survey was high. Considerable efforts had been made by SSRU since the last stage of the survey to keep in contact with the cohort members and to stress the importance of the research programme. In addition, interviewers for Stage 5 were issued with copies of an explanatory letters (for the cohort member, partner and, where appropriate, for the mother figure of households in the mother/child sample) from SSRU and a booklet "Your Story" which described the findings from the previous stage. Both documents stressed the confidentiality of the survey and were left with the respondents after the interview(s). The interviewers' instructions also gave detailed advice on how to introduce the survey and on how to answer questions which cohort members were thought likely to ask. Copies of the letters are appended.

Interviewing began in April 1991 and finished in January 1992. The great majority of interviews were, however, conducted by the end of November 1991.

5.5 Tracing procedures

In the period leading up to the start of fieldwork SSRU had devoted considerable resources to confirming the present addresses of the cohort members. This tracing process continued throughout the fieldwork period and new addresses were passed to the relevant organisation as they were discovered. At the beginning of the fieldwork period, however, a substantial number of addresses were still unconfirmed or were known to be no longer occupied by the cohort member. Tracing such cohort members was a major task for both the consortium interviewers and SSRU. Data in Section 6 show the extent to which this tracing procedure was successful. The methods used are described below.

In addition to cohort members already known to have moved from the address issued to the interviewer, several of those for whom an address had been confirmed were nevertheless no longer resident there. In some cases the cohort member had not been resident for many years. In these situations it was usually because a parent was interested in the study and kept in touch with the NCDS team on behalf of his or her child.

Tracing was, of course, complicated by the fact that a cohort member might have changed name - after marriage or after a relationship breakdown.

At a high proportion of addresses where interviewers found that the cohort member was no longer present, the new residents could either supply a new address for the cohort member or give the interviewer sufficient information for a new address to be traced. If the new address was found to be in the area in which the interviewer was already working, no re-allocation of the new address was required. If the new address was outside the area, it was returned to the relevant head office were it was re-allocated to the nearest interviewer, in some cases to one working for one of the other consortium members. Such transfers from one organisation to another were allowed for in the control system.

Interviewers were instructed to visit as many addresses as required in order to establish the whereabouts of a cohort member.

New addresses were not always found. New residents could not always provide information about the cohort members' whereabouts or they may not have heard of them. In a few cases the addresses were found to be demolished, empty or could simply not be traced. Forwarding addresses supplied by new occupants in good faith were sometimes defective or else the cohort member had moved again.

The importance of finding new addresses for moved and untraced respondents was stressed to interviewers both prior to and during fieldwork. Ideas for sources of information were given to interviewers: neighbours, local post offices and shops, the Electoral Register and friends or relatives who could be traced.

Where these efforts failed, records for the cohort members were returned to the relevant head office from where they were passed back to SSRU for further tracing effort. SSRU

was able to trace several of these, although a small proportion of these were not traced in time for re-allocation and interviewing to be possible.

5.6 The contact and outcome sheet

Computer output supplied each to interviewer comprised:

1. A complete set of names and addresses of all cohort members in the sampling point allocated, along with the date of address confirmation and, where applicable, a previous name.

2. A set of six adhesive address labels for each cohort member in the assignment:

   * a name and address label for the contact and outcome sheet;
   * an information label also transferred to the contact and outcome sheet[3];
   * four serial number labels for transfer to the main sample self-completion documents and the main cohort member interview document.

These procedures were designed to ensure the confidentiality of the results. The contact and outcome sheet, the only document with the cohort member's name and address, was posted back in a separate envelope from that used for the completed survey documents. The process also minimised interviewer error in transcribing serial numbers to questionnaires. However, adhesive labels were not used for the mother/child documents. In these cases interviewers were required to write in the serial number.

If the cohort member had moved or the address was ineffective in some other way, interviewers recorded the information on the contact and outcome sheet, along with any action which had been taken to trace the cohort member. Space was provided for up to three new addresses which might be traced. In the event of a re-allocation, this sheet was returned to the head office and subsequently issued to the new interviewer. In this way all the information regarding tracing effort was contained on the one document.

The contact and outcome sheet contained a list of possible outcome codes, from which an interviewer chose to denote the outcome at each address traced. The sheet also contained room to record the number, date and time of any visits or telephone calls which were made.

A copy of the contact and outcome sheet is appended to this report.

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[3] The information label gave the date of last contact with the cohort member, the current address status, the sex of the cohort member, their birth surname and their telephone number, if known.

6 OUTCOME OF FIELDWORK

6.1 Summary of outcome

15,588 cohort members were issued to interviewers (see Section 2). 9 of these were subsequently found to be duplicates - the same cohort member had been issued to consortium members under two different serial numbers. The effective sample issued to interviewers was therefore 15,579. Table 1 below summarises the numbers traced and interviewed during the fieldwork period. As can be seen there was no differential response between cohort members assigned to the main sample and those assigned to the more demanding Mother/Child sample.

TABLE 1 Summary of Cohort Member Interview Outcome

	Full sample		Main sample		Mother/ Child Sample	
Cohort members issued to interviewers	15,558	%	10,421	%	5,167	%
Found to be duplicates	9	*	4	*	5	*
Found to have died	32	*	22	*	10	*
Living outside GB	288	2	200	2	88	2
Not traced	1,718	11	1,170	11	548	11
Traced, but not confirmed	257	2	166	2	91	2
Traced, confirmed, but not interviewed	1,822	12	1,198	11	624	12
Traced and interviewed:						
fully	11,380	73	7,601	73	3,779	73
partially	49	*	29	*	20	*
subsequently lost in post	33	*	31	1	2	*

The following sections provide fuller details of this response and reasons for non-response.

6.2 Tracing cohort members

Details of interviewer tracing procedures are given in section 5.5.

32 cohort members were found to have died. 13,284 cohort members were traced to addresses at which they were confirmed as currently resident (85% of issued cohort members).

Addresses were obtained for a further 545, but it was not possible to confirm whether or not the cohort member was really resident at the address. 288 of these were addresses overseas and 257 were within Great Britain. The 257 within Great Britain were either traced too close to the end of fieldwork for interviewers to make contact, or they were addresses at which no contact was possible, despite persistent attempts, or, if contact had been made, the current residents refused to divulge any information about themselves or about the cohort member.

At the end of fieldwork it had not been possible to obtain a full current address for 1,718 of issued cohort members (11%). The reported status of the last address obtained for each of these cohort members is given below. After all attempts to trace the cohort member further, no new address was obtained.

The last address obtained for the 1,718 untraced cohort members was reported as:

- too insufficient to allow identification	32
- not traceable	167
- premises vacant	70
- premises demolished	60
- business or industrial premises only	4
- occupied but residents did not know of cohort member	1168
- others	217

Section 6.4 provides further details on amount of tracing required.

6.3 Interviewing traced cohort members

As stated above, 13,284 cohort members were traced to addresses which were confirmed as their current homes. Interviews were obtained with 11,462 of these cohort members. 11,413 gave a full interview (33 of these were subsequently lost in the post between interviewer and office). The remaining 49 gave partial information only to the interviewer.

Table 2 shows the reasons why the 1822 cohort members traced to a current address did not take part in the survey.

TABLE 2 Reasons for non-response among traced cohort members

Cohort members traced, confirmed, but not interviewed	1822	%
No contact possible with Cohort Member during survey period	149	8
Advance refusal to SSRU	37	2
Cohort member refusal to interviewer	1176	65
Refusal by household member on behalf of Cohort Member	198	11
Broken appointment by Cohort Member	113	6
Incapable of interview	13	*
Cohort member ill at home	7	*
Cohort member in hospital/away from home	38	2
Other assorted reasons	91	5
Summary		
Refusals	*1524*	*84*
No contact made with Cohort Member	*194*	*11*
Other reasons	*104*	*6*

6.4 Amount of tracing required

Prior to fieldwork SSRU had tried to establish the current whereabouts of all cohort members. As a result it was thought that 78% of cohort members issued to interviewers were resident at the given address ("confirmed" addresses). It had either not been possible to track down the current address of other cohort members or it had not been possible to establish whether or not they were still resident at the last known address (unconfirmed addresses). In these cases interviewers were given the last known address for the cohort member.

The majority of "confirmed" addresses were found to contain the cohort member. At 15% the cohort member was no longer resident. Cohort members were, however, resident at

half of the "unconfirmed" addresses. Overall, 78% of cohort members were found to be living at the address issued by SSRU:

67%	resident at "confirmed" address
11%	not resident at "confirmed" address
11%	resident at "unconfirmed" address
10%	not resident at "unconfirmed" address
1%	information not recorded

A record was kept of the number of addresses thought to contain the cohort member that were visited by interviewers in their attempts to trace. No record was kept of other addresses visited - such as those of parents and friends. On average, interviewers visited 1.2 addresses per cohort member. In the case of unconfirmed addresses, the number visited rose to 1.6 per cohort member. For only three cohort members were five or more addresses visited.

6.5 Number of calls made

Interviewers could make contact with cohort members in one of two ways - by telephone or by a personal visit to their homes. This section looks at the number of calls made in both respects by interviewers.

31,664 telephone calls were made (an average of 2.0 per cohort member) and 26,180 personal visits (an average of 1.7 per cohort member). The total number of calls made amounted to some 58,000, with an average of 3.7 calls per issued cohort member.

Not surprisingly, the Mother and Child sample required more calls, particularly personal visits.

TABLE 3 **Average number of telephone calls and personal visits made to cohort members, by type of outcome**

	Average number of calls per cohort member		
	Total sample	Main sample	Mother/Child sample
All calls (telephone or visit)			
All cohort members	3.7	3.6	3.9
- interviewed	3.9	3.8	4.2
- not interviewed	3.1	3.1	3.1
traced, not interviewed	*4.1*	*4.1*	*4.1*
not traced, dead, abroad	*2.0*	*2.1*	*2.0*
Telephone calls			
All cohort members	2.0	2.0	2.1
- interviewed	2.2	2.2	2.3
- not interviewed	1.5	1.5	1.4
traced, not interviewed	*2.2*	*2.3*	*2.1*
not traced, dead, abroad	*0.7*	*0.7*	*0.7*
Personal visits			
All cohort members	1.7	1.6	1.8
- interviewed	1.7	1.6	1.9
- not interviewed	1.6	1.6	1.6
traced, not interviewed	*1.9*	*1.9*	*2.0*
not traced, dead, abroad	*1.3*	*1.3*	*1.3*

6.6 Response to Cohort Member self-completion questionnaires

Your Life since 1974

11,303 cohort members completed the preliminary Your Life self-completion questionnaire (73% of those issued to interviewers and 85% of those traced to an address at which they were known to be living). The majority of these (11,194) went on to be interviewed (see *Summary* below).

What do you think?

11,027 completed the "What do you think?" self-completion questionnaire (71% of those issued to interviewers and 83% of those traced to an address at which they known to be living).

Summary

82% of cohort members traced to an address at which they were known to be living completed the preliminary Your Life since 1974 questionnaire, were interviewed and completed the What do you think? questionnaire. Only a few agreed to be interviewed but did not complete either self-completion document.

		% of traced cohort members
Completed Your Life ..	11,303	85%
- *interviewed*	*11,194*	*84%*
Completed What think ..	11,027	83%
- *interviewed*	*10,917*	*82%*

Overall:

Interviewed and completed both Your Life .. and What think ..	10,879	82%
Interviewed and completed Your Life only	11,194	84%
Interviewed and completed What do your think? only	10,917	82%
Interviewed and neither self-completion completed	197	1%

6.7 Partner Self-Completion

9,197 interviewed cohort members were identified as having partners. Of these 7,528 completed the partner's version of "Your Life since 1974" self-completion questionnaire (263 only completed it in part). 190 refused to accept one. The remainder either subsequently stated that they did not wish to complete it or failed to do so for some other reason. In addition to reminders made by interviewers during their visits to interview the cohort member, a written reminder was sent.

6.8 Mother and Child sample response

As detailed in section 2.2 5,167 cohort members were assigned to the Mother and Child sample. 2,574 (68%) of interviewed cohort members in this sample had natural or adopted children living with them. The number of children was 5,204 (2.02 per cohort member with a child or 1.37 per interviewed cohort member).

Interviews were sought with the mothers of these children (whether cohort member or partner, if present in the household). Mothers who agreed to be interviewed, were asked to

complete a self-completed "Your Child" questionnaire about each natural or adopted child of the cohort member.

98% of mothers were interviewed
98% of "Your Child" questionnaires were completed

The child development assessment tests applied to children who were aged 3 years, 11 months and 16 days or older at the time of interview. 3600 children of interviewed mothers were eligible. 96% of these completed the assessments.

Mother and Child Boost

The sampling method for this boost is described in section 2.5.

Additional interviews were carried out with 116 mothers; 236 Your Child questionnaires were completed; and 204 additional child assessment tests administered.

6.9 Record Check and Medical Consent Form

At the end of the interview cohort members were asked to complete a form giving their full name and address details, including telephone number. They were also asked to provide a contact address - that is the address of a relative or friend who could be contacted in the event the cohort member had moved and who would know their current address. The form also asked for details of parents' dates of birth, full names and addresses (if living). The information collected was to be used by SSRU to up-date their database information.

At the same time the cohort member was asked to provide written permission for the NCDS team to contact any of the doctors or hospitals named in the course of the interview. Giving consent in this way was of course optional.

67% of cohort members provided all the required information and signed the Medical Consent Form. A further 6% provided part only. Thus, 98% of those interviewed provided at least partial information.

6.10 Regional response variations

Table 4 shows the cohort member response by region. There are some strong regional differences in the proportion of cohort members who remained untraced by the end of fieldwork. In the London area around a quarter of cohort members could not be traced. As a result, only 59% of cohort members in the old GLC area were interviewed.

A well above average proportion of untraced cohort members also occurred in the North West, the West Midlands and in Scotland. These, of course, are where the main cities, outside London, are located.

TABLE 4: Cohort member response by region

	North	North west	Yorks & Humber-side	West Midlands	East Midlands	East Anglia	South West	South East (not GLC)	GLC	Wales	Scotland	Else-where in UK
Cohort members issued	778	1778	1572	1472	1039	521	1252	3479	1331	805	1496	64
	%	%	%	%	%	%	%	%	%	%	%	%
Duplicates	*	-	-	*	-	-	*	*	*	-	-	-
Found to have died	-	*	*	*	-	*	*	*	*	*	*	-
Living outside GB	2	2	1	1	2	*	2	2	2	1	2	2
Not traced	7	13	8	12	8	6	8	9	24	7	16	8
Traced, not confirmed	1	1	1	1	2	2	1	2	3	1	2	3
Traced,confirmed, not interviewed	13	14	14	14	13	12	10	10	12	12	11	8
Interviewed	77	70	75	71	76	78	79	78	59	77	69	80

7 FIELDWORK QUALITY CONTROL PROCEDURES

The size and irreplaceability of the sample, and the size and complexity of the interviews required made it imperative that the quality of the fieldwork should be monitored carefully. Five types of quality control procedure were employed, all designed to provide constructive help to interviewers and ensure that interviewing standards were maintained. These measures are explained in detail below and consisted of:

* field accompaniment;
* early work checking;
* continuous monitoring of fieldwork performance;
* postal call back procedures;
* telephone call back procedures.

7.1 Field accompaniment

The accompaniment of interviewers in the field by field management staff had two main purposes, namely (a) to ensure that instructions were being followed and that contacting and tracing procedures were being carried out correctly and (b) to help interviewers improve their basic interviewing (or child testing) techniques.

Three factors influenced the level and deployment of supervision: the experience of the interviewer, the extent to which it was felt that the briefing session(s) had been understood and how recently had been the last accompaniment in the normal course of the organisation's quality control procedures. In the event, 136 interviewers (23% of the NCDS5 field force) were accompanied. 164 interviews were carried out with an accompanying officer present. In addition, many calls were observed which did not result in an interview.

All supervisors had themselves attended a full three day briefing and were fully aware of the procedures required. Each organisation used its own standard accompaniment form in order to record comments on an interviewer's work. The forms cover areas such as rapport with the respondent, interviewing technique (such as adequate probing at open-ended questions) and the extent to which the interviewer instructions were followed (correct routing, use of Your Life in completing parts of the main interview).

7.2 Early work checking

All interviewers were asked to complete interviews with two households and send in the questionnaires as soon as possible after they had attended the briefing. These were subject to a 100% visual edit check by clerical staff who had been briefed by project executives. This prompt check of every interviewer's early work ensured that any weaknesses in performance were discovered as soon as possible and communicated to interviewers before they had carried out much more (or any more) of their assignment. In addition, 100% checks were conducted on the work of any interviewer whose performance was judged to be

below the required standard. A total of 1176 units (10% of all completed) were subject to this edit. Where necessary, additional accompaniment or briefing was arranged.

During these early stages of fieldwork close liaison between SSRU and the consortium was maintained so that early problems could be dealt with by a common approach. Typical examples were:

1. The calculation of the number of jobs when unusual circumstances caused complications over definitions of "main", "previous" and "other" employment.

2. The complex routing at Q51a of the main interview.

3. Which accidents to transfer from grid F36 to grid F74 of the main interview.

Interviewers were issued with supplementary instructions which clarified issues arising from the early work check. In cases where major errors or omissions were found, the documents were returned to the interviewer responsible with instructions to visit or telephone the respondent in order to collect the information required.

7.3 Continuous monitoring of fieldwork performance

Prior to data entry, each questionnaire was subject to a partial visual edit (this limited edit was imposed by the project's budgetary constraints). These checks were designed to identify major errors at an early stage so that they could be referred back to the interviewers concerned. The checks also covered aspects of the questionnaire which could not be satisfactorily investigated via the planned computer edit. In the event, this computer edit was not conducted prior to the release of the data to SSRU (see Section 8.5). Thus, apart from range checks at the data entry stage, this limited visual check was the last control over the data collected.

Included in the partial edit were such aspects as the consistency of information between the Your Life document and the main interview, major routing instructions and the correct selection of appropriate parts of the Your Child and child test documents. Also checked was the correct use of Child Person Numbers on documents used for the mother/child sample. A copy of the partial edit instructions is appended.

7.4 Back-checking procedures

As a further check on the quality of the fieldwork, back-checking procedures were conducted. 10% of the sampling points were chosen for back-checking. While the selection was mainly conducted on a random basis in advance of the fieldwork, some points were deliberately included in order to check a particular interviewer's work. For each selected point, back-checking was attempted with all cohort members who gave an interview. The aim was to achieve back-check interviews with a minimum of 60% of interviewed cohort members from the selected back-check points. Non-contacts, refusals and deadwood addresses were not back-checked. The majority of checks were conducted by telephone. Postal back-checks were only conducted for cohort members without access

to a telephone or when an attempted contact by telephone proved unproductive. The back-checking was conducted by members of the head office field management team with responsibility for back-checking on surveys.

In a limited number of cases personal back-checking by a senior member of the field management team was undertaken. Such visits were only used when neither the telephone nor postal procedures were deemed appropriate.

All three consortium members used the same back-checking forms and these are appended to this report. Both questionnaires covered factual data (such as employment status) and checks on correct interview procedure (such as politeness, use of show cards, display of identity card). Answers to the factual questions were checked against the responses in the survey documents. Back-checking was confined to information on the main cohort member interview and questions were asked only of the cohort members themselves.

Successful back-checks were made with 9.3% of interviewed cohort members. 914 of these were by telephone, 129 by post and 17 by personal visit.

The back-checking of 10% of the points covered the work of 63 interviewers in total. The back-checking procedure showed that cohort members were generally happy with the conduct of the interviewers. Any individual problems were passed on to the interviewer concerned and her regional field manager.

8 DATA PROCESSING

8.1 Order of data processing

The data were processed in the following order:

1. Partial edit of completed questionnaires (see Section 7.3).
2. Questionnaire batching (see Section 8.2).
3. Data entry of pre-coded data (see Section 8.3).
4. Coding of open-ended questions (see Section 8.4).
5. Data entry for open-ended questions (see Section 8.4).
6. Reconciliation edit on control system and survey data (see Section 8.6).

8.2 Questionnaire batching

As soon as the partial edit was complete the pre-coded data were prepared for entry. Questionnaires were batched, the number of questionnaires in each batch dependent upon their size. The batch number was recorded on the front of the main interview and the cohort member Your Life questionnaire.

All subsequent attempts to locate a questionnaire were based on the batch number. This avoided the need to sort the questionnaires into serial number order during the processing period or, alternatively, of allocating an additional serial number. The questionnaire remained in its allocated batch through the punching, coding and reconciliation edit. The questionnaires were delivered to SSRU in these batches.

8.3 Data entry

The data entry was conducted in-house by RSGB and NOP and subcontracted to specialist keying agencies by SCPR. In-house punching was subject to 10% verification and subcontracted work to 100% checks. This 100% verification on SCPR's work indicated that the standard of keying improved over time. The main problem concerned isolated identity codes in a series of otherwise blank pages. The quality of data entry improved once these errors were pointed out.

The data set for each cohort member in the main sample comprised the following cards:

1.	Main interview:	005 - 047
2.	Cohort member Your Life:	064 - 084
3.	What do you Think?:	095 - 097
4.	Partner Your Life:	130 - 149
5.	Transfer sheet (open-ended data):	085 - 086
6.	Main interview continuation sheets:	048 - 061

In addition, the mother and child documents generated the following data cards:

1.	Mother interview:	160, 162 - 169, 173
2.	Your Child:	181 - 187
3.	Home observation (PPVT age under four years):	200
4.	Child test (PPVT age four years or more):	201 - 220
5.	Transfer sheet (open-ended data):	174 -175

The data entry programs devised for the keying of NCDS5 data allowed for limited checks on the ranges keyed. For example, if a question had five possible responses only codes 1 to 5 were accepted by the computer.

8.4 Open-ended questions

The coding operations described here as open-ended coding consisted of three major activities, namely:

1. The coding of "Other" answers to pre-coded questions
2. The coding of illnesses and accidents
3. The coding of other open-ended questions

A computer frequency count of the first few hundred questionnaires to be punched by NOP provided an estimate of the likely number of responses to the questions potentially requiring a coding operation. SSRU then decided in which way the coding budget was to be allocated. This allocation was made on the basis of the importance of a question and the likely number of responses to it. Some questions were asked of so few respondents that coding would not be cost-effective. Coding was in the end confined to the main interview and the mother interview. In total, coding was conducted for 35 questions: 15 health-related questions, 14 other open-ended questions and six "Other" answers.

With the exception of the coding of illnesses and accidents, code frames for the open-ended questions and "Other" answers were derived from listings of responses gained from 200 questionnaires. These listings were supplied by NOP and SSRU derived the code frames. These code frames are appended. Where a code for an "Other" answer was given, the original code for "Other" was retained on the original column number allocated.

Health-related questions were coded using the World Health Organisation International Classification of Diseases (1975 Revision). The full frame is not appended since it spans two volumes. A summary of the frame has, however, been included. The volumes are available from HMSO.

All coding was recorded on transfer sheets. These were two-sided documents, one each for the main and mother interviews. A copy of these are also attached.

All coders who worked on the project were briefed by a project executive. Queries were passed in the first instance to the coding supervisor in charge of the coding operation for NCDS5 and then to the project executive if not resolved in the coding department.

The quality of the coding was ensured by conducting 100% checks on the first assignments

completed by each coder. Errors were rectified and communicated to the coder concerned. A further 100% check was then conducted. When a coder's work was deemed satisfactory a 10% check of subsequent work was also conducted by the coding supervisors.

After coding, the data for these questions were keyed in the same way as described in Section 8.3.

It was originally planned that coding of occupations and industries would take place using a semi-automatic coding system - CASOC. This was not commissioned prior to the release of data to SSRU.

8.5 Computer edit

It was originally intended that a computer edit would be applied to the data, but due to project funding restraints, this element of the project was not conducted by the consortium. However, before this decision was made, an edit program was prepared by RSGB, along with instructions for amending data which failed a check. This program and associated instructions were passed to SSRU. The edit was designed to check the completeness of the data and, within each document, internal consistency. The program did not attempt to check consistency between documents, such as the main interview and the Your Life self-completion document. In cases were an error could not be easily amended (such as age ranges and amounts of benefits received and this error was not a punching error) the checks were designed so that only extremes would fail. Some checks proposed in the initial stages of the design of the edit had to be subsequently dropped (again because of project funding constraints).

8.6 Reconciliation edit

This edit checked for consistency between the control system and the data present. This consisted of:

1. Checking for the presence (or absence) of a document according to the information supplied on the control system
2. Checking for duplicate cards
3. Checking that serial numbers had been correctly punched

8.7 Provision of data to SSRU

The data were passed to SSRU in a format suited to its computer facilities. All contact and outcome sheets and the completed questionnaires were also delivered to SSRU at the end of the data processing period.

9 SUMMARY AND CONCLUSIONS

Overall the survey was a considerable success, particularly given the scale of the undertaking, although there were inevitably difficulties and problems. In looking at the different aspects of the survey, and the different problems that arose, separately, it is easy to lose sight of the fact that the principal achievement of the survey was the collection of a vast amount of highly complex data, which will provide an invaluable resource. In looking to the future, and changes that might be made, it is difficult to disentangle the effect of the changes that became necessary in the scope of the survey, caused by the need to reduce overall costs, from problems inherent in the process, but some lessons can be learned.

Firstly, as was also said in the report on NCDS4, it is impossible to over-emphasise the importance of allowing time for a comprehensive programme of piloting and development. All the different questionnaire documents changed considerably as we went through the development process, based on what our interviewers told us and what they reported back that respondents had said.

The report on NCDS4 also commented on the success of the operation of the consortium in terms of teamwork, and NCDS5 showed how this can equally well be achieved by a consortium of three rather than two. By allocation of tasks between the three organisations duplication was avoided as far as possible, and at the same time each of the consortium partners was able to benefit from the experience of the others.

Response was lower than in NCDS4, but this has to be expected, given that some at least of the NCDS4 refusals were included in the NCDS5 sample. Reports from interviewers showed that there were many cohort members who were happy to participate in the past, but now feel that they have done enough, and would like to "retire". It is inevitable that on each new wave there will be a proportion who feel like this, and as it is unlikely that many can be persuaded to change their minds on the next wave, there will be a constant, though small, process of attrition.

On the other hand, and this is perhaps the greatest encouragement to emerge from NCDS5, those who do remain loyal to the survey are very loyal to it. The volume of data we sought to collect from cohort members was enormous, and yet non-response to particular parts of the survey was very low in households that participated at all. In the mother and child sample, it was not uncommon for the whole interview process to last five or more hours, and the vast majority of respondents accepted this without demur.

It must be stressed again that the data supplied to SSRU by the consortium were not subject to any computer edit, because of the need to minimise costs. This is a far from ideal situation for a survey contractor, as it prevents the contractor being sure of the quality of the data supplied, and does not permit the normal internal checks on interviewer quality to be carried out. This is certainly a situation that should be avoided if at all possible in the future.