P2709

NATIONAL DIET AND NUTRITION SURVEY

(NDNS)

INTERVIEWER PROJECT INSTRUCTIONS

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1 BACKGROUND AND AIMS

The National Diet and Nutrition Survey (NDNS) rolling programme has been commissioned by the UK Food Standards Agency (FSA).

The FSA was set up as a new organisation in April 2000. Its aims are to 'protect public health and the interests of consumers in relation to food'. The nutrition remit of the FSA is to encourage and facilitate the eating of healthy diets in order to improve the nutrition and diet of the UK population.

The FSA's information needs are obtained through its dietary survey programme, of which the NDNS is the major component. In the past, the NDNS involved a series of cross-section surveys, each covering a different age group: pre-school children (1.5 to 4 years); school-aged children and young people (4 to 18 years); adults aged 19-64 years; and older adults aged 65 and over. The first survey was carried out in 1986/87, and since then there has been a survey about every three years, with the most recent carried out in 2000/01. Each has been conducted as a 'one-off' survey. However, changes over time in people's eating habits, lifestyles, cooking skills, the availability of different types of food, and formulations in manufactured foods mean that ongoing surveys are required to monitor changing patterns in diet and nutrition. This will enable FSA to provide the best advice to government to develop, implement and monitor policies that affect the nation's diet and nutritional status. This is particularly important at a time when undernutrition, particularly for some micronutrients, is accompanied by overnutrition, particularly for calories, fats, salt, and added sugars, all of which have adverse implications for health.

The main aims of the continuous NDNS survey are:

- to provide annual data about the nation's dietary intake and nutritional status;
- to estimate the proportion of individuals with compromised nutritional status; and
- to estimate the proportions attaining recommended intakes.

The data from the NDNS will be used to estimate the nation's diet and nutritional status, and that of sub-groups of the population. These data will play an important role in monitoring progress towards some specific targets relating to government strategies from both the Department of Health and FSA.

As well as providing the detailed food consumption data essential to support risk assessments for food chemicals, the rolling programme will also benefit a wide range of Government activities related to diet and health. It will be the primary method for monitoring progress against nutrition targets in the Agency's Strategic Plan 2005-2010, for example on salt and saturated fat intakes, and will also be key to monitoring progress on diet and nutrition objectives set out in the 'Choosing Health' White Paper.

A comparison study was carried out in 2007 to determine the most appropriate method for collecting information on diet for the main survey. The comparison study compared the use of a 4-day unweighed diary ('the diary') with 4 interviewer-administered recalls of food consumed in the past 24-hours (the '24-hour recalls'). The two methods yielded very similar response rates. The diary was chosen because of the reduced respondent and interviewer burden (compared with strictly timetabled multiple interviewer visits with the 24-hour recall method).

Fieldwork for the mainstage will launched in April 2008. The mainstage was preceded by a small-scale "run in" which tested all survey components, procedures and protocols involved in the interviewer and nurse stages.

2 OVERVIEW

The key elements to the survey are as follows:

- face-to-face interview and self-completion questionnaires.
- dietary data collection (4-day unweighed diary).
- taking of physical measurements (e.g. height, weight and blood pressure).
- wearing of physical activity monitors (Actigraphs).
- blood sample collection (and analysis of nutritional status indices).
- 24-hour urine collection.
- a sub-study involving Doubly Labelled Water (DLW) for a sub-sample of respondents.

The study will sample people living in private residential Catering Units only. The sample will include adults and children (aged 18 months and older). Pregnant and breastfeeding women are to be excluded, because they have different nutritional needs.

This study is being carried out by a consortium of three organisations:

- NatCen (National Centre for Social Research)
- MRC Human Nutrition Research (HNR), based in Cambridge
- Department of Epidemiology and Public Health at the Royal Free and University College London Medical School (UCL)

The study covers all four countries of the UK. The Northern Ireland Information, Statistics, and Research Agency (NISRA) is our research partner in Northern Ireland.

Information about the survey, its objectives and design have been circulated to a Multi Centre Research Ethics Committee (MREC) This is the body that approves the ethical aspects of medical research. Committee members represent medical, professional and patient interests.

3 THE SURVEY TEAM

The lead office-based members of the NDNS team are:

National Centre		HNR	UCL
London	*Brentwood*		
Sarah Pigott	Sue Duffy	Dr Alison Stephen	Dr Jennifer Mindell
Helen MacKenzie	Lynne Gold	Birgit Teucher	Barbara Carter-Szatynska
Caireen Roberts	Helen Selwood	Antony Wright	
Bev Bates	Jan Morris		
Claire Deverill	Wendy Watson		

In addition to the office-based staff above, every fieldwork area has an NDNS Manager who is responsible for the day-to-day running of the project in their region. Your NDNS Manager will speak to you and your Team Leader regularly and can help with any queries or questions you may have when working on NDNS.

4 NDNS WEBSITE FOR RESPONDENTS

NDNS has its own website. It is designed to give respondents more information about the survey. You can refer respondents to the website if they would like further information. The website address is also on advance letters.

The website address is: **www.natcen.ac.uk/NDNS**

5 SUMMARY OF SURVEY DESIGN

5.1 Sampling

For the mainstage, a total of 4,779 addresses has been drawn from 177 postcode sectors (points) across all four countries of the UK. The mainstage sample comprises a core sample plus a boost to increase the sample size in Scotland and Northern Ireland (there is a strong possibility of a boost in Wales in future years, but not in the launch year, 2008/09). The addresses will be issued on a monthly basis over the year.

Each assignment will contain 27 addresses. You will send an advance letter to each address, introducing the study and explaining that you, the interviewer, will be calling.

At each address you will enumerate the number of households and in cases where there are two or more, select one at random. Within each selected household the CUs will be enumerated and one randomly selected.

In 9 of the 27 addresses (addresses 1-9), you will select one adult (aged 19+) and one child (aged 18months-18years) at random. In CUs with no such children, just one adult will be selected. The remaining 18 addresses (addresses 10-27) are for a "child boost" – here, you will screen out adult only households, and at other households select one child and *no* adults.

For selected respondents, there are two main parts to the survey, an interviewer-administered first stage (Stage 1), and a visit by a nurse to carry out measurements and take a blood sample (Stage 2). Co-operation is entirely voluntary at each stage. Someone may agree to take part at Stage 1 but decide not to continue to Stage 2. (However they must do Stage 1 in order to do Stage 2).

If the adult selected is not the 'Main Food Provider (MFP)' (see section 7 for a definition), this person will also be invited to take part in a short CAPI interview.

A sub-sample of around 200 respondents aged 4 and older from the core sample (i.e. not from the Scotland and NI country boost points) will be recruited to a further part of stage 1, namely a DLW exercise to measure total daily expenditure of energy. This will involve the respondent drinking some tracer water and collecting a urine sample on 10 consecutive days (plus a pre-dose sample). Also, all children aged 4-10 will be asked to wear an Actigraph (physical activity monitor) for seven consecutive days.

Fuller details of the sample and associated documents are given in Section 16.

5.2 The Interviewer Visits

Interviewers make three main visits to a participating Catering Unit. The interviewer visits cover:

- questionnaire administration
  Most of the interview will be an interviewer-administered CAPI questionnaire carried out face-to-face. It will also include self-completion booklets to record smoking and drinking habits of children and young people.
- collection of dietary data for four consecutive days using a diary (see section 13) and
- the taking of physical measurements of standing height and weight.

All children aged 4-10 will be asked to wear an Actigraph (see section 17 and Appendix D). There may be an additional visit to collect the Actigraph.

Additional interviewer visits will be made to a sub-sample of respondents who are invited to take part in the Doubly Labelled Water (DLW) sub-study (see Section 16 and Appendix C).

At the end of the interviewer stage, the token of appreciation (£30 in high street vouchers) is given, the DLW sub-study is introduced to eligible respondents, the second stage of the survey is introduced and the interviewer asks for permission for the nurse to visit.

The table below summarises the tasks carried out at each main visit.

1st visit	CAPI questionnaire (part 1). Self-completion questionnaires. Height & weight measurements. Place diary. *Actigraph sub-sample: explain to the respondent how to wear the activity monitor and how to fill in the activity log.*
2nd visit	Midweek diary check up(s) (can be done by telephone ONLY if interviewer is sure this is appropriate).
3rd visit	Collect diary & complete checklist. CAPI questionnaire (part 2). Give token of appreciation. Introduce the nurse visit. *DLW sub-sample: ask for verbal consent to administer.* *Actigraph sub-sample: collect the activity monitor & paperwork.*

For the DLW sub-sample, there will be two further visits to administer the DLW dose and to collect urine samples.

5.3 The Nurse Visit

The second stage of the survey is carried out by a qualified nurse. At the end of the final visit, you will seek consent for the nurse to visit (see section 15). All respondents completing at least three dietary days (i.e. those deemed fully productive) will be eligible for a nurse visit. The nurse will collect details of any prescribed medications and non-prescribed dietary supplements before taking, with agreement, the following physical measurements:

- Infant length (18 months to 2 years).
- Waist and hip circumferences (ages 11 and over).
- Mid-upper arm circumference (ages 2-15).
- Demi-span (ages 65+ and all ages where standing height is not possible).
- Blood pressure (ages 4 and over).

Nurses will also aim to take 24-hour urine samples (from all aged 4 and older) and blood samples (from all respondents, 18 months and older). Some blood tubes will need to be taken to a local

hospital or laboratory for prompt processing, while the others will be posted directly to the analysis laboratory. Urine samples will also be posted to the analysis laboratory. Where the Natcen nurse does not have recent experience in paediatric phlebotomy, paediatric phlebotomists will be recruited to take blood from those aged 1.5-10years. The Natcen nurse will accompany the phlebotomist to the respondent's home.

Before the nurse carries out any measurements, the informant will be given, and asked to read, a leaflet that describes the measurements the nurse will take and their purpose. Before the urine and blood samples are taken, agreement will be obtained in writing (and countersigned by a parent/guardian for children under age 16).

Blood will only be taken from the arm, which is less painful than the hand; only two attempts are allowed in adults, one in children. With the respondent's permission, blood pressure readings and the results of the blood tests most relevant to their health will be sent to their GP. This information will also be sent to the respondent, if they so wish. Informants will be asked to give separate consent to store a small sample of blood for possible future analysis.

The following table summarises the nurse tasks on NDNS:

1st visit	CAPI interview. Obtain necessary written consents. Carry out measurements. Introduce the 24-hour urine sample. Introduce the blood sample. Make appointment for next visit.
2nd visit *for those agreeing to 24-hr urine sample/blood sample*	Collect the 24-hour urine sample. Take blood sample .
	The nurse then delivers blood tubes that require immediate processing to a local laboratory, and posts the other tubes directly to HNR.
3rd visit *for those agreeing to 24-hr urine sample/blood sample*	Collect the 24-hour urine sample, if not done on 2nd visit. Take blood sample, if not done on 2nd visit.
	The nurse then delivers blood tubes that require immediate processing to a local laboratory, and posts the other tubes directly to HNR.

5.4 Summary of Data Collected

Some of the information collected is limited to a particular age group. The table below summarises the information to be collected.

CAPI questionnaire	**Respondent**
Catering Unit information	MFP/Selected adult
Food preparation, storage, cooking facilities	MFP
Cooking skills	MFP, All ages
Eating habits, social eating	All ages
General health	All ages
Dental health	Adult (16+)
Smoking	Adult (18+), self-completion for child aged 8-17
Drinking	Adult (18+), self completion for child aged 8-17
Dietary supplements	All ages
Physical activity	Adult, child aged 11+ (separate version of module for 11-15 year olds)
Sun exposure	Adult, child aged 11+ (separate version of module for 11-15 year olds)
Employment status, educational background	16 years upwards
Measurements	
Height measurement	Ages 2+
Weight measurement	Ages 2+
Collection of dietary data	
Diaries	All ages (separate version of diary for under 16s and for toddlers aged 1.5-3years).

6 DEFINITIONS

The following definitions are particularly important on this study so you must familiarise yourself with them before you start interviewing.

6.1 Dwelling Unit (DU)

A Dwelling Unit (DU) is an address or part of an address, which has its own front door. The front door does not have to be at street level, but it must separate one part of the address from other parts (i.e. only those who live behind the door have access to the area, it is not a communal part of the address).

A DU need not be fully self-contained - for example, an address may contain four bed-sitters, the inhabitants of whom share a bathroom. Each bed-sitter would count as a DU as long as it had its own front door.

You do not need to concern yourself with DUs whilst administering the questionnaire - the questionnaire itself deals with Catering Units. The concept of a DU is only used on the ARF as an aid to identifying households then Catering Units at multi-occupied addresses.

6.2 Household

The standard definition of a household applies for this study: one person/group of people who have the address (or the selected DU within the address) as their only or main residence. A group of people are classed as one household if they share at least one meal a day OR share living accommodation.

Many households consist of either an individual living alone or one or two parents with their dependent child(ren). Other households consist of one or more adults, some elderly, with no dependent children.

Also see page 63 of the *Interviewers' Manual* for further information on establishing who is resident at the address and on dividing residents into households.

6.3 Catering Unit (CU)

The Catering Unit (CU) is the primary grouping for this study. It is a "group of people who eat food that is bought and prepared for them (largely) as a group".

Occasionally a household will be found to consist of more than one CU. Although people may share accommodation and even be related, they may not be in the same CU. For example, adult children sharing a house with their parents may shop, cook and eat by themselves, in which case the parents would be in one CU and the children in another.

However, in the vast majority of cases, we expect the household and CU to be synonymous and hence, to avoid using jargon during the interview, the term 'household' rather than 'Catering Unit' is generally used in the CAPI programme and field documents.

6.4 Main Food Provider (MFP)

The Main Food Provider (MFP) in this study is the person in the CU with the main responsibility for shopping and preparing food. If these tasks are equally shared between two people, for example if one person does all the shopping and another person does all the cooking, then either resident can be classified as the MFP but, if possible, information should be obtained from both of them when the MFP interview is being completed.

6.5 Adults and children

For the purposes of respondent selection, adults are those aged 19+ so respondents aged 17 and 18 are counted as children. In the questionnaire, those aged 16-18 will usually follow the same routing as those aged 19+.

7 YOUR SAMPLE

7.1 The sample

The sample for this survey has been drawn from the publicly available Postcode Address File.

A total of 4,779 addresses were drawn from 177 postcode sectors (points) across all four countries of the UK. The sample comprises a core sample plus a boost to increase the sample size in Scotland and Northern Ireland. The addresses will be issued on a monthly basis over the year to March 2009.

Each assignment will contain 27 addresses.

7.2 Who to interview

7.2.1 Selecting respondents

In 9 of the 27 addresses, you will select one adult (aged 19+) and one child (aged 1.5-18years) at random. In CUs with no such children, just one adult will be selected.

The remaining 18 addresses are for a "child boost" – here, you will *screen out* adult only households, and at other households select one child and *no* adults.

The front of the ARF will indicate whether the address is a child boost or not. Also, an ARF for a child boost address will be purple, ARFs for other addresses will be green.

The ARF will guide you through the procedures for respondent selection (see section 10).

7.2.2 Interviewing children

For all children under 16 you must get permission from the child's parent(s) **before** you interview the child. If a child is not living with his/her natural or adoptive parent, permission should be obtained from the person(s) in the CU who is *in loco parentis* for that child on a permanent/long-term basis. For example, a foster parent or a grandparent who is bringing the child up instead of the parents. Such a person should **never** be used as a substitute if the natural or adopted parent is a member of the child's CU. Always give preference to the natural/adopted parent and, where appropriate, to the mother.

If the parent(s) are temporarily away from home and will be throughout your fieldwork period (for example, abroad on business or on an extended holiday without the children) and have left them in the care of a close relative, then if that relative feels they can give permission for a child to be interviewed, this is acceptable. A non-relative must never be taken as the person *in loco parentis* in this type of situation.

The parent or "guardian" of a child **must** be present at the time you carry out the interview. For children under 8, the interview will be mainly completed by the parent/guardian about their child. For children aged 8-10, the parent/guardian and the child should both be present whilst you carry out the interview, and the interview will be a "joint effort" between the child and their parent/guardian.
Older children (11-15 years) do the interview themselves. The parent/guardian need not necessarily be in the same room but they must be at home and be aware that you are carrying out the interview. This protects both the child and yourself. You are asked to record the name of the parent/guardian who gave permission for their child to be interviewed on the ARF.

If there is any disagreement between parents, or between parent and child, in respect of willingness to co-operate in the survey, you should respect the wishes of the non-cooperating person. Obviously, you may not always know if both parents agree or disagree as you may not see them together. But if the disagreement is brought to your attention, then the above rule applies.

1.5 to 7 year olds	You should interview the parent or guardian about the child. As you will be measuring the height and weight of the child, the child has to be present in the home for that visit. Ideally they should be present during all visits as they may be able to provide information about themselves that their parent either does not know or has forgotten.
8 to 10 year olds	Both the parent/guardian and the child should be present at all visits as the child should be able to provide information about themselves, but with help from a parent or guardian.
11 to 15 years	Children of this age are interviewed in their own right (after obtaining parental permission).
16 to 17 year olds	It is not necessary to obtain formal parental agreement to interview these young people. It is however courteous to let resident parents know that you wish to interview them.

Should a parent wish to know the content of the survey, explain briefly the survey coverage.

7.2.3 Proxy interviews

Apart from interviews with children you should **not** complete individual interviews by proxy. If a person is unable to complete the interview in person and no translator (within the household) is available then use the appropriate code (e.g. language difficulties, physically or mentally unable/incompetent).

You may conduct the MFP interview with the selected adult if the MFP is not – and will not – be available.

7.2.4 Non-selection of pregnant/breastfeeding women

This survey does not include pregnant nor breastfeeding women, this is because of their special nutritional needs. The following instructions explain how to screen out pregnant/breastfeeding women and what to do if you have screened in someone who is pregnant or breastfeeding.

- On the doorstep, *before beginning the respondent selection process*, if possible find out whether any of the women or teenagers in the CU are pregnant/breastfeeding, and exclude them from the selection grid. The total number of people in the CU should not include a pregnant/breastfeeding person.

- If you select a woman between the ages of 16 and 50, you might want to check with her then that she is not pregnant/breastfeeding, before beginning the interview. If she is pregnant/breastfeeding, you will need to carry out another selection.

- If it is a single adult CU with children, and the adult is pregnant/breastfeeding, then you will attempt to interview a child only.

8 INTRODUCING THE SURVEY

8.1 Notifying the Police

You, as the interviewer, are responsible for notifying the police in your area about the work you **and your nurse** will be undertaking on this survey. You will be given a special form for this purpose. Before you start any work hand this form in at the police station in your area together with a copy of the advance letter and leaflet (adult version).

You will be given three copies of the police letter; leave one at the station, keep one yourself and send one to your nurse with the first batch of NRFs or NNVs for your assignment. Request more copies of the letter if you need to register at more than one station.

8.2 Advance letters and Survey Leaflets

A letter, printed on FSA headed paper, describing the purpose of the survey is sent by you to all sampled addresses a few days in advance of fieldwork. The letter briefly describes the study and states that you will be calling. You have been given copies of the advance letters to use as a reminder. **You must include a copy of the stage 1 leaflet (adult version) with the advance letter.**

There are adult and child versions of the leaflet. The appropriate version of the leaflet should be given to the respondents selected for full interview. Read the leaflets carefully. They will help you answer some of the questions people might have.

8.3 Dietary feedback example

In your laminate pack you will be provided with an example of the dietary feedback that the respondent can receive if they complete four diary days.

The feedback is made up of 8 graphs for 8 different nutrients. The first page of the feedback gives a simple explanation of how to read the graphs. The pink dotted line shows the average intake of a specific nutrient, based on the respondent's diet over the four days of recording. The blue line shows the UK guideline for the nutrient. The shaded area shows the range of observed intakes for the respondent's age group.

The respondent can use this information to see how they compare with other people of the same age and sex. The last page of the feedback form provides information on organisations that can give advice on a healthy diet.

8.4 Doorstep Introduction

The general rule is keep your initial introduction short, simple, clear and to the point. The way the survey is introduced is vital to obtaining co-operation. Before you go out into the field make sure you know about your survey. Keep your explanation as short as possible saying as little as you can get away with.

Show your identity card

Say who you are

Say who you work for

Say that you are carrying out an '*important Government survey about the diet and nutrition of people (living in the UK)*.'

Only elaborate if you need to. Introduce one new idea at a time. Do not give a full explanation right away - you will not have learned what is most likely to convince that particular person to take part.

On the doorstep, concentrate on obtaining the interview. Do **not** mention measurements. We do not want to risk losing an interview because a person is worried about being weighed or measured. These are decisions they can make later. The interview and dietary data collection are themselves very important, and we want them even if we do not get any measurements for a person.

What you might mention when introducing the survey

- It is a national (Government) survey (on behalf of the Food Standards Agency).
- It is an extremely important survey.
- It will provide the government with accurate and up-to-date information on the diet and nutrition of the population.
- The information is available to all political parties.
- The information will be needed by whichever government is in office. To get an accurate picture, we **must** talk to all the sorts of people who make up the population - the young and the old, those with varied and unvaried diets, and those who like the current government's policies and those who do not.
- Each person selected to take part in the survey is **vital** to the success of the survey. Their address has been selected - not the one next door. No-one else can be substituted for them.
- No-one outside the research team will know who has been interviewed, or will be able to identify an individual's results.
- The government only gets a statistical summary of everyone's answers.
- Respondents who complete four diary days can receive feedback based on their diet over the four days of recording
- **THERE IS A £30 TOKEN OF APPRECIATION FOR EACH INDIVIDUAL TAKING PART.**

8.5 Doorstep introduction for the child boost sample

At boost addresses, we are only looking for children aged 1.5-18 years. We are therefore looking for people from what might be seen as a 'vulnerable' group. You need to think carefully about your doorstep approach in these cases and be ready with explanations if questioned by household members.

- This survey is sponsored by the Food Standards Agency
- You have registered at the local police station before starting to work in this area. If the police station stamped a copy of the advance letter you can show this to respondents. If you have CRB clearance this may also help to reassure people.
- The main reason we are targeting people in this age group is to get an accurate picture of diet and nutrition from all different people, including those who are younger.
- The diet, nutrition and health of children are very important to us so we need to interview more people of this age to get accurate data. This is why in some addresses we will be focusing our attention on children.

- Make it clear to parents that you can only interview children if the parent or legal guardian is present.
- There is a freephone number on the advance letter if the respondents want further clarification. Members of the Blue Team and the research team would be happy to answer any questions they may have.

8.6 Visits to the Catering Unit (CU)

You will make up to three main visits to a participating CU. For CUs with an adult and a child respondent you should try to interview the adult and child at the same visit, so that you do not need to make additional visits.

Section K of the core ARF and Section L of the child boost ARF has space for you to enter appointments made with respondents - you might find this helpful in keeping track of your progress and also provides a checklist of tasks to be completed at each visit.

If there is a long gap between diary placement and the start of the diary recording period, you may wish to contact the respondents to remind them to start their diary. It is a matter of judgement as to when (indeed whether) such a reminder would be necessary but as a rule of thumb, we envisage a reminder being considered for gaps of 4 days or longer. As respondents may use a reminder phone call as an opportunity to drop out, we suggest you post another reminder card if you are in the area, and only telephone the CU if that is not possible.

8.7 Introducing Height and Weight Measurements

The relationship between general build and health is of great interest to the FSA. This is particularly so, as both the height and the weight of the population appear to have been changing very rapidly over the last two decades. These changes reflect the changes in the population's diet and lifestyle.

Explain that it will only take a very short time to do and that no one will be asked to undress. The respondent can have a record of their measurements but if they would prefer not to have them written down, then this is okay.

Introduce the height and weight measurements on your first visit, after you've introduced the diary. Do not turn up with your stadiometer and scales. Leave your car somewhere where you can retrieve these. You will not require them until the end of the interview and they can look very off-putting.

Once you have entered the height and weight into the computer, it will calculate the person's Body Mass Index (BMI) if aged 16 or older.

$$\text{BMI} = \frac{\text{weight in kilograms}}{(\text{height in meters})^2}$$

If the person would like to have their measurements, then fill in the measurement record card (which includes spaces for their height, weight and BMI (16+ only)). If the respondent is aged 16+, hand over the BMI leaflet with the measurement record card, as this provides information on what BMI is, and how to interpret the results.

9 THE ARF

9.1 Introduction

You will receive a pre-labelled ARF for each of the addresses in your sample. Note that there are two variants of the ARF:

- a **green CORE ARF** for addresses 01-09 where you will aim to select one adult and one child.
- a **purple BOOST ARF** for addresses 10-27 which includes a screen for children aged 1.5-18 years.

The ARF header tells you whether the address is CORE or BOOST.

The ARF enables you to:

- record all attempts to make contact at the address, and keep track of the visits you make
- establish the number of DUs and where more than one, make a selection of one;
- establish the number of CUs (within the selected DU) and where more than one, make a selection of one;
- *Not child boost*: establish the number of eligible adults (19+) within the selected CU and select one;
- establish the number of eligible children (1.5-18 years) within the selected CU, and if more than one, select one;
- record who gave consent for any 1.5-15 year olds to take part in the interview;
- record the final outcome for the selected respondent(s).

It also provides a checklist of the tasks that you need to do.

Each ARF should be completed and returned to the office immediately you have finished work at the address to which it relates.

9.2 Address label

The Address Label at the top of the ARF gives, in addition to the full address, a seven-digit serial number plus a check letter. It is made up of:

- One digit for the YEAR (‘1’ for year 1, 2008/09)
- Two digits for the MONTH (01=January; 04=April etc)
- Two digits for the Point number, within month (01..15)
- Two digits for the Address number, within point (01..27)
- A check letter.

The serial number is very important. It is the anonymised number assigned to that household. You will be asked to write it on a variety of documents, such as the self-completions. Doing this enables the office to match all the information from one household together.

You also use this serial number to access the interview in the CAPI. When you open a CAPI questionnaire you should make sure that you select the address number that corresponds to the address number of the ARF label.

Note that if you are working on a country boost point (for interviewers working in Scotland and Northern Ireland), this will be indicated by *CB* in the top right hand corner of the address and selection labels.

9.3 Selection label

The selection label on the front page should be used where there are two or more DUs or CUs and you have to select one at which to interview. This label is also used when the selected CU contains two or more persons and you have to select one as the respondent. Further information on selection procedures and an example of the label is provided in section 10.6.

9.4 Final outcome
(top right corner of the ARF)

This is the outcome code for the **whole** CU. For addresses or CUs which are totally unproductive, this code will come from the ARF.

For CUs which were productive (or partially productive) it is calculated on the basis of the individual respondent interview(s). It can only be coded when you have completed all your tasks for that CU. This code will be given to you in the Admin block.

9.5 Calls record
(bottom half of front page of the ARF and p2 of ARF)

Keep a full record of all the visits you make to an address/CU – include abortive visits as well as productive ones. Any notes about what happened at each call should be made in the notes box. Label the notes with the call number.

There is also a grid (on the bottom half of page 2) where you can keep track of all telephone calls you make. At various stages of the interview process, you might need to phone the respondents, to check how they are doing and to remind them to start/keep going. All attempts and actual calls you make can be recorded here.

9.6 Completing the CORE ARF

9.6.1 SECTION A
(page 3 of ARF)

These questions guide you through the process of establishing:

- whether the address is eligible for interview (i.e. traceable, residential and occupied as a main residence) and
- the number of DUs at an eligible address.

Please follow the routing instructions carefully.

A1 You first need to establish whether the address is traceable, residential and occupied as a main residence. If is not traceable, residential or occupied (or you cannot be sure), then you will proceed to Section B (see below).

If it is residential and occupied, then proceed to A2 to establish the number of DUs at the address.

A2/A3 At this question you should establish the number of DUs at the address. NDNS only allows **one DU** within an address to be selected. You need to enter this information into the Admin block. If you are unable to establish the number of DUs, you will go to section G to record further information about why the address is unproductive, especially if it is a refusal.

This information is needed to help assess eligibility for reissue so please give as much demographic information as possible, and any reason given for refusal.

A4 If there are 2 or more DUs at your address, list **all** of them in the grid in the order indicated. Then use the selection label on the front of the ARF to select the one DU to include in the survey. Go along the first row ('DU/P1') until you reach the number of DUs at your address, and then look below for the selection code of the DU to include. Ring this code in the column headed *DU Code*. An example of a selection label is shown below.

GridRef: 238665/344822

```
DU/P1: 2 3 4 5 6 7 8 9 10 11 12
       2 3 1 1 5 1 1 9 9  11 6

CU/P2: 2 3 4 5 6 7 8 9 10 11 12
       1 2 3 5 6 6 1 4 8  7  7
```

It is very unlikely that you will come across an address with 13 or more DUs. If you do, list the DUs on a separate sheet of paper in the order indicated at A4. Then use the look-up chart in Section J of the ARF. E.g. if you have 17 DUs, the DU to be included in the survey is the 13th. Pin the sheet on which you have listed these DUs to the back of your ARF.

An example of a completed DU selection is shown above. Given the selection label shown below, you can see that the Basement flat was the selected DU.

A3. **DWELLING UNIT SUMMARY:**

1 DU only	A	**GO TO A6**
2+ DUs	(B)	**GO TO A4**

2+ DUs: LIST ALL DUS AT ADDRESS (continue on separate sheet if necessary):

A4.
- In flat/room number order,
- Or, from bottom to top of building, left to right, front to back

DESCRIPTION	DU CODE	DESCRIPTION	DU CODE
Basement Flat	(01)		07
Ground floor flat	02		08
First floor flat - front	03		09
First floor flat - back	04		10
	05		11
	06		12

IF 2-12 DUs:
- Look at the selection label on front page.
- In 'DU/P1' row: find number matching total number of DUs
- Look at 'Select' row directly beneath this. This shows you which DU code to select.
- Ring corresponding DU code in grid above.
- Write in description of selected DU at A5.

IF 13+ DUs:
- Make a selection using the lookup chart in section J.
- Write in at A5.

A5.

ENTER CODE NUMBER OF SELECTED DU HERE:	**0**	**1**	**GO TO A6**

A6.

CHECK THE ADDRESS IS CORRECT/COMPLETE ON THE ADDRESS LABEL. IF NOT, AMEND.	**GO TO A7**

A5/A6 Once you have selected a specific DU, make sure that the address label on the front of the ARF is updated so that if another interviewer needs to take over any of your work, they know which DU has been selected. Make sure that you complete the observation information at Section J (ideally before making contact, although you may have already made contact by this stage).

9.6.2 SECTION B

Selection of Catering Units (CUs)

B1/B2 - At these questions you should establish the number of CUs in the (selected) DU. Again, you will need to enter this information into the Admin block. If you are unable to establish the number of CUs, go to section G and code why this information was not collected.

B3 If there are 2 or more CUs (which will be fairly rare), list all of them in the grid in alphabetical order of the name of the MFP in each CU.

Then use the selection label on the front of the ARF to select the CUs to include in the survey. Go along the first row until you reach the number of CUs at your address, and then look below for the selection code of the CUs to include. Ring this code in the column headed *CU Code*.

It is very unlikely that you will come across a DU with 13 or more CUs. If you do, list the CUs on a separate sheet of paper in the order indicated at C3. Then use the look-up chart in Section H of the ARF. For example, if you have 13 CUs, the CUs to be included in the survey is the 12th. Pin the sheet on which you have listed these CUs to the back of your ARF.

An example of a completed CU selection is shown below. Given the selection label shown above, you can see that the 'Jill' was the MFP in the selected CU. Enter the number of the selected CU at C4.

GridRef: 238665/344822

DU/P1: 2 3 4 5 6 7 8 9 10 11 12
2 3 1 1 5 1 1 9 9 11 6

CU/P2: 2 3 4 5 6 7 8 9 10 11 12
1 2 3 5 6 6 1 4 8 7 7

B: Establish number of Catering Units (CUs) at DU and select one

B1. ESTABLISH NUMBER OF CATERING UNITS IN (SELECTED) DU, ASK:

Do all the people who live together in this dwelling unit eat food that is bought and prepared for them (largely) as a group, or do any of them buy and prepare their food separately? IF ANY PERSONS/PEOPLE BUY OR PREPARE FOOD SEPARATELY, PROBE FOR NUMBER

ENTER NUMBER OF CATERING UNITS:	**0**	**2**	**GO TO B2**
OR CODE: Don't know	A		**GO TO SECTION G**

B2. CATERING UNIT SUMMARY:

1 CU only	A	**GO TO B6**
2+ CUs	(B)	**GO TO B3**

B3. IF 2+ CATERING UNITS:
ESTABLISH MAIN FOOD PROVIDER (MFP) IN EACH CATERING UNIT.

Ask for name of **person with main responsibility for shopping and preparing food** in each Catering Unit.

- **List in alphabetical order** in grid below. Continue on separate sheet if necessary.

DESCRIPTION	CU Code	DESCRIPTION	CU Code
Jill	(01)		07
John, Katie	02		08
	03		09
	04		10
	05		11
	06		12

IF 2-12 CUs:

- Look at the selection label on page 1 of ARF
- In 'CU/P2' row: find number matching total number of CUs
- In the 'Select' row: the number beneath total number of CUs is the 'selected CU' code. Ring on grid above and record at B4.

IF 13+ CUs:

- Make a selection using the lookup chart in section J.
- Write in at B4 below.

B4.

ENTER CODE NUMBER OF SELECTED CATERING UNIT HERE:	**0**	**1**	**GO TO B5**

B5 Having selected the CU (or in most cases, having found that there is just one), you need to establish who the MFP is for that CU. The MFP is "the person with the main responsibility for shopping and preparing food". As discussed in section 7, it is possible for these tasks to be equally shared, in which case put both names on the ARF (and try to ensure that both are present for the household questionnaire).

9.6.3 SECTION C

Selection of adult respondent (age 19+)

C1 First you need to make contact with the CU and introduce the study. You then need to establish the number of eligible, non-pregnant or breastfeeding adults (aged 19+) in that CU. (There are notes at the top of Section D that remind you who is and is not eligible). As in most cases the CU will include all those living at an address, in most cases you can ask "I would like to ask you a few questions about the people who live here. Including yourself, how many adults aged 19 or over live here (in this house/flat/part of the accommodation)?" Then you will need to check if any of these adults are currently pregnant or breast-feeding, and exclude them. If the accommodation consists of more than one CU, you will need to be careful to establish that we are only interested in those who are part of the selected CU.

C2 Record the number of eligible adults here. If you are unable to establish the number of adults, go to section G to record the reason why.

If there is no-one aged 19 years or over in the CU, but there is someone aged 16-18 (i.e. the eldest CU member is aged 16-18), you will go onto Section D to select a child respondent (Respondent 2). If there is no-one aged at least 16 (i.e. the eldest CU member is aged 15 or younger) you will not make a selection / interview anyone. Ring code C at C3 and go to section E. Select outcome 599 and record this on the front of the ARF.

Any extra information as to why you were not able to establish the number of eligible adults, or why there were no eligible adults should be recorded in section F.

C3 If the CU comprises just one person aged 19+ (not pregnant nor breastfeeding) then they will be selected for interview.

C4 In CUs containing two or more such adults then one respondent needs to be selected at random. This grid enables you to select an adult respondent for interview. **Please note that only non-pregnant/breastfeeding CU members are eligible**. **If at this stage you identify that there are no non-pregnant/breastfeeding adults in the household, use final outcome code 532 for respondent 1 then continue to ascertain whether there is an eligible Respondent 2.**

All eligible adults (19+) should be listed in the grid at C4, in alphabetical order. Then use the selection label on the front of the ARF to select the adult to include in the survey. Go along the first row (DU/P1) until you reach the number of eligible adults in the CU, and then look below for the selection code of the adult to include. Ring this code in the column headed *Person Code*.

The next two pages show an example of respondent selection in a CU comprising three eligible adults. Following the protocol and the selection label, the third adult (Steve) has been selected as the respondent.

C4. IF 2+ NON-PREGNANT PERSONS AGED 19+:

Ask for name or initials of each non-pregnant/breastfeeding person aged 19+ in the (selected) CU. List in **alphabetical order** in the grid below. Continue on separate sheet if necessary.

NAME/INITIAL	PERSON CODE	NAME/INITIAL	PERSON CODE
Katrina	01		07
Paul	02		08
Steve	(03)		09
	04		10
	05		11
	06		12

IF 2-12 NON-PREGNANT/BREASTFEEDING PERSONS AGED 19+:

- Look at the selection label on page 1 of the ARF
- In the 'DU/P1' row: find the number matching total number of persons.
- In 'Select' row: number beneath total number of persons is the 'selected person code'. Ring on grid above and write in at C5.

IF 13+ NON-PREGNANT/BREASTFEEDING PERSONS AGED 19+:

- Make a selection using the lookup chart in section J.
- Record selection code at C5.

C5.	**ENTER CODE NUMBER OF SELECTED RESPONDENT 1:**	**0**	**3**	**GO TO C6**
C6.	**RECORD FULL NAME OF SELECTED RESPONDENT 1 (*aged 19+)* ON FRONT PAGE OF ARF.**			**GO TO SECTION D**

C5/6 Enter the code number of respondent 1 and record their full name on the front page of the ARF.

9.6.4 SECTION D

Establishing number of children at (selected) CU and selection of Respondent 2

D1 Here, you will establish if there are any eligible children in the CU, and if so, select one for interview. Children who live in that CU and are aged 1.5-18 are eligible. (As for adults, teenagers who are pregnant or breastfeeding are ineligible). Record the number of eligible children at D1.

If you are unable to establish the number of children, ring code A and record the reason at section F. You will then continue to interview/record the final outcome for the selected adult.

D2 This summarises the number of eligible children.

If there are no eligible children, code A, and continue to interview/record the final outcome for the selected adult.

If there is one eligible child, that child will be selected. If there are two or more eligible children, you will need to do a selection at D3.

D3 This grid enables you to select a child. In CUs containing two or more eligible children then one of them needs to be selected at random.

All eligible children (aged 1.5-18) should be listed in the grid at D3, in alphabetical order. Then use the selection label on the front of the ARF to select the child to include in the survey. Go along the CU/P2 row until you reach the number of eligible children in the CU, and then look below for the selection code of the child to include. Ring this code in the column headed *Person Code*.

Now follows an example of respondent selection in a CU comprising four eligible children. Following the protocol and the selection label shown earlier, the first child (Felix) has been selected as the respondent.

ENTER TOTAL NUMBER OF PERSONS AGED 18 MTHS – 18 YRS HERE:	**0**	**4**	**GO TO E2**
OR CODE: Don't know	A		**GO TO SECTION E**

INTERVIEW SUMMARY:

D2.

No eligible persons aged18 mths – 18 yrs	A	**GO TO SECTION E**
1 person aged 18 mths – 18 yrs	B	**GO TO D5**
2 + people aged 18 mths – 18 yrs	(C)	**GO TO D3**

D3. IF 2+ NON-PREGNANT/BREASTFEEDING PERSONS AGED 18 MTHS –18 YRS:

Ask for name or initials of each person aged 18 mths –18 yrs in the (selected) CU.
List in **alphabetical order** in the grid below. Continue on separate sheet if necessary.

NAME/INITIAL	PERSON CODE	NAME/INITIAL	PERSON CODE
Felix	(01)		07
Gabriel	02		08
Kitty	03		09
Nell	04		10
	05		11
	06		12

IF 2-12 NON-PREGNANT/BREASTFEEDING PERSONS AGED 18 mths –18 yrs:

- Look at the selection label on page 1 of the ARF.
- In the 'CU/P2' row: find the number matching total number of persons.
- In 'Select' row: number beneath total number of persons is the 'selected person code'. Ring on grid above and record at D4.

IF 13+ NON-PREGNANT/BREASTFEEDING PERSONS AGED 18 mths –18 yrs:

- Make a selection using the lookup chart in section J.
- Record selection code at D4.

D4.	**ENTER CODE NUMBER OF SELECTED RESPONDENT 2:**	**0**	**1**	**GO TO D5**

D5.	**RECORD FULL NAME OF SELECTED RESPONDENT 2 *(aged 18 mths - 18 yrs)* ON FRONT PAGE OF ARF.**	**GO TO D6**

D4/5 Enter the code number of respondent 2 and record their full name on the front page of the ARF.

D6/7 If the selected child is aged less than 16, you will need to seek parental consent to interview the child. If consent is given, write the name of the person agreeing at E7. If consent is not given, go to section G and circle code 432 (proxy refusal). Remember to return to section F to record the outcome of the selected adult respondent.

9.6.5 SECTION E

Outcome for respondent 1 (aged 19+)

This is where you record the outcome for respondent one (the adult respondent), if there is one. The outcome codes are standard.

9.6.6 SECTION F

Outcome for respondent 2 (aged 1.5-18 years)

This is where you record the outcome for respondent two. Again, the outcome codes are standard.

9.6.7 SECTION G

Unproductive outcome: eligible addresses

Section G allows you to record an outcome code for any addresses that are eligible but unproductive. The codes are standard.

9.6.8 SECTION H

Unproductive outcome: deadwood addreses

Section H allows you to record an outcome code for any addresses that are ineligible (deadwood).

710 Not yet built/under construction The building has not yet been built or completed. If completed but still empty or in the process of conversion, use code 730.
720 Demolished/derelict This includes addresses that “disappear” when two addresses are combined into one.
730 Vacant/empty housing unit Housing units known not to contain any resident household on the date of the first contact attempt. This includes second homes which are not occupied at first contact attempt.
740 Non-residential address Address occupied solely by a business, school, government office, factory, other organisation, etc., with no resident persons.
750 Address occupied, but not eligible Address is residential and occupied, but is not the main residence of any of the residents. This is likely

to apply to seasonal/vacation /temporary residences, except if not occupied at the time of the contact attempt (code 730).
760 Communal establishment/institution Address is residential and occupied, but does not contain any private household(s), e.g. institutions and group quarters.
790 Other ineligible Record the full reasons for using this code at B2.

Further information about the use of Deadwood codes should recorded at I4.

9.6.9 SECTION I

Unproductive outcome: unknown eligibility

These are cases where you are unable to ascertain whether the address contains eligible respondents or not, for example where you are unable to locate an address. You should only code an address as unknown eligibility as a last resort. This means you have done everything possible to locate an address, or identify whether it is residential and occupied.

612 Issued but not attempted This code can only be used with prior office approval.
620 Inaccessible Include remote areas temporarily inaccessible due to weather conditions or other causes. (Check with the office before using this code.)
630 Unable to locate address Only use this code as a last resort. You must contact the office before using this code. You need to code whether you were unable to locate the address due to an insufficient address or if the address was not traced.
640, 810,820 Unknown whether address is residential These codes distinguish whether you were unable to establish whether the address contains residential housing due to refusal (810) or no contact (640) or contact, but not able to get information (820)
650, 830,850 Residential address – unknown whether occupied by household You know that the address is residential but do not know whether or not it is occupied. Choose the appropriate code according to whether you were unable to establish this information due to a refusal (code 830) or non-contact (code 650), or contact, but with someone who can't provide information due to a language barrier (850).
890 Other unknown eligibility – contact made.
690 Other unknown eligibility Only use this code as a last resort and only after contacting the office. Record the full reasons for using this code in the admin block.

9.6.10 SECTIONS J-L

SECTION J is a **Look up chart** for 13+ DUs/CUs or eligible individuals

SECTION K, Diary task list, is an aide memoire of the tasks that need to be completed, and allows you to record details of the dates that the diary will cover and to keep track of what appointments you have made.

SECTION L, Interviewer observation, is where you record the standard observations that need to be made at all non-deadwood addresses.

9.7 Completing the CHILD BOOST ARF

Sections A and B of the BOOST ARF are identical to the CORE ARF. Please refer to section 10.6 for instructions on completing these sections.

9.7.1 SECTION C

Screen for children at (selected) CU

C1 Here, you establish if there are any children aged 1.5-18 years in the CU.
If you are unable to establish whether there are any such children, code 'Don't know' and then select the appropriate outcome code in section I.

9.7.2 SECTION D

D1 If there is at least one child aged 1.5-18 years, establish the number of persons aged 19+ and 1.5-18 years. If you cannot establish the number of such persons in the CU, code 'Don't know' and then select the appropriate outcome code in section I.

The remainder of section D is identical to the CORE ARF – please refer to section 10.6.4 for instructions on how to complete this section.

9.7.3 SECTION E

Please note, there is no section E on the BOOST ARF.

9.7.4 SECTIONS F-H

Sections F-H of the BOOST ARF are identical to the CORE ARF. Please refer to section 10.6 for instructions on completing these sections.

9.7.5 SECTION I

Unproductive outcome: Screening not completed

Section I allows you to record an outcome code for any addresses where the screening was not completed.

9.7.6 SECTIONS J-M

Sections J-M of the BOOST ARF are identical to sections I-L on the CORE ARF. Please refer to section 10.6 for instructions on completing these sections.

10 QUESTIONNAIRE OVERVIEW

10.1 Introduction

Please make sure you look through the questionnaire very carefully, making sure you are familiar with it **before** you go out to start interviewing. Practice serial numbers and check letters are provided in Appendix E for this purpose.

The CAPI questionnaire has **three main elements**:

- 'Household Structure' interview
- Main Food Provider (MFP) interview
- Individual interviews (including self-completions)

The Household Structure interview must be completed before you carry out an individual interview. You cannot open the MFP interview or an Individual interview until there is a **complete** Household (CU) interview. The CAPI program allows only one respondent to be interviewed at a time.

Interviewer instructions appear on the screen in capital letters, but further information about some questions is given in this document.

The study actually focuses on CUs, but for simplicity the term 'household' is mainly used in the CAPI programme. In the vast majority of cases, the household and the CU are the same thing (i.e. all members of the household cater as a unit) but where there are two or more units in the household, the entity of interest is the selected CU, not the wider household.

You also have a set of Laptop Instructions. These are to help you use the laptop and the CAPI program. Please read them. If you have mislaid your copy, request a new set from Brentwood.

10.2 Conventions in the Blaise program

QUESTION TEXT WRITTEN IN CAPITALS…

…should not be read out to the respondent. It represents an instruction or explanation to you, the interviewer.

[*] displayed at the beginning of question text denotes that it is an opinion question. You should read out the question exactly as it appears on the screen. The interpretation of the question must be left to the respondent: even if they say they do not understand the question, all you can do is repeat the exact text back to them. Never try to interpret the meaning for them.

SPONTANEOUS ONLY

Answer codes preceded by SPONTANEOUS ONLY should never be read out, prompted, nor probed. For example, in the following question, you would only record 'same sex cohabitee' if the respondent volunteered the information without probing or prompting.

LiveWith ASK OR RECORD
"May I just check, are you/is [Name] living with someone in the household as a couple?"
Yes
No
SPONTANEOUS ONLY - same sex couple

ASK OR RECORD

This means that you may already know the answer to the question, either because the information has already been recorded earlier in the interview or because the respondent may have already volunteered the information. Take for example the following question which asks about marital status of adult CU members. If you already know that someone is married, you do not have to read the entire question out again. However, to guard against errors in coding or incorrect presumptions, you should check the details back with the respondent, for example, *'you have already told me that ….. is your husband so I can code that you are married?'*

MarStat ASK OR RECORD. CODE FIRST THAT APPLIES.
"Are you/is [Name]
…single, that is, never married,
…married and living with your husband/wife,
…married and separated from your husband/wife,
…divorced,
…or widowed?"

RUNNING PROMPT

This means that you should read out all the answer codes up to the question mark. For instance, in the following question about milk taken in tea, you would read out all three answer codes.

Appet "How would you describe your appetite? Do you have…
RUNNING PROMPT...
…a good appetite,
…an average appetite,
…or a poor appetite for someone of your age?"

Also see section 7 in the *Interviewers' Manual* for further information about administering questionnaires.

10.3 Household (CU) structure interview

The Household interview (properly, the 'CU interview') will be completed with the MFP or another adult respondent (see section 11.8). If other CU members are present at the time it is useful for obtaining correct dates of birth etc.

If you are interviewing in a single-person CU, you must complete the Household/CU interview with that person. If that person is not capable of answering the questions, it is not permissible to collect the information by proxy from someone else.

The Household interview allows you to determine the composition of the household.

First, the structure of the CU is established, with questions about:
- who lives in the CU's accommodation;
- the relationship of each person in the CU to everyone else;
- the 'Household Reference Person' (HRP);
- the nature of tenure of the accommodation.
- income
- the MFP;
- the individual respondent(s);

Next, the Household interview establishes each person's:
- sex;
- date of birth or age;
- relationship of members of the CU to each other;
- work status; and
- ethnicity.

10.4 Household (CU) composition

The information collected about the composition and structure of the CU is the basis for all subsequent questions and filtering and therefore must be correct. In particular, please check:

- that you have not omitted any CU member (you need to enter all members, not just the selected respondents);
- that you have not included anyone who is not really a member of the CU;
- that you have the correct date of birth/age for everyone.

The order in which you enter the respondents is not crucial, but you may find it easier later if they are entered roughly in age order, with the MFP first. **At the very least, you should try to enter the details of parents before you enter those of children**.

Before you leave this block, make sure that you are happy with the information in it.

10.5 Entering details of selected respondents

At questions ***AdNum1 – MFPNum*** you will be prompted to record the names of the respondents on the front page of the ARF. If the child respondent is under the age of 11 you will be prompted to record the name of the adult who will be answering questions alongside or on behalf of the child's. Where there are two or more adults you will also be asked to enter the MFP name from the front of the ARF. If you have not already done so, you will need to ascertain who the MFP is at this point (see section 7.4 for definition).

10.6 The MFP interview

Once you have completed the Household (CU) Questionnaire, you will be routed to the start of the MFP questionnaire. The purpose of the MFP block is to gain information at CU-level about cooking facilities, food shopping, food preparation and cooking skills. The overall content of the MFP questionnaire is outlined in the rest of this section – on screen instructions should give you all the detailed information you need.

If the MFP is not one of your selected respondents and is not currently available for interview, you have the option of doing the interview 'Later' rather than 'Now'.

If you select 'Later' the MFP questionnaire will be taken off the route. When you go back to carry out the MFP questionnaire later, you will need to re-open the same household (CU) interview. Press <CTRL+ENTER> to bring up the parallel fields. Use the down arrow key until the module – 'Main Food Provider' – is highlighted then press enter. You will be taken straight to *MFPNow* where you can change the code from 2 (Later) to 1 (Now). Please see section 12 for more information about navigating via parallel blocks.

Note that if the MFP is unlikely to be available during any of your visits to the CU, you can carry out the MFP questionnaire with any adult (aged 16 or older) member of the CU. The preference is for the person who has the best knowledge about the cooking facilities in the CU, shopping for food, food preparation, etc. To do this, select the 'Now' option at *MFPNow,* then code at the next question, *MFPProx* that the questionnaire is being completed by proxy. Then, all the MFP questions will then come on the route, except the 'Cooking skills' section, which ask how well the MFP *thinks* they can cook, and so cannot be asked by proxy.

The MFP questionnaire is divided into the following sections.

MFP Sections	**Block Names**
• Cooking facilities	Kitch
• Shopping for food	Shop
• Food Preparation	Prep
• Cooking Skills (Adult)	Cook

Cooking facilities (Kitch)

These questions are designed to find out about cooking facilities available to the CU, including kitchen equipment, food storage and space for food preparation.

Shopping for food (Shop)

This block of questions ask about where the CU does their food shopping, including shopping for fruit and vegetables and organic foods.

Food Preparation (Prep)

These questions are asking how some food is *habitually* prepared, including the use of salt. If the respondent asks what 'usually' or 'normal' means say that "usually means on most days" and that 'normal' is whatever they consider normal. Note that tact is required in some places as people may be sensitive about certain topics (e.g. avoiding certain types of meat on religious grounds).

Cooking skills (Cook)

This section includes questions about the frequency of preparing main meals, confidence in cooking certain foods/using different cooking techniques and how/where respondents learnt to cook. Questions are also asked about cooking equipment and basic ingredients usually available at home.

10.7 Structure of the individual interviews

Once you have completed the Household (CU) Structure Questionnaire (and hopefully, the MFP questionnaire), you will endeavour to conduct an individual interview with the respondent(s) you identified and recorded on the ARF.

At households in core addresses there will be a **maximum of 2 individual questionnaires**:

- **Respondent 1**: first selected person (always an adult aged 19 or older)
- **Respondent 2**: second selected person (always a child aged 18 months-18 years*).

**The rules for seeking permission to interview children are set out in Section 8.*

At households in child boost addresses there will be **just 1 individual questionnaire:**

- **Respondent 2:** ONLY selected person (always a child aged 18 months-18years). For consistency, the selected person in child boost addresses will always be **Respondent 2**.

For each individual questionnaire (any age) there are **two main parts**:

- **CAPI 1**
- **CAPI 2**

Each section of **CAPI 1** and **CAPI 2** is shown in order on the next page, and the intended respondent(s) are indicated.

If a respondent is eligible for, and agrees to take part in, the DLW and/or Actigraph part of the study, there are additional CAPI elements to the questionnaire:

- **DLW_Admin**
- **ActiGraph_Collection**

Please see section 16 for information on the CAPI questions relating to DLW, and section 17 for information on CAPI questions relating to the Actigraph.

Finally, there are CAPI questions which introduce the nurse visit:

- **Nurse_Intro**

Please see section 15 for information on these questions.

CAPI 1

CAPI1 Sections	Block Names	Respondent
• Cooking Skills (Adult)	Cook	All respondents 16+
• Access to Food at School	School	All respondents 18 months-18 years (except if 16-18 and in full time employment)
• Cooking Skills (Child)	CookCh	All respondents 7-15
• Usual Eating Habits	Isol, WhatEat, Avoid	All respondents
• General Health	Health	All respondents
• Oral/Dental Health	Oral	All respondents 16+
• Smoking	Smoke	All respondents 16+ (16-24 year olds may answer in a self-completion instead)
• Drinking	Drink	All respondents 16+ (16-24 year olds may answer in a self-completion instead)
• Education	Educ	All respondents 16+
• Job/Income	Job, JobHRP	All respondents 16+ (except if 16+ and in full time education)
• Measurements	Meas	All respondents
• Actigraph introduction	ActiG	All respondents 4-10

CAPI 2

CAPI2 Sections	Block Names	Respondent
• Dietary supplements	Supp	All respondents
• Physical activity (Adult)	PhysAAd	All respondents aged 16+
• Physical activity (Child)	PhysACh	Children 11-15
• Exposure to sunlight	Sun	All respondents
• Nurse introduction	NrsIntro	All respondents

The content of the individual questionnaires is outlined in the rest of this section, with the name of each block given in brackets. On screen instructions should give you all the detailed information you need.

10.8 CAPI 1 - details

Cooking skills (Cook)

This section includes questions about the frequency of preparing main meals, confidence in cooking certain foods/using different cooking techniques and how/where respondents learnt to cook.

Access to food at school (School)

These questions ask about food (both meals and snacks) provided at school, including subsidised or otherwise.

Cooking skills – children (CookCh)

This block of questions asks about food children have learnt to prepare at school as well as food prepared at home, and with whom.

Eating Habits (Isol, WhatEat, Avoid)

Respondents are asked about the frequency of eating out and eating take-away meals, food eaten at work and, for older respondents, food provided by 'Meals on Wheels' and suchlike. Respondents are also asked about the frequency with which they have eaten certain foods in the last year, including rarely consumed foods such as sprats, seaweed and papaya. Questions are also asked about appetite, food avoidance, and the eating of peel of fruits such as orange, kiwi and banana.

General Health (Health)

This block asks about respondents' general health, including any long-standing illnesses and recent operations and hospital stays.

Oral/Dental health (Oral)

In this block, respondents are asked about natural teeth, dentures, and how easy they find it to eat certain foods.

Smoking (Smoke)

These questions ask whether respondents have ever smoked, whether they smoke nowadays (including how many and the type of cigarettes), and, if applicable, when they gave up smoking. Note that for respondents aged 8-17, these questions, along with the drinking questions, will be administered in a self-completion booklet (a RED booklet for 8-12 year olds, a TURQUOISE booklet for 13-15 year olds and a PALE GREY booklet for 16 and 17 year olds). In addition, respondents aged 18-24 are give the option of completing the PALE GREY self-completion booklet or answering the questions via CAPI.

Drinking (Drink)

The questions in this block ask whether respondents drink alcohol, including the frequency of drinking, how much they drink and the types of alcohol they drink. Note that for respondents aged 8-15, these questions, along with the smoking questions, will be administered in a self-completion booklet (a RED booklet for 8-12 year olds, a TURQUOISE booklet for 13-15 year olds and a PALE GREY booklet for 16 and 17 year olds). In addition, respondents aged 18-24 are give the option of completing the PALE GREY self-completion booklet or answering the questions via CAPI.

Education (Educ)

These are basic questions about respondents' education and qualifications. Make sure the

respondent has properly looked at the show cards of qualifications and told you the **first** qualification listed on it that they have achieved.

Job/Income

The questions in this block are asked of Respondent 1 only and are about the job of the HRP. If Respondent 1 is not the HRP, CAPI will guide you to ask these questions of Respondent 1 but about the HRP. In child boost cases, these questions will be asked of the MFP. Note that the income questions is about **CU income** (NB: ***not*** *individual income* **or** *household* income – you will say 'household' to the respondent but we are referring to the CU). The question relates to all sources of income the CU (i.e. all its members) receives – please ensure that housing benefits and child allowance are included (if they receive any).

10.9 CAPI 2 - details

Dietary supplements (Supp)

This block asks about dietary supplements taken in the preceding year and covers the types taken as well as the frequency, dose and form in which they were taken. Note that, where possible, we would like you to actually look at the supplement containers in order to record accurate information.

Adult physical activity (PhysAAd)

These questions will be asked of adult respondents aged 16 and over. The questions relate to the last SEVEN DAYS – this reference period means the seven days prior to the interview date, so you need to focus the respondent's attention on this. The block includes questions about physical activity whilst at work, as well as on the way to and from work, domestic physical activity, walking and specific sports/exercises. These questions also cover time spent doing certain activities, as well as frequency.

Child physical activity (PhysACh)

These questions will be asked of respondents aged between 11 and 15 years. The module aims to get a general picture of the child's level of physical activity. All respondents eligible to answer this section (11-15 year olds) will be interviewed in their own right (although parents should be present for interviews with those under 13). The questions relate to the last SEVEN DAYS – this reference period means the seven days prior to the interview date, so you need to focus the respondent's attention on this. The block includes questions about physical activity whilst at school, as well as on the way to and from school, active play, walking and specific sports/exercises. These questions also cover time spent doing certain activities, as well as frequency.

Adult Sun Exposure (Sun)

This block asks questions about general sun exposure as well as sun exposure whilst at work and whilst on holiday. The block also includes questions about sun cream and the location and duration of holidays in the preceding year.

Child Sun Exposure (Sun)

This block asks questions about general sun exposure as well as sun exposure whilst at school and whilst on holiday. The block also includes questions about sun cream and the location and duration of holidays in the preceding year.

Dietary feedback (CAPI2)

At questions *DietFBA* (adults) and *DietFBC* (children), you will ask the respondent whether they would like to be sent some information about foods and nutrients in their diet, based on information they provide during the interviews and in their diaries. You should follow the instruction on screen and tell the respondent that the information will tell them how they compare with current consumption in the UK and how their nutrient intake fits with recommendations for a healthy diet. If they do wish to be sent this feedback, it will be sent from the office within 3 months. You will be routed to record the respondent's name and address, for addressing purposes. Please ensure you record the information

accurately so that we can be sure we are sending information to the correct respondents.

Flagging on the NHS Central Register and the Cancer Registry (CAPI2)

Respondents aged 16 and over are asked if they will consent to have their name flagged on two separate registers: the NHS Central Register and the Cancer Registry. Respondents must give permission jointly for NHS Central Register and Cancer Registry together because if they are flagged for one, they are flagged for the other. At the relevant questions you will record whether you have obtained written consent from respondents aged 16 and over. Please see section 14 for more information about flagging on the NHS Central Register and Cancer Registry.

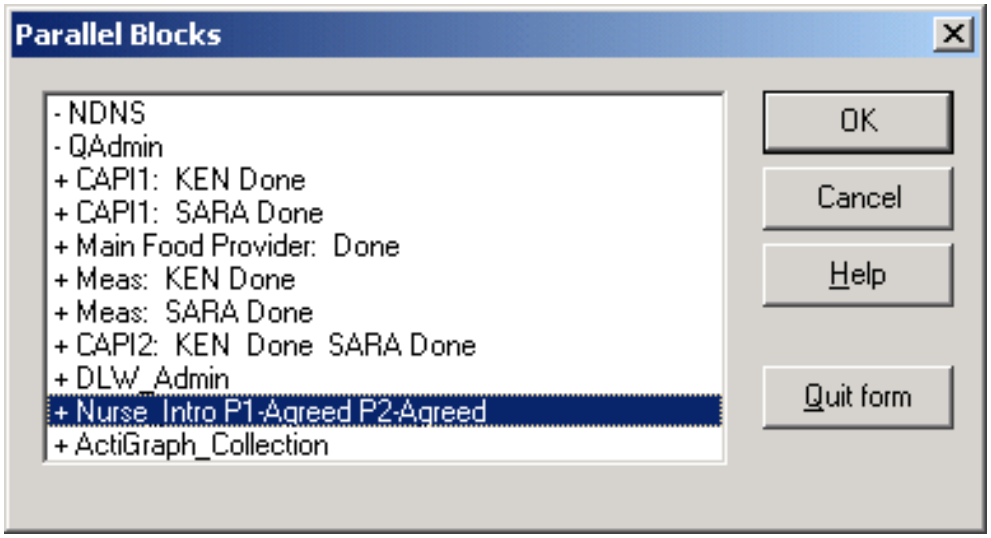
11 NAVIGATING THE CAPI MODULES

The computerised questionnaire consists of:

1. The household (CU) structure questionnaire **(NDNS)**
2. The admin block **(QAdmin)**
3. The MFP questionnaire **(Main Food Provider)**
4. The individual CAPI 1 interview(s) **(CAPI1)**
5. The individual measurements **(Meas)**
6. The individual CAPI 2 interview(s) **(CAPI2)**
7. DLW administration **(DLW_Admin)**
8. Nurse introduction **(Nurse_Intro)**
9. Actigraph collection **(ActiGraph_Collection)**

Each component is known as a 'parallel block'. This means that you can enter any component at any time, no matter where you are in the schedule. For example, you can enter the MFP block at any convenient moment.

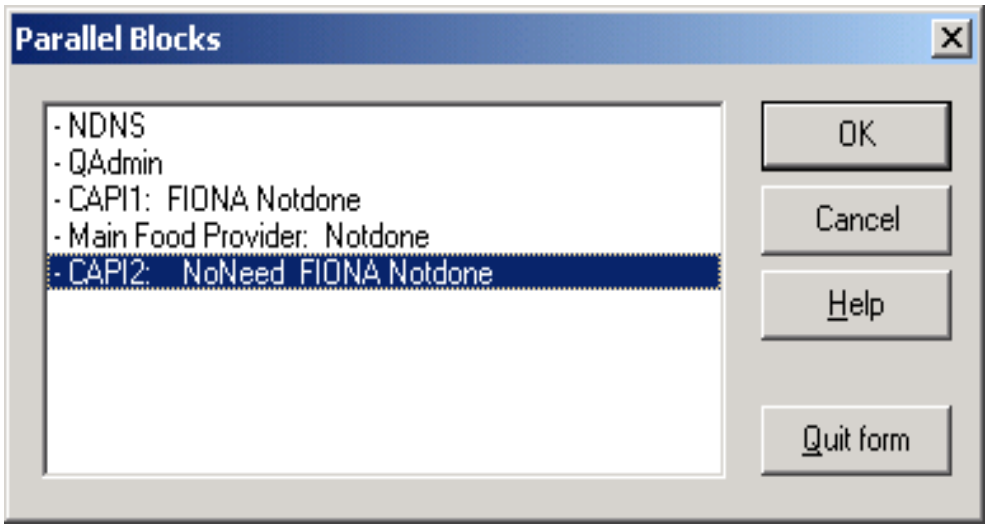
The way to move between parallel blocks is by pressing <Ctrl+Enter>, which brings up a screen called 'Parallel Blocks'. This screen is the 'gateway' to the other components of the schedule. It lists all the possible blocks you could go into, and looks like this:



- **CAPI1** is the individual schedule for each respondent (note that names are specified in the parallel blocks)
- **CAPI2** is the individual schedule for BOTH Respondent 1 and Respondent 2 (names are specified in the parallel blocks)
- **Nurse_Intro** is the nurse introduction for BOTH Respondent 1 and Respondent 2 (names will be specified in the parallel blocks)

The final thing to note about the parallel blocks screen is the **'+' or '-'** which precedes each block. All blocks will have a '-' to start with, and this will turn into a '+' when the block has been started (but not

necessarily complete). In addition to this, blocks will say either ‘Done’, ‘Notdone’, ‘NoNeed’ (for child boost addresses) or ‘Agreed’ (for the Nurse_Intro parallel block) to assist you when navigating via the parallel blocks. The illustration below shows an example of the parallel blocks early on in a child boost case:



Since this case has only just been started, you can see that each of the parallel blocks (CAPI1, Main Food Provider and CAPI2) have a ‘-‘ at the beginning and state that they are ‘Notdone’. In addition, CAPI2 states ‘NoNeed’ at the start, since it is a child boost address and so there is no Respondent 1. Please do make sure you become familiar with navigating around the CAPI program via the parallel blocks by using the practice serial numbers provided in Appendix E.

12 FOUR-DAY FOOD AND DRINK DIARY

Respondents are asked to keep a record of all they had to eat and drink over a four-day period including Saturday and Sunday. You will need to place the diary with the respondent, check it during the diary-recording period, and collect it after the four-day diary recording period is finished. The following sections provide you with a description of the diaries as well as instructions and information on placing, checking and collecting the four-day food diary.

12.1 The food diary

12.1.1 Types of food diary in NDNS

As NDNS covers such a wide range of ages, there are four types of diary:

- **Adult diary (A5)** – for respondents aged 16+
- **Adult diary (A4)** – for respondents aged 16+ who may struggle with the smaller A5 diary
- **Child diary (A4)** – for respondents aged 4-15
- **Toddler diary (A5)** – for respondents aged 1.5 to 3 years

12.1.2 Components of the food diary

Although there are different types of diaries, all are very similar in terms of how the information is collected. The following list describes the important components of the food diary that are common to all types. Please familiarise yourself with the different components in order to help explain these to your respondents when placing the diaries.

1. **Day & Date** – this should be filled in either by you at the first visit when you place the diary or by the respondent as they go along.
2. **Time Slots** – this helps the respondent with recording but it also helps you when you come to check the diary. For instance, if a respondent has a hot drink between 10pm and 6am for 3 days and then that time slot is blank on Day 4, it alerts you to the possibility that they forgot to record the drink.
3. **Time** - respondent still needs to record the time for each eating occasion, as this is what will be entered when the food is coded.
4. **Where & with Whom** – this information is useful in 2 ways: 1) it helps us decide how to code certain foods depending on where they were eaten such as school lunches or food eaten in restaurants; 2) it tells us about the environment in which people are eating so that we can look at how that might influence what people chose to eat and how much.
5. **Food/Drink Description and Preparation** – respondents need to record as much detail as they can about the type of food and drink they consumed including how it was prepared. There are prompts for most foods in the diary (listed mainly in alphabetical order) which tell respondents the sort of detail needed. For example, if a respondent has squash to drink, they can look up squash under soft drinks and it tells them what they need to record.
6. **Brand Name** – wherever possible we ask that respondent's record brand names as this is very helpful for coding.
7. **Portion Size** – it is important that we do not guess at how much a respondent is eating. Therefore, we need the respondent to describe the amount consumed using household measures or weights from packaging instead.
   Portion sizes for various foods can be found alongside the food description prompts. At the back of the diary is a picture of some life-size spoons. When respondents describe the amount in tablespoons they are often thinking of dessertspoons so it is important that they are clear about the difference.
   For composite foods respondents need to list individual components. Composite foods consist of more than one food, consumed together but not cooked together, that can be split into their component parts. Examples of composite foods are salads or sandwiches but they also apply to

drinks such as gin and tonic. So a sandwich would be split into bread, spread and filling(s) and the amount of each component recorded separately. Splitting foods up like this means we get accurate portion sizes no matter how small the amount i.e. half a teaspoon of sugar in tea or a slice of tomato in a sandwich.

In the adult diaries only there are pictures that can be used to describe some foods. These should only be used to describe the food in the picture itself or very similar foods i.e. picture 1 can be used for all breakfast cereals but picture 5 can only be used for broccoli.

In the adult and child diaries there is a picture of a life size glass and some other guidance on volumes.

8. **Questions on that day's food and drink intake** – these need to be filled out by respondents at the end of each diary recording day to indicate whether the day's consumption of food and drink was typical, and provide reasons if it was more or less than their usual intake.
9. **Dietary supplements** – if respondents have taken supplements, they need to record them in the table provided including brand, type and strength of the supplement, as well as how many taken.
10. **Recipes** – for any homemade recipes, respondents should list the ingredients, the amount of each ingredient, how many people the recipe was for and how much of the recipe the respondent ate.
11. **General Questions on Eating Habits** – at the end of the four-day recording period, respondents should provide information on their usual eating habits such as usual type of milk, type of oil used when cooking etc.

12.1.3 Food coding (data entry)

The reason why we require so much detail on the food, drink, and supplements consumed by the respondent is so that we can identify each food item correctly and allocate a corresponding food code from our NDNS nutrient databank as well as an appropriate portion code. Missing detail makes food and portion coding difficult and less likely to represent what the respondent actually had to eat.

12.1.4 Child and toddler diaries

As mentioned above, the child and toddler diaries are very similar to the adult diary. However, because children, particularly young children and toddlers, eat differently from adults there are some points that should be considered when placing and checking these diaries.

Who completes these diaries?

For children aged 12 and under, the parent/carer will be asked to complete the diary with help from the child as appropriate. Children over 12 will be asked to complete the diary themselves but will be expected to confirm details, where necessary, with the MFP. Additional detail and information may need to be obtained from the MFP if they are not completing the diary on behalf of the child. The parent/carer will be asked to keep the diary for all toddlers.

Due to the child boost, in some CUs, the child or toddler might be the only person completing a diary and an adult might be asked to help a young child or toddler to complete a diary without having to keep one themselves.

Portion sizes and leftovers

There are no food pictures in the child and toddler diaries. This is because young children tend to have difficulty conceptualising portion sizes this way. For toddlers, the portion sizes depicted in the food pictures are not usually relevant to the foods or amounts that toddlers consume. Therefore, children and parent/carers are encouraged to describe foods using household measures or weights from packaging instead.

Children tend to leave leftovers more often than adults and with very young children a lot of what is served ends up on the floor. In particular, parent/carers should be reminded that the portion size they record is the amount eaten, not the amount served.

Recipes
If a child/toddler eats a homemade dish and the recipe has already been recorded in the adult diary, it does not need to be recorded again in the child or toddler diary. The child or parent/carer can just write "see adult diary" in the recipe box. However, they still need to record how much of the recipe the child ate.

Extra questions in toddler diary
There are a few pages of extra questions in the toddler diary that you need to complete with the parent/carer when you initially place the diary. These are general questions on frequency of meals eaten outside of the home, the size of the toddler's usual cup/bottle and how the toddler's drinks are usually made up. These questions can be found on pages 22-25 of the toddler diary. Some of the information given can then be referred back to by the parent/carer while they are filling in the diary.

12.2 Other diary documents

12.2.1 Instruction booklet (adult diary only)

All respondents completing the adult diary should be given the separate instruction booklet. This contains the same instructions, examples, description prompts, and food pictures as the diary itself but saves the respondents from having to flick back and forth in the diary. It also includes some additional examples to help respondents.

12.2.2 Carer packs (child or toddler diary only)

Young children and toddlers might have meals where the person keeping the diary is not present e.g. at childminders, school, relative or friend's house. In order to get information on the foods consumed at these occasions, we need to ask the carer(s) to help. Ideally we want them to fill in the diary, but in some cases this won't be possible. Carers will not have received the same introduction to the diary as the parent; they may not be as motivated or committed; they may not have enough time or the level of understanding required. As an alternative to recording in the diary, they can fill in a carer food and drink recording sheet, which is a simple form for recording key details about what the child ate whilst in their care.

So for respondents aged 12 and under, you may need to issue the parent/carer with a "carer pack".

The pack consists of (in a plastic zipper bag):
- 1 x carer letter. This letter asks the person to complete the diary on the child's behalf
- 4 x carer food and drink recording sheets. There is one for each diary day.

The parent/carer should hand the pack to whoever feeds their child in their absence along with the diary (it is easier and safer if they are all kept in the plastic zipper bag).

12.2.3 Reminder card (all diaries)

This card is to remind respondents when they should start keeping the diary. The respondent should put it somewhere prominent e.g. on their fridge door, bedroom mirror etc.

12.2.4 Extra pages (adult A5 diary only)

Extra pages are for all respondents filling in the A5 adult diary in case they run out of space in the main diary. Respondents need to make sure they enter the day and date on any extra pages they use. You must enter their serial number on any extra pages used before returning them as they may become separated from the main diary.

12.3 Interviewer Assessment Schedule

The INTERVIEWER DIARY ASSESSMENT SCHEDULE (IDAS) is separate from the other diary documents as it is for your use in the respondent's house. It provides a list of the documents you will need, the instructions for placing the diary, what to look out for when checking the diary and other helpful reminders.

12.4 Placing the food diary

12.4.1 Introducing the food diary

Based on the day of the first individual CAPI interview, the laptop will select four consecutive days (including both weekend days) as the diary recording period. If a CU contains two respondents, both respondents will be assigned the same diary days. Please complete the details on the front cover of the diary with the respondent's name, serial number etc and enter the date of the day they should start recording. It may also help if you write in the day and dates of the diary days allocated by CAPI in the diary itself. If there is a long gap between diary placement and the start of the diary recording period, you may wish to contact the respondents to remind them to start their diary. It is a matter of judgement as to when (indeed whether) such a reminder would be necessary but as a rule of thumb, we envisage a reminder being considered for gaps of 4 days or longer. As respondents may use a reminder phone call as an opportunity to drop out, we suggest you post another reminder card if you are in the area, and only telephone the CU if that is not possible.

Generally respondents should stick to their allocated days even if they think that on some days their food and drink intake will be untypical: we do not want respondents to be picking "good" and "bad" weeks to keep their diary. However, if the respondent will be on holiday at any point during the allocated 4 days, assign 4 new days. This is because food and drink consumption on holiday is unlikely to represent the respondent's typical diet. You should replace like-with-like so if the original days were Saturday – Tuesday, the new days should also be Saturday – Tuesday.

It is important that after you have placed the diary with the respondent, they feel confident with what is expected of them and are aware of the information in the diary that will help them record what they have eaten as reliably as possible. Start by spending a few minutes working your way from the front to the back of the diary so that your respondent *or the person who will be completing the diary* gets an overview. Then go back through giving the respondent more detailed instructions which can be found in your INTERVIEWER DIARY ASSESSMENT SCHEDULE and below in section 13.4.4. These are designed to be read out loud to the respondent(s). They cover the adult, child and toddler diaries and will route you to different pages and sections where applicable.

12.4.2 Plastic bag for food labels

These are for respondents to collect labels for less common brands and, in particular, ready meals and meals-on-wheels. Each bag contains a double-sided card with instructions on what information on packaging is helpful. Respondents are asked to wash all labels/packaging that has come into contact with food. You should label plastic bags with the respondent's serial number.

12.4.3 Food eaten away from home

Respondents *or the person who will be completing the diary*, are asked to record food and drink consumed at home and away from home e.g. restaurant, friend's house and school. Therefore, they are expected to take the diary with them when they are away from home. For young children this may mean another adult such as a teacher or friend's parent completing the diary for the child. In that case, they should be given a carer pack (see section 13.2.4). If a respondent forgets to take the diary out with them, they should make notes and transfer these into their diary as soon as possible.

We understand that it is difficult for respondents to collect the same level of detail for foods eaten

outside the home. They should try and record as much information as possible, describing what is in dishes rather than just giving the name. So if they have a vegetable curry in a restaurant, they should describe what vegetables were in it and whether it was a tomato based sauce or a creamy sauce.

12.4.4 Instructions for respondents on how to complete the food diary

These are the key points that you need to explain. Please read out to the respondent(s) and ask them to find the relevant pages as you go through. Words that appear inside square brackets are instructions to you.

[INTERVIEWER: READ OUT]

1. "Now, I would like to show you the diary and explain what you need to do".

2. "The diary should be **completed for 4 days** starting on the day on the front of the diary."

3. "The diary should include **all food and drinks** (including water) consumed throughout the **day and night**, including snacks, and food and drink consumed away from the home."

4. "It is important that you do **not** change what you normally eat just because you are keeping a diary. The dietary feedback we give you is based on what you have recorded. So it is important you give us as much information as you can, then this feedback will be representative of what you actually ate"

5. "You should write down everything **at the time of eating** rather than from memory later. This means taking the diary with you when you go out. If you do forget to take your diary please make notes while you are out and transfer them to the diary later"

6. "There are examples of how to fill in your diary."

   [ADULT DIARY TURN TO PAGE 4-15]
   [CHILD DIARY TURN TO TURN TO PAGE 4-11]
   [TODDLER DIARY TURN TO TURN TO PAGE 4-15]

a) Day and Date
Please write down the day and date at the top of the page each time you start a new day of recording.

b) Time Slots
Please note the time of each eating occasion into the space provided. For easy use each day is divided into sections, from the first thing in the morning to late evening and through the night.

c) Where and with whom?
Please tell us what **room or part of the house** you were in when you ate, e.g. kitchen, living room, and tell us **whether you ate at a table or not** and **whether you were watching television**. If you ate at your work canteen, a restaurant, fast food chain or your car, write that location down. We would also like to know **who you share your meals with**, e.g. whether you eat alone, with your partner, children, colleagues, or friends.

d) Description of food and drink?
Please describe the food you eat in as much detail as possible. Be as specific as you can. There are prompts that will tell you what details we need, like **cooking methods** (fried, grilled, baked etc) and any **additions** (fats, sugar/sweeteners, sauces, pepper etc).

[ADULT DIARY TURN TO PAGE 16-21]
[CHILD DIARY TURN TO TURN TO PAGE 12-17]
[TODDLER DIARY TURN TO TURN TO PAGE 16-21]

e) Brand name

Please note the **brand name** (if known). Most packed foods will list a brand name, e.g. Bird's eye, Hovis, or Supermarket own brands.

f) Portion sizes

When you record how much you had to eat, we want to know the amount that was **actually consumed**, so remember to take into account any leftovers.

For foods, quantity can be described using:

- **household measures**, e.g. one teaspoon (tsp) of sugar, two thick slices of bread, 4 tablespoons (tbsp) of peas, half a cup of gravy. Be careful when describing amounts in spoons that you are referring to the correct spoon size. Compare the spoons you use with the life size pictures at the back of this diary.

[RESPONDENT(S) TO TURN TO BACK OF DIARY]

Quantity can also be described using:

- **weights from labels**, e.g. 4oz steak, 420g tin of baked beans, 125g pot of yoghurt
- **number of items**, e.g. 4 fish fingers, 2 pieces of chicken nuggets, 1 regular size jam filled doughnut

[FOR RESPONDENTS COMPLETING ADULT DIARY ONLY]

"Where appropriate, you can describe the amount of certain foods using the picture examples on page 22-25."

[RESPONDENT TO TURN TO PAGE 22-25]

"The picture examples can only be used to describe the food in the picture itself or very similar foods. For example, the pictures breakfast cereals can be used for any breakfast cereal while the pictures of broccoli can only be used to describe the amount of broccoli you had, not any other vegetable. Use the picture label as a guide"

FOR ALL DIARIES

For drinks, quantity can be described using:

- **volumes from labels** (e.g. 330ml can of fizzy drink).
- the **size of glass, cup etc** (e.g. large glass) or the **volume** (e.g. 300ml).

[FOR RESPONDENTS COMPLETING ADULT OR CHILD DIARY ONLY]

"There is also a picture of a **life-size glass** which can help in describing size or volume of drink."

[ADULT DIARY TURN TO PAGE 26-27]
[CHILD DIARY TURN TO PAGE 18]

FOR ALL DIARIES

7. "If you have eaten any **homemade dishes** e.g. Bolognese sauce or fairy cakes record how much you have eaten in the portion size column."

[ADULT DIARY TURN TO PAGE 6]
[CHILD DIARY TURN TO PAGE 5]

[TODDLER DIARY TURN TO PAGE 5]

"Then in the recipe section after each diary day record the name of the recipe, **ingredients with an amount** (including water or other fluids) for the whole recipe, the number of people the recipe serves, and the cooking method".

[ADULT DIARY TURN TO PAGE 9]
[CHILD DIARY TURN TO PAGE 7]
[TODDLER DIARY TURN TO PAGE 9]

8. "You should also record as much detail as possible about takeaways or other made-up dishes not prepared at home such as those eaten in restaurants or at a friend's house."

9. "**After each day of recording** you will be prompted to tell us whether this was a typical day or whether there were any reasons why you ate and drank more or less than usual."

   [ADULT DIARY TURN TO PAGE 7]
   [CHILD DIARY TURN TO PAGE 6]
   [TODDLER DIARY TURN TO PAGE 7]

10. "**After each day of recording** there is a section for providing information about any supplements you took. Brand name, full name of supplement, strength and the amount taken should be recorded."

    [ADULT DIARY TURN TO PAGE 8]
    [CHILD DIARY TURN TO PAGE 6]
    [TODDLER DIARY TURN TO PAGE 8]

11. "**After completing all four days of the diary**, you should go to the end of the diary and complete some general questions about your eating habits over the recording period."

    [ADULT DIARY TURN TO PAGE 61]
    [CHILD DIARY TURN TO TURN TO PAGE 35]
    [TODDLER DIARY TURN TO TURN TO PAGE 59]

12. "It also helps us a great deal if you collect labels from all **ready meals,** labels from **foods of lesser known brands** and also from any **supplements** you take, and put them in the plastic bag provided. We have included in the bag a card which shows you what information from packaging is helpful."

    [SHOW RESPONDENT(S) BOTH SIDES OF PACKAGING CARD IN THEIR PLASTIC BAG]

    "Please wash all packaging that has come into contact with food"

13. "There is a **freephone number** in the diary that you can call if you have any questions."

14. "Finally, please remember to read the instructions and examples at the front of the diary before starting."

.

[ADULT DIARY TURN TO PAGE 2-3]
[CHILD DIARY TURN TO PAGE 1-3]
[TODDLER DIARY TURN TO PAGE 2-3]

[FOR RESPONDENTS COMPLETING TODDLER DIARY ONLY]
"Now I would like to ask you a few questions about how often your toddler eats outside the home and a few questions about the drinks they consume. All these questions are in the diary itself, so you can refer back to the information when you are recording and this will save you time.

[INTERVIEWER TO GO TO PAGE 22-25 AND COMPLETE QUESTIONS WITH PARENT/CARER]

12.4.5 Practising with your respondent

The best way of ensuring your respondent has understood the instructions and is sufficiently familiar with the tools available to them is to get them to practise whilst you are still there to offer assistance and advice.

There are 2 types of practice diary pages (both A4); an adult one based on the adult/toddler diary and a child one based on the child's diary. After reading out the instructions, ask the respondent to recall a recent eating occasion (a few food items will suffice). Show them how you would record those food items in the diary, making sure you put them in the correct time slot and fill in the details such as time, where and with whom. Refer to the food description pages and demonstrate how these can ensure that you have recorded enough detail about the food. If appropriate, refer to the photos of portion sizes, the life size glass and the life size spoons. Remember to ask them if they ate or drank everything so that you ensure any leftovers have been accounted for.

Then ask your respondent to recall a different recent eating occasion and, this time, have them record the information on the practice diary page. Some respondents will need to record more practice items than others, depending on how well they are coping. Some adult respondents, especially those with impaired vision, may struggle with the A5 adult diary. For adults with impaired vision, other difficulties, or simply prefer the A4 format, please provide them with the option of an A4 diary.

12.4.6 Proxies

Where there are language barriers or other difficulties, you may find that another member of the household can act as a proxy for the respondent. For example, children could act as proxies if their parents do not speak English. If this is the case, please make a note in the Diary Evaluation (see section 13.6.1). Where proxies are used, you should still encourage the respondent themselves to contribute as much as possible to completing the diary.

12.4.7 Arrange check up visit

After placing the diary, please arrange a check-up visit with the respondent before you leave. The visit should be on the second day of the diary recording. CAPI will tell you which day to make the appointment. CAPI will also prompt you to make an appointment to collect the diary up to three days after the last diary day. **Please make a note of the respondent's phone number if they are willing to give it to you.**

Ideally the check up visit should be a home visit (i.e. personal). If this is not possible then you must at least phone the respondent on the second day of recording to check that they have started keeping their diary. You should ask if they have any concerns or questions and encourage them to continue with the diary. In a few cases you may feel that more than one check-up visit is required and you should arrange to go back on the third or even the fourth day of recording, as appropriate. It is up to you to decide how much support each respondent needs.

12.5 Check up visit

This visit is an opportunity to provide encouragement and support and to point out things the respondent may be omitting, thereby improving recording for the remaining days. You should review what they have recorded so far. Try to go through the diary with adult respondents and children aged over 12 on their own. We appreciate that this might not be possible (given practical considerations as well as other issues such as cultural constraints) so do not enforce this as a rule. Obviously, where a respondent is not sure of the full details of the food he/she ate it will be necessary to refer to someone else in the house for clarification.

Remain neutral when reviewing the diary, as respondents may be defensive about what they have recorded. In order to maximise co-operation and improve future recording, we suggest you make the following points to the respondent when reviewing their diary:

1. "This visit is a quick check to see how you're getting along and to answer any questions".
2. "When you have completed the diary it will be sent back to our offices to be coded and so my job is to make sure that the people coding the diary have all the information they require and to fill in any gaps".
3. "Remember if you wish, you can receive personalised feedback on your diet based on the data collected in your diary. The more information you provide, the more reliable the assessment of your diet will be".
4. "While checking the diary I may need your help in clarifying anything that might not be clear".

12.5.1 Restarting the diary

If when you arrive for your check up visit or speak to the respondent on the phone and they have forgotten to start recording, they are allowed **ONE** restart. Ideally they would then start on **that day and complete four days from then**. Make sure that 2 weekdays and 2 weekend days are covered. For example, your respondent is asked to keep their diary from Saturday to Tuesday but when you arrive for your check up visit on the Sunday, the respondent has not started recording. Allocate them four new diary recording days starting with that Sunday through to Tuesday plus the following Saturday to ensure they have 2 weekdays and 2 weekend days. Ensure that the respondent is in possession of their diary and write in the new dates in the diary. If you can, start them off by getting them to fill in the first thing they had that day. Arrange a new check up visit for the next day (now the second day of diary recording).

On some occasions, a respondent may not have started recording and may want to delay for some reason. Although we do not want respondents to be picking "good" and "bad" weeks to keep their diary, the alternative could be that we would lose the respondent. If this would be the case or it would be difficult to arrange subsequent visits, you can allocate them four new days. You should replace like-with-like so if the original days were Saturday – Tuesday, the new days should also be Saturday – Tuesday. Give your respondent a new reminder card and write the new dates in the diary. Also arrange a new check up visit for the second day of the diary recording period.

12.5.2 Checking the food diary

We want the diary to be as complete as possible. Missing information should be collected while you are at the respondent's home because this increases the chance of filling in any gaps. This section provides help on what you should be looking out for. A less detailed checklist can be found in your INTERVIEWER DIARY ASSESSMENT SCHEDULE. **Not everything that the respondent has written (or not written) needs to be scrutinised. Priority should be given to missing descriptions of foods, portion sizes, recipes or cooking methods.**

If there are any omissions or ambiguities in the diary, you should clarify these with the respondent. Please use a green pen (or at least a different colour from that used by the respondent) when you write on the diaries so that we can see where you have needed to probe for additional information or made changes.

Day and date: has this been recorded for each new day?
Time/Where/With whom: has the respondent been recording these for each meal/snack?
Missing meals and snacks:
Check for empty time slots. Ask the respondent to confirm whether they ate or drank anything during that time. Try and fill in any gaps with the respondent. Do not try and fill in entire missing days retrospectively. If the respondent says they were unwell or ate less for any other reason, make sure this is recorded in the question at the end of the diary day. If they have genuinely not eaten anything in a particular time slot, write this into the diary i.e. "Nothing eaten or nothing taken" so that it is clear that you have confirmed this.
There are some foods that are often missed out after the first few days of diary keeping:

Drinks (especially water)
Crisps & savoury snacks
Biscuits, cakes & confectionery

Inquire about such foods and fill the gaps if necessary
Remember that people may have eating habits that seem unusual to you especially the very young or very old, people from different ethnic groups and those who are ill. If you have concerns about anything the respondent has written or not written please put these in the diary evaluation form (section 13.6.1).
Descriptions of food and drink: have sufficient details been recorded including cooking method? In section 13.5.3 is a list of the sort of details respondents should have recorded. You should use these prompts to elicit the additional info required. You can also use the food description pages in the diary itself.
Brand name: has the respondent been recording this?
Portion size: ensure that each food and drink item has a corresponding portion size. Remember that, wherever possible, composite foods should be broken down into their constituent parts and a portion size recorded for each part. So for a ham sandwich made by the respondent, we would need the amount of bread, spread, ham and any other fillings like salad or mayonnaise. For young children, the elderly or respondents who may not have completed the diary themselves, confirm that the portion sizes recorded was the amount eaten i.e. they have taken into account any leftovers
Homemade recipes: if the respondent has consumed any homemade dishes, have details been recorded on the relevant pages along with the cooking method?

1) Is there an amount for each ingredient, even if it is an ambiguous measure like "a pinch" or "a handful"?
2) Do we know how many people the recipe served?
3) Is the amount of the recipe that the respondent actually ate recorded on the main diary page?

Check the cooking method for phrases like "fried in oil" or "stewed for an hour" or "mashed with milk and butter" and check that the ingredients includes the oil for frying, water for boiling/stewing, and milk or spread for mashing.
Other made up dishes and takeaways: have details been recorded of what these dishes contain, either in the diary itself or on the recipe pages?
Typical day: has the respondent told us whether the day was usual or unusual? If the respondent has recorded that the day was "**NO, NOT USUAL"** make sure that they have given a reason why they ate **MORE** or **LESS** than usual
Dietary supplements: have sufficient details been recorded for any supplements taken? If the strength of the supplement is missing e.g. 100mg or 25µg, ask to see the container. If the supplement contains a lot of different things, such as a multivitamin supplement, you do not need to list all the ingredients and record the strength for each of them. You will just need to ensure that there is a brand, and a full name and description of the supplement, including prescribed supplements.

Please note that this may seem a lot to check but remember you will get quicker at spotting missing

details and not every respondent will have recorded in all the sections i.e. not everyone takes supplements or cooks homemade dishes.

12.5.3 Food description prompts

In general the following information is required (this can also be found on page 11 of the INTERVIEWER DIARY ASSESSMENT SCHEDULE):

- **Type of food or drink**
- **How was it bought – fresh, canned, frozen, dehydrated etc?**
- **Was it home-made – if so – what was in it? *Don't forget to check that any recipes are recorded on the Recipe Pages.***
- **How was it cooked – boiled, grilled, fried etc?**
- **If it was cooked in fat, or fat was used in pastry or cakes or any other dish, what sort of fat or oil was used?**
- **If it was a dried / dehydrated product, was it reconstituted using water, milk or both?**
- **Was the item coated before cooking – if so – was it flour, batter, egg, breadcrumbs etc?**
- **Was it unsweetened, sweetened with sugar/honey, or artificially sweetened?**
- **Was it regular or low fat / low calorie?**

Remember to use neutral prompts to gather the above information and to prompt for foods that may be eaten in combination e.g. dressing on salad, jam on toast.

12.5.4 Regional and ethnic foods

A respondent may eat a regional food or use a local term for a food that others might not be familiar with e.g. stovies, empire biscuits. Please ask the respondent for a description that will help clearly identify the food especially if the food can be prepared in a variety of ways, as is the case for stovies. When collecting information about ethnic foods it is important to obtain as much information as possible about a food/recipe that is 'uncommon'.

12.5.5 Meals on Wheels

Respondents should give a description of the components of the meal (for example mashed potato, carrots and chicken breast etc) and, if possible, retain the packaging. Councils employ private catering companies to provide meals on wheels so try and obtain the name and telephone number of the catering company that provided the meals. You should be able to get this information from the respondent, as they will usually be given a menu with the company name, logo etc on it.

12.5.6 School meals

For young children, there may be very little detail given for meals provided by their school. Often parents have weekly menus of school lunches provided by the school. If this is available, you can use it either to prompt the child for missing detail or clarify the name or content of a dish. If the parents/carers do not have a copy of the school menu, ask if they could get one from the child's school. You can then use the school menu on your pick up visit when checking the diary. Please return the school menu along with the diary if possible.

When using a school menu to prompt the child for missing detail of a school meal, please remember to cover the following points:

- Find out the name of the dish by referring to the date and day of the diary and matching it with the correct weekly cycle and day of the school meal

- Find out whether anything else that was on the day's menu was eaten e.g. rice, garlic bread, salad, side vegetables etc.
- Get more information on the type of foods in the dish e.g. type of vegetable, dressing on the salad, boiled or roast potatoes etc.
- Ask about portion size of the foods consumed
- Find out if pudding was eaten and what was in it, e.g. type of fruit in fruit crumble, served with yogurt, custard, or ice cream etc.

Please note that items listed on the school menu may change due to what's available, therefore, record what the child has described.

Please also be aware that children who have packed lunches rather than school meals may swap foods and therefore record foods that their parents might question. For example, a child may have recorded that she had a carton of Ribena and when you ask about it, her parent might say that she did not give a Ribena to the child. In these cases, you should leave in what the child has written in order to encourage the child to record what they actually ate rather than what their parent gave them.

12.5.7 Additional check up visits

In a few cases you may feel that more than one check-up visit is required and you should arrange to go back on the third or even the fourth day of recording, as appropriate. It is up to you to decide how much support each respondent needs.

12.6 Pick up visit

The pick-up visit should be no later than three days after the final day of recording. Again, you should check the diary for completeness, concentrating on the entries made since your last visit as described above for the check-up visit. If the respondent has followed your guidance, checking the remainder of the diary should not take very long. Some interviewers have suggested working backwards through the diary i.e. starting with the most recent day. You must also ensure that the respondent has completed the General questions about food/drink in the last 4 days at the back of the diary. If not, please ask them to fill these in.

Remember to collect any additional items such as the plastic bag with labels, extra pages, school menus and carer packs.

12.6.1 Diary Evaluation

A diary evaluation should be completed for each respondent as soon as possible after collecting the diary. This form is for you to record any problems the respondent might have had with keeping the diary and how well you thought it reflected on what they actually ate. For example, if a respondent had language difficulties and their young son or daughter acted as a proxy for them, you would note this in your evaluation. You can also write in positive comments!

Please ensure that you send your first completed diary back to Brentwood as soon as you have collected it from the respondent.

13 FLAGGING ON THE NHS CENTRAL REGISTER AND THE CANCER REGISTRY

Respondents aged 16 and over are asked if they will consent to have their name flagged on two separate registers: the NHS Central Register and the Cancer Registry. Respondents must give permission jointly for NHS Central Register and Cancer registry together because if they are flagged for one, they are flagged for the other.

If respondents agree to be flagged on these lists, a marker will be put against the respondent's name to show that they took part in the NDNS. As the survey is planned to continue for many years, it will be useful to be able to follow up what happens to respondents in the future. For example, if somebody who has taken part in the survey dies or gets cancer, the cause of death or type of cancer can be linked with their answers to the survey. Such information could be extremely helpful to future medical researchers.

It is important to understand that the only information that the *National Centre*/UCL/HNR give to the NHS Register and the Cancer Registry is the respondent's full name, date of birth and address, and the fact that (s)he has taken part in the survey. The respondent's details are already on the register (they are put there when they receive their NHS number). We could ask for respondents' NHS number but not many people are likely to know this. For this reason we ask for other details which will help us identify them on the register.

No other information is given, not even the serial number used by the interviewer. A totally **different** case number is allocated to ensure anonymity.

If a respondent wishes to cancel this permission at any time in the future, they can do so by writing to us.

Further information on the two separate registers is given below.

NHS Central Register

The National Health Service has a Central Register, which lists all the people in the country and their NHS number. When the respondent dies, the NHS Register provides the NDNS team with a replica of the respondent's Death Certificate (something that is publicly available). The information on the Death Certificate is then attached to the data file.

Cancer Registry

The National Cancer Registry is run by the Office for National Statistics, and collects details about all types of cancer. If a respondent is diagnosed with cancer, a code indicating which sort of cancer it is will be added to the data file.

Once the respondent has signed the consent form please return the top copy to the office. The bottom copy is for the respondent to keep.

14 INTRODUCING STAGE 2: THE NURSE VISIT(S)

Our target is to interview and measure everyone eligible. All respondents are eligible for the nurse visit and this stage is mentioned in the leaflet which accompanied the advance letter. The measurements carried out by the nurse are an integral part of the survey data and without them the interview and diary data, although very useful, cannot be fully utilised. Your job is only complete when you have attempted to secure agreement for the nurse to visit.

The introduction to the nurse visit is given by the CAPI program at the question *NursInt*. The parallel blocks will appear at the end of CAPI2 and you will need to select the 'Nurse_Intro' parallel block (please refer to section 12 for more information about parallel blocks). For respondents eligible for the DLW sub-study, the parallel blocks will appear after the DLW recruitment questions. For respondents **not** eligible for the DLW sub-study, the parallel blocks will appear after the sun exposure questions. The introduction to the nurse visit should be read exactly as worded. Sometimes you will need to provide further information in order to convince people of the importance of this stage. They may want to know more about what is involved. Some may be nervous of seeing a nurse and you will need to allay any fears.

Try to convince respondents that seeing a nurse is a vital part of the study and that it is non-threatening. If the person is reluctant, use the arguments given in the box below to try to get them to change their mind: -

- Explain that the nurse is the best person to describe what (s)he wants to do. The respondent can always change his/her mind after hearing more about it
- Stress that by agreeing to see the nurse, the person is not committing themselves to helping with all, or any, of the measurements
- The nurse will ask for separate permission to carry out the various measurements
- We would still like a nurse to visit, even if a respondent says that (s)he will not want to consent to all of the measurements

If the respondent wishes, they and their GP can be given their blood pressure readings and blood sample results most closely related to their health. If you feel that this will help you get agreement to see the nurse, please explain this. **However, be careful to avoid calling the nurse visit a 'health check' – it is not.** One of the most common reasons given for respondents refusing to see the nurse is 'I don't need a medical check - I have just had one'. Avoid getting yourself into this situation. You are asking the respondent to help with a survey.

REMEMBER – We don't access the medical records of the respondents, so the only way to obtain medical information on them is to have a nurse visit. As with the doorstep introduction, say as little as possible in order to gain co-operation.

Some of the things you might say when introducing the nurse visit:

- "(name of nurse) is a really lovely lady and is very professional"
- "I'm not a nurse so I can't do the measurements, but the nurse is highly trained, and very experienced, and there is no need to worry about her visiting you"
- "NatCen have a team of professional nurses who are highly qualified. They all have extensive experience working in hospitals, health centres etc and have been specially trained for this survey"
- "the nurse is covered by the Data Protection Act and anything you say will be treated in the strictest confidence"
- "she will answer any questions you have, and you don't have to do anything you don't want to. The nurse will ask separate permission for each test, so you can decide at the time if you don't want to help with a particular one"
- "If you want, you will be given the results of some of your measurements. Some measurements can also be sent to your GP if you would like"
- "The Multi Centre Research Ethics Committee has given approval for the survey"

14.1 The Stage 2 leaflet

You will be given copies of the Stage 2 leaflets to give to all respondents who agree to a nurse visit. These give details of the measurements and give other information that respondents might need to know before the nurse arrives. Note that there are different versions of the Stage 2 leaflet for different age groups. It is not your job to explain these leaflets, nor the measurements. The nurse will go through all of the measurements when he/she visits.

14.2 Nurse appointments

As the nurse visit is such an important element of NDNS, we want to ensure that as many respondents as possible participate in Stage 2 of the survey. The Health Survey for England have found that a very effective way to do this was for interviewers to make an appointment with the respondent for the nurse to visit them wherever possible. We have agreement from Operations for nurses to prioritise work on NDNS from October 2008 onwards, so nurses will be in a position to send you their availability for making their first visit. Below is some guidance on liaising with your nurse partner and making their first appointment.

14.3 Liaising with your nurse partner

To make sure that NDNS is as successful as possible, particularly in terms of the nurse visit, interviewers and nurses need to know several things at different stages of fieldwork:

BEFORE FIELDWORK STARTS	
You need to know…	The **nurse** needs to know…
• Your nurse's **name** • Your nurse's **availability** for the fieldwork month (as much as they know at this stage). For further information see **section 15.4**. • The make, registration number, model and type of their car, to put on the **police letter** • **Personal info** such as their job and former job, whether they work as a nurse in a hospital/clinic/in the community (this information can be very reassuring for respondents) • How well they know the area you are both working in • How you are both going to **keep in touch**	• Whether there are any times you know you will definitely not be working on NDNS, for example if you are working on a different project • How you are both going to keep in touch

DURING FIELDWORK	
You need to know…	The **nurse** needs to know…
• An **update** of the nurse's availability. He/she will give you some availability before you start fieldwork but you will obviously need an update as his/her plans change	• Where **appointments** have been made and the details of these appointments (date and time, any helpful location details or unusual circumstances) • Any households that agreed the nurse visit, but where you were **unable to make an appointment** so the nurse needs to make it • Any households where **nobody has agreed** a nurse visit, so that he/she can cross these households off his/her worklist • An **update** of when you will not be working on NDNS.

What other information might it be helpful to find out before I start fieldwork?

It is useful to know as much as you can about your nurse and the nurse visit before you start fieldwork. Here are some suggestions:

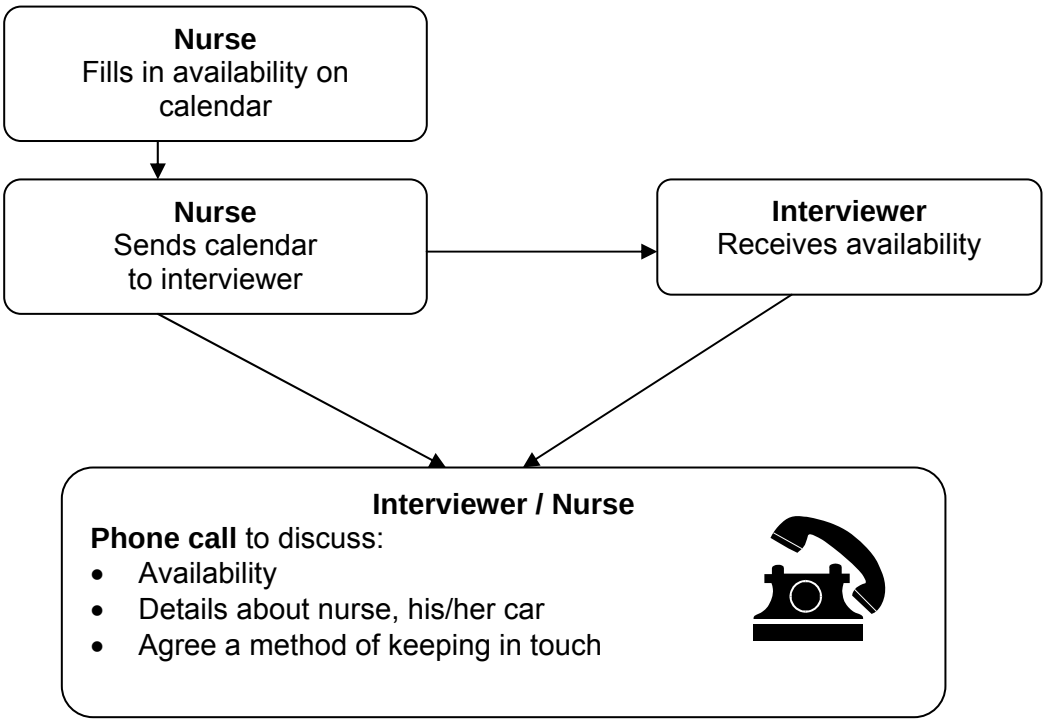
- His/her preferences for making appointments, for example how long to leave in between each one, whether they prefer to have work arranged close together or whether they prefer to just do one appointment at a time.

14.4 How should interviewers and nurses let each other know this information?

As you can see, this means a few key pieces of information need to be shared between yourself and the nurse. You are both very busy people who manage your own workload, which can sometimes make it hard to give all of this information at any one point in time. The key is therefore regular communication between you and your nurse.

The following pages outline our recommendations for making sure that you both have all the information you need throughout fieldwork.

Before fieldwork starts:

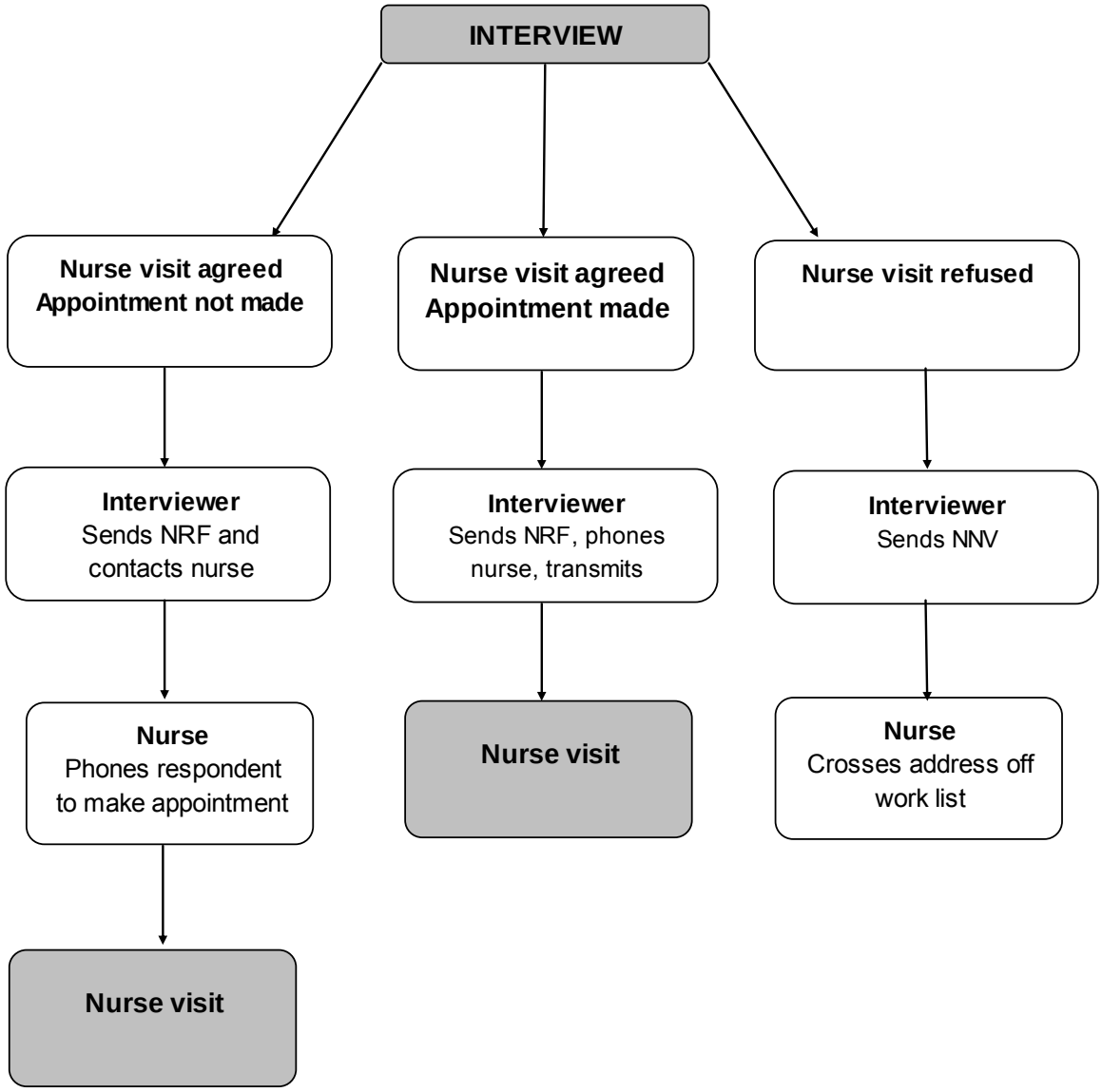


Whose responsibility is it to make the initial phone call?
You will need to confirm that you have received the nurse's availability calendar so it makes sense for you to discuss these other things when you do that. If you do not receive your nurse's availability by the beginning of fieldwork you should ring him/her anyway to find it out.

What sort of availability should the nurse be giving me?
We have asked nurses to give availability for the four-week period beginning on the third week of the month. We have asked nurses to dedicate a few slots each week to NDNS. However, your nurse might not be able to give you all of this from the beginning of your fieldwork period as theirs does not start until two weeks later. For example, your nurse might give you one weekday, one evening and one weekend morning in the first week of his/her fieldwork and then give you availability for the other weeks later on.

What if my nurse does not give me availability?
Your nurse might not be able to give you much before you start work. In this case the nurse should ring you nearer the start of his/her fieldwork period to give you availability. If your nurse refuses to give you any availability then you should discuss this with your team leader or NDNS project manager.

During fieldwork:



Whose responsibility is it to make phonecalls during the fieldwork period?
Your nurse should phone you to keep you updated on his/her availability. However, you should also phone your nurse if your work plans change. You will also need to ring your nurse when you have made an appointment for him/her, as the post can be unreliable.

How can I be sure that the nurse is going to be available for the appointments I am making?
You have been given an appointment diary to keep a note of your nurse's availability. When the nurse gives you availability this constitutes a commitment from the nurse to work on NDNS on those days. However, if you have not spoken to your nurse in a while it is worth giving them a quick phone call to check that their availability hasn't changed.

How do I know how far apart to make the appointments?
Find out from your nurse how long they think it will take them to complete an interview and how close together they like them to be. You will know how long it takes to get from one address to another from your own fieldwork. Please do not underestimate these times.

Will I ever accompany my nurse when he/she goes back to visit a household I have interviewed?

You may come across a situation where you feel that the nurse might not get a response or might have other problems with the respondent unless you accompany them when they visit. If you feel that this is the case, obtain clearance from your Area Manager to accompany the nurse.

Both you and your nurse will be juggling various different commitments and demands on your time. You should discuss with your nurse the best way to keep in touch throughout the fieldwork period as the scenario outlined above will not suit everyone.

14.5 Documents relating to the nurse visit

- **Stage Two leaflet**

  See **section 15.1** for information about this leaflet.

- **Appointment record card**

  Complete the appointment record card (purple) and leave this with the respondent when you have made a nurse appointment. Remember to always fill in the household serial number in case a respondent has to telephone the office to rearrange the appointment. At the bottom of the appointment record card are some notes about what they should and shouldn't do before the nurse visit.

  Q. Why are some respondents asked to wear light clothing?
  A. Light clothing makes it much easier to get accurate measurements.

- **The Nurse Record Form (NRF) and No Nurse Visit Sheet (NNV)**

  The nurse has a list of the addresses in the point being covered. He/she needs to know the outcome of your visit to each address in order to plan his/her own workload. This includes any deadwood addresses. This information is communicated via the Nurse Record Form (NRF) and No Nurse Visit sheet (NNV) and also by telephone calls.

  NRF
  This is the nurse's equivalent of the ARF and is used for households where you have made a nurse appointment. See below for further information on completing the NRF.

  NNV
  This is for households where there is no work for the nurse to do. This could be because the address was deadwood, or unproductive, or because it was a productive household but all selected respondents refused a nurse visit.

  Your workpack contains a set of NRFs and NNVs, together with a sheet of **address labels** which replicate the address labels on your ARFs.

  As soon as you have finished your work at a productive household where at least one person agreed to see the nurse, fill out the NRF and send it to your nurse (even if you have already told him or her about the appointment by telephone).

How do I complete the Nurse Record Form (NRF)?
You need to complete the sections on **page 1 and page 2** of the NRF. Pages 3 and 4 are for the nurse to complete.

★REMINDER: COMPLETING THE NRF

Basic information

1. Enter the nurse appointment time and date at the top
2. Enter the telephone number and main contact name and the alternative number and contact name (if you have them)
3. If there is more than one household/CU at the address, describe the location of the household covered by that NRF.
4. **Stick the address label** on the address box. Pass on any useful tips about how to find the address, if this is difficult

Completing Part A

1. Complete the **Interviewer Outcome Summary** box.

2. Enter the date on which you conducted the CAPI 1 interview

3. Write in the number of persons in the catering unit eligible for the nurse visit aged 18mths-less than 2 years, 2-15 and 16+.

4. Complete the grid on page 2 for the selected respondents. Remember that if it is a child boost address then you need to leave the section for person 1 blank. The admin block has a screen called *NRF* which shows you exactly what to enter here.

    - Enter each person's details in the grid and ring the appropriate code to say whether the person agreed the nurse.

How do I complete the No Nurse Visit sheet (NNV)?
Stick the address label on the NNV and ring the code to indicate why there is no nurse visit. CAPI will prompt you to do this when you complete the admin block. Although you can fit several address labels onto an NNV, please do not wait until this sheet is full before sending it to the nurse. You should send these sheets regularly (at least once every week).

Posting documents to your nurse

An A5 prepaid envelope will hold a **maximum** of **three NRFs** or **two NRFs and one NNV**. If you fill the envelope with more than this the nurse will have to pay excess postage because of the new postage system of price in proportion to size, rather than just weight. This will cause delays to the nurse's fieldwork. Therefore, if you have more than three NRFs to send you should split them between envelopes.

14.6 Transmitting information to your nurse

In most cases the information your nurse needs to carry out the nurse visit (i.e. names, ages etc) will be transmitted automatically via modem. You simply need to connect to the host machine. The necessary information will then be extracted and made available to your nurse when he/she connects to the host.

You should therefore connect to the host machine as soon as possible after making a nurse appointment. **You need to have completed all work at a household and completed the admin block for a household in order to transmit the nurse details**. Simply connect and transmit and the host machine will take only the information it needs to pass to the nurse.

Of course, you will still need to send your nurse the NRF and notify him/her about the appointment over the phone, in case the nurse does not pick up the information from the host in time.

15 MEASURING AVERAGE DAILY EXPENDITURE OF ENERGY: DOUBLY LABELLED WATER (DLW)

15.1 Background

For a sub-sample of NDNS respondents there will be a further part to the study, namely a DLW exercise to measure total daily expenditure of energy by asking respondents to drink some tracer water and collect a urine sample on 10 consecutive days (plus a pre-dose sample).

DLW is introduced at the end of the final main visit to the household (at the end of CAPI 2).

15.2 Recruitment

Respondents aged 4+ for whom dietary data has been collected (at least 3 diary days) and who have provided reliable height and weight measurements are eligible for recruitment to the DLW sub-study – subject to quotas in 10 age/sex groups being filled. The quota groups are as follows:

Male	**Female**
4-10	4-10
11-15	11-15
16-49	16-49
50-64	50-64
65+	65+

For the mainstage, 20 respondents will be recruited to each cell (200 in total). Respondents from the Scotland/Northern Ireland country boosts will <u>not</u> be recruited to the DLW sub-study.

Progress filling these cells will be monitored by the Blue Team (NISRA in Northern Ireland) and by HNR.

Detailed information about recruitment and administering DLW can be found in Appendix C.

15.3 CAPI recruitment questions

At the end of CAPI2 (CAPI questions administered during the final main visit to the household), there are a number of questions which establish the respondents eligibility for, and willingness to participate in, the sub-study.

Please note that if recruiting a respondent for DLW would take you over your interviewer fieldwork deadline then CAPI will not bring up the DLW recruitment questions. I.e. if your diary pick-up/CAPI 2 visit is within 15 days of the end of your assignment then CAPI will not allow you to recruit respondents for DLW.

NeedFUp
This question identifies whether the respondent is required. To do this, the CAPI program accesses a look-up file containing up-to-date information about quota progress. An update of this look-up file is downloaded to your laptop every time you dial in. **To ensure that you are accessing the most up-to-date quota information, it is vital that you dial into the office regularly, and always before you conduct a visit at which the respondent will be asked whether they are willing to participate in the further stage of the study.**

P1DLWAgr / P2DLWAgr
This question, asked of eligible respondents aged 4+ (*P1DLWAgr* for Respondent 1; *P2DLWAgr* for Respondent 2), establishes willingness to participate in the follow-up **if needed**. This is where you will

obtain verbal consent/agreement to take part. You will obtain written consent when you return with the dose.

Even though the look-up file will be updated whenever a respondent is recruited, quota information is not static but subject to change at any time. It is therefore possible, particularly during the later stages of fieldwork, for an interviewer to recruit someone who in fact is no longer needed. Hence, you will therefore ask eligible respondents whether they would be willing if needed to participate in the sub-study.

If the respondent is willing to take part, you should arrange a provisional appointment to revisit with the DLW dose.

FUpReview
For those agreeing to the follow-up, *FupReview* summarises the next step with regards to getting the relevant confirmation and equipment from HNR and/or Ops. You are instructed at this screen to go to *HNRInfo* in the DLW_Admin parallel block before contacting HNR. Make sure you do this as this is where the information you will need to provide to HNR is displayed.

DLW_Admin parallel block
The first screen in this parallel block (*HNRInfo*) displays the information you will need to pass onto HNR when you call to request a dose (e.g. serial number, height, weight etc.). Therefore, you MUST enter the DLW_Admin parallel block before contacting HNR.

The rest of the questions in this block establish the outcome of the call to HNR to establish whether the respondent is indeed required for the DLW sub-study.

For those still required and still willing to participate, there are a number of questions recording the outcome at each stage, namely:

- whether the respondent took the DLW dose
- whether the mid-collection period check was carried out
- whether the DLW samples were collected
- whether the DLW samples were couriered back to HNR
- whether the respondent was given the £30 token of appreciation promissory note *(see section 18.2 for more information about the token of appreciation for the DLW sub-study).*

The on-screen instructions will guide you through each stage.

These questions have been placed in a parallel block so that you can fill in the details at home, rather than spending unnecessary time at the respondent's home. However, it is essential that you complete this block accurately. The information is required for monitoring purposes and the questions trigger certain fees to be paid to you. You will not be able to complete the CAPI Admin block for an address until you have completed the DLW_Admin block.

15.4 Documents and task list

Note: there is a task list in your laminate pack for you to check that all DLW tasks have been completed. You can use this as an "aide memoire" of tasks that need to be completed and when.

You have been provided with a number of different DLW information leaflets, aimed at different ages of respondent. Please make sure you give these to respondents as they provide lots of information about the sub-study, as well as contact details should they have any queries or concerns.

Also, you have been provided with a "Follow-up confirmation sheet" onto which you can record information needed by HNR when you call to request a DLW dose.

All the information you need will be displayed in CAPI (at *HNRInfo* in the DLW_Admin) but you can transfer it to this document if you prefer to have a paper record to hand when contacting HNR.

16 THE ACTIGRAPH

16.1 Introduction

All respondents aged 4-10 will be asked to wear an Actigraph (AG). The AG is a small lightweight accelerometer which measures physical activity. It is worn on a belt above the right hip. Respondents will be asked to wear the actigraph for seven consecutive days while they are awake and remove it when they are sleeping, swimming, showering or having a bath. The AG records their energy expenditure by capturing the respondent's movements in its digital memory.

The AG is introduced at the end of the first main visit to the household (at the end of CAPI 1) and the seven day period will start on the day after the interview. Appendix D provides detailed information about AG recruitment and protocols.

16.2 CAPI recruitment questions

For eligible respondents, you will prompted to introduce the Actigraph at the end of CAPI 1 (CAPI questions administered during the first main visit to the household). On screen instructions guide you through what to say, and when. Note that all questions will be directed at parents since proxy interviews are carried out for that age group (i.e. 4-10 year olds). *AGCons* is where you will record whether the respondent and their parent/gaurdian has agreed to take part. If the respondent is willing to take part, make sure you explain and fit the actigraph, as described in Appendix D (The Actigraph protocol).

16.3 Collecting the Actigraph

When you return to collect the Actigraph, you will need to enter the **ActiGraph_Collection** parallel block. Here, you will thank the respondent for taking part in the Actigraph part of the respondent and record information about their experiences of wearing it. You will be prompted to record how many days the respondent wore the Actigraph, the start and end dates, as well as whether you actually collected the Actigraph.

Finally, you will be prompted to prepare the despatch note and give the respondent the £20 token of appreciation promissory note (see section 18.2 for more information about the token of appreciation for the Actigraph part of the study).

Please complete the **Actigraph_Collection** block accurately, the information is required for monitoring purposes and the questions trigger certain fees to be paid to you.

16.4 Posting the Actigraphs back to the office

Due to the high cost of replacing actigraphs, we will be using special delivery to send all actigraphs (whether they have been used or not) back to the office so that we can track them should any go missing. This also means that we will be entitled to compensation if any actigraphs go missing in the post.

Place the actigraph in a jiffy bag (remember to only put 1 actigraph per jiffy bag), with relevant documentation if the actigraph was placed with a respondent. Then put the jiffy bag containing the actigraph in the special delivery envelope provided in your workpacks. You can put up to 2 jiffy bags in one special delivery envelope. Remember you need to send unused as well as used actigraphs back via Special Delivery. You will need to send the actigraph(s) from a post office at the same time as one of visits to the post office to send your diaries back to the office. Please don't put the diaries in the same envelope as the actigraphs.

At the end of your assignment please return any unused special delivery envelopes to the Blue Team.

17 TOKEN OF APPRECIATION

17.1 Gift voucher token of appreciation for all fully productive respondents

In acknowledgement of the amount of time and effort we are asking respondents to devote to this study, we will be offering a token of appreciation to those who a diary for three or four days (i.e. those defined as 'fully productive'). The tokens are **£30 in high street gift vouchers** for each respondent. The vouchers you will be given are in £10 denominations, so you will need to give three to each productive respondent. Vouchers for children should be given to the parent.

If you anticipate needing more tokens, contact the Blue Team in Brentwood, who will send you more. Do this as soon as you have done your selections so that the tokens will reach you before your final visit to the address.

When you give the token to the respondent, you will need to get them to sign a receipt. These are provided in your pack, and you will need to complete one for each respondent. If the respondent is under 16, the receipt will need to be countersigned by the parent or guardian. Keep the top copy to send to the office, leaving the carbon copy with the respondent.

17.2 Gift voucher token of appreciation for DLW and/or AG participation

Those who take part in the DLW sub-study, and who provide at least one urine sample, will receive **£30** in high street gift vouchers. These will be sent out from Brentwood to the respondent (or the parent in the case of a child).

If you recruit someone for the DLW sub-study but are subsequently told that we do not need them, they will be sent **£10** in high street gift vouchers as a thank you. These will also be sent out from Brentwood.

Any children aged 4-10 who wears an Actigraph, and returns it in working order, will receive **£20** in high street gift vouchers. These will also be sent out from Brentwood (and will be sent to the parent).

In each case, please give the respondent a promissory note (that states the vouchers will be sent to them and provides contact details if they do not receive them). Again, please keep the top copy to return to the office – make sure these are sent back as soon as possible so that respondents receive their vouchers with minimal delay. Please make sure that the respondent knows that the vouchers may take up to 4 weeks to arrive.

18 RETURNING WORK TO THE OFFICE

18.1 Transmitting CAPI work

You should transmit **CAPI work** at the end of each day. It is very important that work is returned promptly for two reasons:

- It allows time for the information to be transmitted to the nurse
- We need information from your work to help us deal with any abnormalities detected by the nurse tests. Occasionally we find something potentially life-threatening. In these situations delays in getting in touch with the GP/respondent could be very serious.

REMINDER: TRANSMITTING CAPI WORK

- Make sure you have a backup copy of your most recent work.
- Connect up your modem
- Select 'T' for Transmit/Return data to HQ **from the Action menu**, and follow the instructions on the screen.

CAPI questionnaire data will be transferred back to the office via the modem.

Don't forget to back-up work regularly.

Do I need to complete the admin block before transmitting?

No. It is important that you transmit after each day's work, so you should not wait until a household is complete before returning your work. The nurse needs to be able to pick up his/her work daily and cannot do that unless you have returned yours. You can complete the admin block at a later point.

18.2 Returning paper documents

Remember **paperwork and ARFs** must also be returned promptly as soon as possible after work at an address is complete.

Before returning work for an address, check all paper dietary documents for correct serial numbering and completion – the ARF, the Diaries, self-completions, the Token of Appreciation receipts. If a respondent has taken part in the DLW or actigraph parts of the study, remember to also check all related documents for correct serial numbering and completion, including the DLW consent forms and the Token of Appreciation promissory notes. Collate documents in person number order.

Always return work in **two** separate envelopes, *posted at the same time*:

- ARFs, top copies of the £30 Token of Appreciation receipts and, if applicable, DLW consent forms and top copies of the Token of Appreciation promissory notes.

- Diaries (and associated documents) & self-completions

Diaries and associated documents must be returned to the office via Registered Post, in up to three batches per assignment (apart from the first completed diary, which should be sent back straight away). Self-completions should be returned in the same envelope.

Please ensure that you send your first completed diary back to Brentwood as soon as you have collected it from the respondent – please don't wait until you have several.

You should make a paper claim for visits to the post office to do this, remembering to include receipts.

- As well as claiming for Registered Post costs, you should also claim £2.16 per post office trip to post diaries back to the office. You can claim for a maxiumum of three trips to the post office per assignment. The fee needs to be claimed on paper using a pink CCF.

REMINDER: SENDING BACK PAPERWORK

Before sending work back:

- Check all paper documents are completed
- Check all paper documents have correct serial numbers
- Update your Interviewer Sample Sheet

Return work in **two separate envelopes**:

1. ARFs and consent forms, receipts & promissory notes
2. Diaries (and associated documents) & self-completions

This is very important to protect the respondent's anonymity. The ARFs and consent forms contain names and addresses and the diairies and self-completions contain personal information that can be matched to the ARF by serial number. For this reason it is vital to keep the two separate.

18.3 Last return of work

At the **end of your assignment**, check that you have accounted for all your addresses on the Interviewer Sample Sheet.

When your assignment is completed, make your **last return of work** as follows:

- From the main menu system select **Working at Home/Support < Alt + S > / Technical Support Details** to display Support menu screen.

- Select '**End of Assignment clear out**' and follow on-screen instructions. For further help, consult page 73 of the CMS User Guide.

- Return to Brentwood in **two** separate envelopes, posted at the same time:
    - The last batch of ARFs, top copies of the £30 Token of Appreciation receipts and, if applicable, DLW consent forms and top copies of the £30 Token of Appreciation promissory notes.
    - The last batch of Diaries & self-completions

YOUR ASSIGNMENT IS NOT COMPLETE UNTIL THIS PROCEDURE HAS BEEN CARRIED OUT.

IT IS IMPORTANT THAT ALL THESE PROCEDURES ARE FOLLOWED, TO AVOID DELAYS IN THE PROCESSING OF PAY CLAIMS.

19 ANY PROBLEMS

If you have any problems about **the survey generally**, or with the questionnaires, contact any of the research team at the *National Centre*

If you have a problem with your **fieldwork, equipment or supplies**, talk to your Area Manager or contact the Blue team in Brentwood.

If you have questions regarding any aspect of the **diary** please contact, the survey nutritionist at NatCen.

You are provided with **incident report forms**. Please complete one of these if anything untoward occurs while you are in a respondent's home, or there is anything which you would like to be recorded.

APPENDIX A: PROTOCOL FOR TAKING HEIGHT MEASUREMENT

A. THE EQUIPMENT

You are provided with a portable stadiometer. It is a collapsible device with a sliding head plate, a base plate and three connecting rods marked with a measuring scale.

Please take great care of this equipment. It is delicate and expensive. Particular care needs to be paid when assembling and dismantling the stadiometer and when carrying repacking it in the box provided.

- Do not bend the head or base plate
- Do not bend the rods
- Do not drop it and be careful not to knock the corners of the rods or base plate pin
- Assemble and dismantle the stadiometer slowly and carefully

The stadiometer will be sent to you in a special cardboard box. Always store the stadiometer in the box when it is not in use and always pack the stadiometer carefully in the box whenever you are sending it on by courier. Inside the box with the stadiometer is a special bag that you should use for carrying the stadiometer around when you are out on assignment.

If you have any problems with your stadiometer, report these to Brentwood immediately. Do not attempt measurements with a stadiometer that is broken or damaged.

The rods
There are three rods marked with a measuring scale divided into centimetres and then further subdivided into millimetres. (If you are not familiar with the metric system note that there are ten millimetres in a centimetre and that one hundred centimetres make a metre). The rods are made of aluminium and you must avoid putting any kind of pressure on them which could cause them to bend. Be very careful not to damage the corners of the rods as this will prevent them from fitting together properly and will lead to a loss of accuracy in the measurements.

The base plate
Be careful not damage the corners of the base plate as this could lead to a loss of accuracy in the measurements.

Protruding from the base plate (see diagram overleaf) is a pin onto which you attach the rods in order to assemble the stadiometer. Damage to the corners of this pin may mean that the rods do not stand at the correct angle to the base plate when the stadiometer is assembled and the measurements could be affected.

The head plate
There are two parts to the head plate; the blade and the cuff. The blade is the part that rests on the respondent's head while the measurement is taken and the cuff is the part of the head plate that slips over the measurement rods and slides up and down the rods. The whole unit is made of plastic and will snap if subjected to excessive pressure. Grasp the head plate by the cuff whenever you are moving the headplate up or down the rods, this will prevent any unnecessary pressure being applied to the blade which may cause it to break.

Assembling the stadiometer
You will receive your stadiometer with the three rods banded together and the head plate attached to the pin so that the blade lies flat against on the base plate. Do not remove the head plate from this pin.

Note that the pin on the base plate and the rods are numbered to guide you through the stages of assembly. (There is also a number engraved onto the side of the rods, this is the serial number of the stadiometer). The stages are as follows:

1. Lie the base plate flat on the floor area where you are to conduct the measurements.

2. Take the rod marked number 2. Making sure the yellow measuring scale is on the right hand side of the rod as look at the stadiometer face on, place rod 2 onto the base plate pin. It should fit snugly without you having to use force.

3. Take the rod marked number 3. Again make sure that the yellow measuring scale connects with the scale on rod 2 and that the numbers run on from one another. (If they do not check that you have the correct rod). Put this rod onto rod number 2 in the same way you put rod 2 onto the base plate pin.

4. Take the remaining rod and put it onto rod 3.

Dismantling the stadiometer
Follow these rules:-

1. Before you begin to dismantle the stadiometer you must remember to lower the head plate to its lowest position, so that the blade is lying flat against the base plate

2. Remove one rod at a time

B. THE PROTOCOL - ADULTS (16+)

1. Ask the respondent to remove their shoes in order to obtain a measurement that is as accurate as possible.

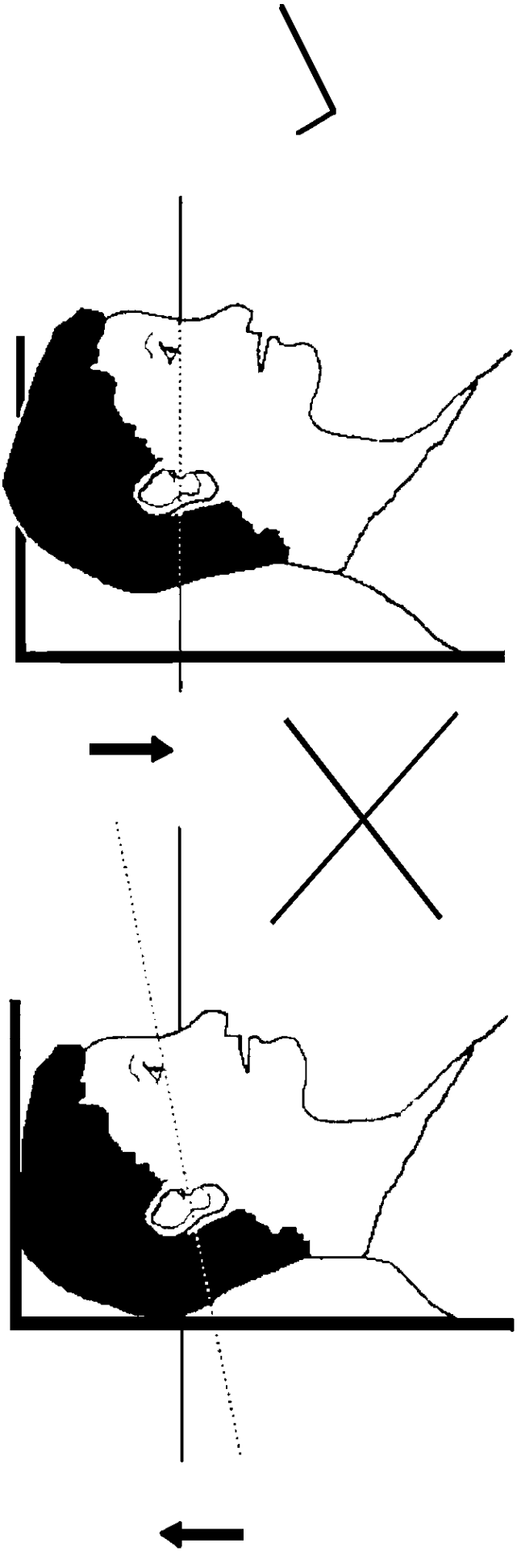
2. Assemble the stadiometer and raise the headplate to allow sufficient room for the respondent to stand underneath it. Double check that you have assembled the stadiometer correctly.

3. The respondent should stand with their feet flat on the centre of the base plate, feet together and heels against the rod. The respondent's back should be as straight as possible, preferably against the rod but NOT leaning on it. They should have their arms hanging loosely by their sides. They should be facing forwards.

4. Move the respondent's head so that the Frankfort Plane is in a horizontal position (i.e. parallel to the floor). The Frankfort Plane is an imaginary line passing through the external ear canal and across the top of the lower bone of the eye socket, immediately under the eye (see diagram). This position is important if an accurate reading is to be obtained. An additional check is to ensure that the measuring arm rests on the crown of the head, i.e. the top back half. To make sure that the Frankfort Plane is horizontal, you can use the Frankfort Plane Card to line up the bottom of the eye socket with the flap of skin on the ear. The Frankfort Plane is horizontal when the card is parallel to the stadiometer arm.

5. Instruct the respondent to keep their eyes focused on a point straight ahead, to breath in deeply and to stretch to their fullest height. If after stretching up the respondent's head is no longer horizontal, repeat the procedure. It can be difficult to determine whether the stadiometer headplate is resting on the respondent's head. If so, ask the respondent to tell you when s/he feels it touching their head.

FRANKFORT PLANE – ADULTS



6. Ask the respondent to step forwards. If the measurement has been done correctly the respondent will be able to step off the stadiometer without ducking their head. Make sure that the head plate does not move when the respondent does this.

7. Look at the bottom edge of the head plate cuff. There is a green arrowhead pointing to the measuring scale. Take the reading from this point and record the respondent's height in centimetres and millimetres, that is in the form 123**.**4, at the question *Height*. You may at this time record the respondent's height onto their Measurement Record Card and at the question *MbookHt* you will be asked to check that you have done so. At that point the computer will display the recorded height in both centimetres and in feet and inches. At *RelHiteB* you will be asked to code whether the measurement you obtained was reliable or unreliable.

8. Height must be recorded in centimetres and millimetres, e.g. 176.5 cms. If a measurement falls between two **millimetres,** it should be recorded to the **nearest even millimetre.** E.g., if respondent's height is between 176.4 and 176.5 cms, you should round it down to 176.4. Likewise, if a respondent's height is between 176.5 and 176.6 cms, you should round it up to 176.6 cms.

9. Push the head plate high enough to avoid any member of the household hitting their head against it when getting ready to be measured.

C. THE PROTOCOL - CHILDREN (2-15)

The protocol for measuring children differs slightly to that for adults. You must get the co-operation of an adult household member. You will need their assistance in order to carry out the protocol, and children are much more likely to be co-operative themselves if another household member is involved in the measurement. If possible measure children last so that they can see what is going on before they are measured themselves.

Children's bodies are much more elastic than those of adults. Unlike adults they will need your help in order to stretch to their fullest height. This is done by stretching them. This is essential in order to get an accurate measurement. It causes no pain and simply helps support the child while they stretch to their tallest height.

It is important that you practice these measurement techniques on any young children among your family or friends. The more practice you get before going into the field the better your technique will be.

1. In addition to removing their shoes, children should remove their socks as well. This is not because the socks affect the measurement. It is so that you can make sure that children don't lift their heels off of the base plate. (See 3 below).

2. Assemble the stadiometer and raise the head plate to allow sufficient room for the child to stand underneath it.

3. The child should stand with their feet flat on the centre of the base plate, feet together and heels against the rod. The child's back should be as straight as possible, preferably against the rod, and their arms hanging loosely by their sides. They should be facing forwards.

4. Place the measuring arm just above the child's head.

5. Move the child's head so that the Frankfort Plane is in a horizontal position (see diagram). This position is as important when measuring children as it is when measuring adults if the measurements are to be accurate. To make sure that the Frankfort Plane is horizontal, you can

use the Frankfort Plane Card to line up the bottom of the eye socket with the flap of skin on the ear. The Frankfort Plane is horizontal when the card is parallel to the stadiometer arm.

6. Cup the child's head in your hands, placing the heels of your palms either side of the chin, with your thumbs just in front of the ears, and your fingers going round towards the back of the neck. (See diagram).

7. Firmly but gently, apply upward pressure lifting the child's head upwards towards the stadiometer headplate and thus stretching the child to their maximum height. Avoid jerky movements, perform the procedure smoothly and take care not to tilt the head at an angle: you must keep it in the Frankfort plane. Explain what you are doing and tell the child that you want them to stand up straight and tall but not to move their head or stand on their tip-toes.

8. Ask the household member who is helping you to lower the headplate down gently onto the child's head. Make sure that the plate touches the skull and that it is not pressing down too hard.

9. Still holding the child's head, relieve traction and allow the child to stand relaxed. If the measurement has been done properly the child should be able to step off the stadiometer without ducking their head. Make sure that the child does not knock the head plate as they step off.

10. Read the height value in metric units to the nearest millimetre and enter the reading into the computer at the question “Height.” At the question “MbookHt” you will be asked to check that you have entered the child's height onto their Measurement Record Card. At that point the computer will display the recorded height in both centimetres and in feet and inches.

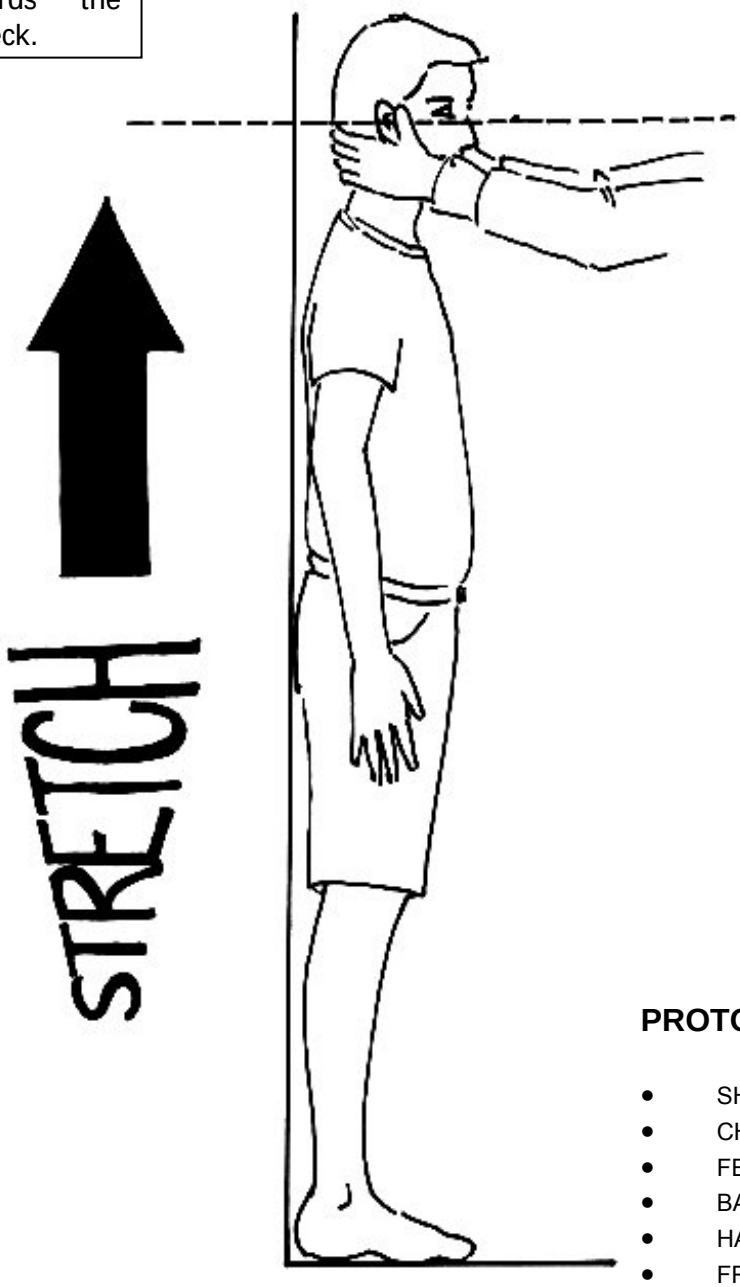
11. Push the head plate high enough to avoid any member of the household hitting their head against it when getting ready to be measured.

REMEMBER YOU ARE <u>NOT</u> TAKING A HEIGHT MEASUREMENT FOR CHILDREN UNDER 2 YEARS OLD.

D. HEIGHT REFUSED, NOT ATTEMPTED OR ATTEMPTED BUT NOT OBTAINED

At *RespHts* you are asked to code whether the measurement was taken, refused, attempted but not obtained or not attempted. If for any reason you cannot get a height measurement, enter the appropriate code at this question and you will automatically be routed to the relevant follow up questions (*ResNHi* and *NoHtBC*) which will allow you to say why no measurement was obtained.

Cup the child's head in your hands, placing the heels of your palms either side of the chin, with your thumbs just in front of the ears, and your fingers going round towards the back of the neck.



PROTOCOL

- SHOES OFF
- CHILDREN – SOCKS OFF
- FEET TO THE BACK
- BACK STRAIGHT
- HANDS BY THE SIDE
- FRANKFORT PLANE
- LOOK AT A FIXED POINT
- CHILDREN – STRETCH & BREATHE IN
- ADULTS - BREATHE IN
- LOWER HEADPLATE
- BREATHE OUT
- STEP OFF
- READ MEASUREMENT

E. ADDITIONAL POINTS - ALL RESPONDENTS

1. If the respondent cannot stand upright with their back against the stadiometer and have their heels against the rod (e.g. those with protruding bottoms) then give priority to standing upright.
2. If the respondent has a hair style which stands well above the top of their head, (or is wearing a turban), bring the headplate down until it touches the hair/turban. With some hairstyles you can compress the hair to touch the head. If you can not lower the headplate to touch the head, and think that this will lead to an unreliable measure, record this at question *RelHite.* If it is a hairstyle that can be altered, e.g. a bun, if possible ask the respondent to change/undo it.

3. If the respondent is tall, it can be difficult to line up the Frankfort Plane in the way described. When you think that the plane is horizontal, take one step back to check from a short distance that this is the case.

PLEASE NOTE: the child head stretch on NDNS is the same as used on HSE but different to that used on Child of the New Century. Please use the NDNS/HSE stretch when measuring children for NDNS interviews.

APPENDIX B: PROTOCOL FOR TAKING WEIGHT MEASUREMENTS

A. THE EQUIPMENT

There are several different types of scales used on NDNS. They differ in the type of power supply they use, where the weight is displayed and the way the scales are turned on. Before starting any interviewing check which scales you have been given and that you know how they operate. The most common types are:

Soehnle Scales

- These scales display the weight in a window on the scales.
- The Soehnle scales are turned on by pressing the top of the scale (e.g. with your foot). There is no switch to turn the scales off, they turn off automatically.
- The scales take 1 x 9v rectangular MN1604 6LR61 batteries.

Seca 850

- These scales display the weight in a window on the scales.
- The Seca 850 is switched on by pressing the top of the scales (e.g. with your foot). There is no switch to turn the scales off, they turn off automatically.
- The scales take 4 x 1.5v AA batteries/1 x 9v rectangular MN1604 6LR61.

Seca 870

- These scales display the weight in a window on the scales.
- The Seca 870 is switched on by briefly covering the solar cell (for no more than one second). The solar cell is on the right hand side of the weight display panel. **NB** You may experience difficulties switching the scales on if there is insufficient light for the solar cell. Make sure that the room is well lit.
- The scales have an fixed battery which cannot be removed.

Tanita THD-305

- These scales display the weight in a window on the scales.
- The Tanita is switched on by pressing the button on the bottom right hand corner of the scales. The scales will automatically switch off after a few seconds.
- The scales take 4 x 1.5v AA batteries.

When you are storing the scales or sending them through the post please make sure you remove the battery to stop the scales turning themselves on.
(This does not apply to the Seca 870 scales)

Batteries (Soehnle, Seca 850 and Tanita)
It should not be necessary to have to replace the batteries, but always ensure that you have some spare batteries with you in case this happens. If you need to change the battery, please buy one and claim for it. The batteries used are commonly available.

The battery compartment is on the bottom of the scales. When you receive your scales you will need to reconnect the battery. Before going out to work, reconnect the battery and check that the scales work. If they do not, check that the battery is connected properly and try new batteries. If they do still not work, report the fault to your Area Manager/NDNS Manager or directly to Brentwood.

The reading is only in metric units, but as for height, the computer provides a conversion. If the respondent would like to know their weight in stones and pounds you will be able to tell them when the computer has done the calculation. You also have a conversion chart on the back of the coding booklet.

WARNING
The scales have an inbuilt memory which stores the weight for 10 minutes. If during this time you weigh another object that differs in weight by less than 500 grams (about 1lb), the stored weight will be displayed and not the weight that is being measured. This means that if you weigh someone else during this time, you could be given the wrong reading for the second person.

So if you get an identical reading for a second person, make sure that the memory has been cleared. Clear the memory from the last reading by weighing an object that is more than 500 grams lighter (i.e. a pile of books, your briefcase or even the stadiometer). You will then get the correct weight when you weigh the second respondent.

You will only need to clear the memory in this way if:

a) You have to have a second or subsequent attempt at measuring the same person

b) Two respondents appear to be of a very similar weight

c) Your reading for a respondent in a household is identical to the reading for another respondent in the household whom you have just weighed.

If you have any problems with your scales, report these to Brentwood immediately. Do not attempt measurements with scales that are broken or damaged.

B. THE PROTOCOL

1. Turn the display on by using the appropriate method for the scales. The readout should display 888.8 (1888 for the Seca 870) momentarily. If this is not displayed check the batteries, if this is not the cause you will need to report the problem to the *National Centre* at Brentwood. While the scales read 888.8 do not attempt to weigh anyone.

2. Ask the respondent to remove shoes, heavy outer garments such as jackets and cardigans, heavy jewellery, loose change and keys.

3. If necessary, turn the scales on again. Wait for a display of 0.0 before the respondent stands on the scales.

4. Ask the respondent to stand with their feet together in the centre and their heels against the back edge of the scales. Arms should be hanging loosely at their sides and head facing forward. Ensure that they keep looking ahead - it may be tempting for the respondent to look down at their weight reading. Ask them not to do this and assure them that you will tell them their weight afterwards if they want to know.

The posture of the respondent is important. If they stand to one side, look down, or do not otherwise have their weight evenly spread, it can affect the reading.

5. The scales will take a short while to stabilise and will read 'C' until they have done so. (The Seca 870 displays alternate flashing lines in the display window. With the Tanita scales the weight will flash on and off when stabilised). If the respondent moves excessively while the scales are stabilising you may get a false reading. If you think this is the case reweigh, but first ensure that you have erased the memory.

6. The scales have been calibrated in kilograms and 100 gram units (0.1 kg). Record the reading into the computer at the question *XWt1* before the respondent steps off the scales. At question *MBookWt* you will be asked to check that you have entered the respondent's weight into their Measurement Record Card. At that point the computer will display the measured weight in both kilos and in stones and pounds.

WARNING
The maximum weight registering accurately on the scales is 130kg (20½ stone). (The Seca 870 can weigh up to a maximum of 150kg or 23 ½ stone). If you think the respondent exceeds this limit code them as "Weight not attempted" at *RespWts*. Do not attempt to weigh them.

Weighing Children
You must get the co-operation of an adult household member. This will help the child to relax and children, especially small children are much more likely to be co-operative themselves if an adult known to them is involved in the procedure.

Children wearing nappies should be wearing a dry disposable. If the nappy is wet, please ask the parent to change it for a dry one and explain that the wetness of the nappy will affect the weight measurement.

In most cases it will be possible to measure children's weight following the protocol set out for adults. However, if accurate readings are to be obtained, it is very important that respondents stand still. Ask the child to stand perfectly still - "Be a statue." For very young children who are unable to stand unaided or small children who find this difficult you will need to alter the protocol and first weigh an adult then weigh that adult holding the child as follows:-

a) Code as "Weight obtained (child held by adult)" at *RespWts*

b) Weigh the adult as normal following the protocol as set out above. Enter this weight into the computer at *WtAd1*.

c) Weigh the adult and child together and enter this into the computer at *WtChA1.*

The computer will then calculate the weight of the child and you will be asked to check that you have recorded the weight onto the child's Measurement Record Card at *MBookWt*. Again the computer will give the weight in both kilos and in stones and pounds.

Weight refused, not attempted or attempted but not obtained
At *RespWts* you are asked to code whether the measurement was taken, refused, attempted but not obtained or not attempted. If for any reason you cannot get a height measurement, enter the appropriate code at this question and you will automatically be routed to the relevant follow up questions (*ResNWt* and *NoWtBC*) which will allow you to say why no measurement was obtained.

MEASUREMENT RECORD CARD

When you have taken the respondent's height and weight, offer the respondent a record of his/her measurements. Make out a Measurement Record Card and give it to the respondent. There is room on the Measurement Record Card to write height and weight in both metric and imperial units if the respondent wants both. The computer does the conversion for you. There is space to write in the respondent's Body Mass Index (BMI) as well, if the respondent is aged 16+ (the computer will calculate this for you). Remember to give respondents the BMI leaflet if you give them their BMI.

APPENDIX C: PROTOCOL FOR ADMINISTERING DLW

A. BACKGROUND & RECRUITMENT

A sub-sample of respondents aged 4 and older who have provided at least three complete days of dietary data and who have also had their height and weight measured, will be asked whether they are willing to participate in the DLW part of the study. This will involve the respondent collecting one urine sample before they drink a known amount of doubly labelled tracer water (DLW). The respondent will then collect further urine samples, one a day for ten consecutive days after drinking the tracer water, making a total of eleven urine samples in all.

The CAPI program will guide you through questions to ask eligible/required respondents whether they are willing to participate in the DLW part of the study.

Note that respondents from the Scotland and Northern Ireland country boosts (indicated by **CB on the ARF labels) are not eligible for the DLW sub-study.**

B. PRE-DOSING

For each respondent eligible and willing to participate, you will leave them with pre-dosing sample collection equipment comprising:

1 x glass sampling bottle for collection of urine
1 x plastic storage container, for safe and hygienic storing of sample
1 x plastic cup to aid collection of urine (if required)
1 x DLW respondent protocol/"Collection of urine samples" recording sheet

Before you give the respondent the pre-dosing kit, write the serial number and respondent number on the label on the bottle and complete section 1 on the Respondent protocol (recording sheet). If there are two respondents, ensure each knows which pre-dosing kit (bottle and recording sheet) belongs to them.

You should make a provisional appointment to call back with the DLW dose. Remember to leave at least 3 working days, to allow time for equipment to be prepared and delivered.

You should ask the respondent to provide a urine sample before you return to give the dose. This sample should ideally be taken on the day you return. Tell the respondent that the sample should not be their first urine sample of the day, but anytime after that is fine. If required, the respondent can use the plastic disposable cup to aid collection and this should be disposed of after use. Ask the respondent to fill the bottle to about 1cm from the top and secure the lid tightly. The "Collection of urine samples" sheet provides detailed information about how to collect and store samples.

The 'pre-dose' sample is the most important sample of the study and should be treated as such. The respondent should store the sample bottle in the container provided, preferably in their fridge or alternatively in a cool, dry environment such as an unheated garage.

C. REQUESTING THE DLW DOSE

You will then call HNR as soon as possible to request a DLW dose (contact details are provided at the end of this section). You need to provide the following information, as displayed on the first CAPI screen in the DLW Admin block (and as recorded by you on your DLW confirmation sheet, if you transferred the information to paper):

- Serial number (7 digits)

- Respondent number (1 or 2)
- Body weight (in kg)
- Height (in cm)
- Age
- Date of birth
- Sex
- Interviewer number

HNR will consult the most up-to-date quota listing and confirm whether the respondent(s) is still needed. If yes, they will make arrangements with you for the DLW dosing kit to be sent to you.

Once HNR have confirmed that the respondent is still required for DLW and arrangements have been made for delivery of the DLW dosing kit, you should **contact the respondent(s)** as soon as possible to:

- **confirm their participation**;
- **confirm the date and time** to call back to administer the DLW dose;
- Remind them to provide a **urine sample** (in the sampling bottle you left at your last visit), before your return to give the dose, following the protocol outlined in the "Collection of urine samples" sheet.

  If at this point, the respondent withdraws participation, you must call HNR <u>immediately</u> to try and halt preparation of the dose. If the dose has already been sent out, you will make arrangements for the dosing kit to be sent back to HNR. Do not refuse delivery.

If the respondent is no longer needed, you will notify the respondent accordingly, thank them for their co-operation and tell them that a £10 high street voucher will be issued as a token of our appreciation of their willingness to participate. You do not need to collect the pre-dosing kit; the respondent can dispose of it in their normal household rubbish.

D. THE DLW DOSING KIT

For each respondent, HNR will send you a DLW dosing kit. The kit will be a small cardboard box containing the following items:

- **1 x Dosing bottle** containing a pre-weighed amount of DLW
- **1 x Straw** for drinking of dose
- **1 x pre dose label** for interviewer to stick over the label on the earlier collected pre-dose urine sample bottle
- **1 x Printed respondent label** for interviewers to stick on the urine collection sheet when they go back to give the dose
- **10 x Glass urine collection and storage bottles** for post dose daily urine collections (labelled Days 1 to 10)
- **1 x Pen**
- **1 x pre paid returns plastic bag** labelled with HNR's address
- **Elastic band/s** to secure full box

If required, you should also leave the respondent with 10 plastic cups to aid sample collection. You should also take a spare data recording sheet in case the respondent has mislaid the original.

E. DLW DOSING AND CONSENT FORM

Before you visit the household, check the bottle containing the DLW dose. If the water level appears to be below the fill-line and there is any sign of leakage, do not use – contact HNR for advice on how to proceed. If you are in any doubt, contact HNR for advice.

- BEFORE the dose can be administered you must check that the respondent has collected the pre-dose urine sample. If not, you must obtain a sample before giving the tracer water to the respondent. The extra label marked pre-dose provided in the dosing kit will have the respondent ID printed on it. Copy the time of collection from the original hand written pre-dose label onto the new printed label and then stick over the original label or on the storage container. If there are two respondents, you must make sure you attach the correct label to the correct bottle. Store samples of pre-dose urine in the dosing box kit along with all other samples.
- Stick the printed respondent label, also provided in the dosing kit, anywhere on the collection of urine record sheet.
- Check all labelling on recording sheet/dose bottle etc matches the details of the respondent you are visiting.
- **Before asking the respondent to drink the tracer water you MUST obtain a signed consent form from each respondent (blue for Respondent 1, yellow for Respondent 2). This is essential – without a signed consent form from each respondent, we cannot use their data.** The bottom copy should be left with the respondent, the top copy should be retained by you and returned to Brentwood with other paperwork (see section 19).
- When the respondent is ready to drink the tracer water, record the date and time on their "Collection of urine samples" record sheet.

- **Administering the dose: -**
    (i) Ask the respondent to drink the dose water, without spilling it, using the straw provided.
    (ii) Once the water is drunk *and without removing the straw*, carefully half-fill the dose bottle with tap water.
    (iii) Gently swirl the water around the bottle, avoiding spillage.
    (iv) Then ask the respondent to drink the contents of the bottle again through the same straw, without spilling any.
    (v) The bottle and straw do not need to be kept and can be disposed of in normal household rubbish.

F. POST DOSE URINE COLLECTION

- The respondent should be instructed to collect one urine sample every day for the next ten days.
- If plastic cups are to be used to aid collection of urine then the respondent must discard cups after each use and use a clean cup each time a sample is collected.
- The respondent should never collect the first urine sample of the day but any time after this is fine. The exact dates (day and month) and times of each collection should be recorded **both** on the record sheet and on the bottle.
- Sample bottles should be filled to about 1cm from the top but not overfilled. The samples will be frozen once at HNR and overfilling will result in cracking of bottles.
- Check bottle lids are tightly secured.
- The first post dose urine sample collection should be provided the day after drinking the dose and collected in the sample bottle labelled 'day 1'. The exact date and time of collection **must** be written both on the recording sheet provided and also the sample bottle.
- Thereafter, the respondent should provide one urine sample per day for a total of 10 days, in bottles day 2 – day 10 again remembering to record all dates and times.
- None of the urine samples collected should be the first urine of the day but any time after that is fine.

G. RECORDING DETAILS OF SAMPLE COLLECTION

- Please impress upon the respondent that it is important that they record details of their collections accurately.
- Dates and times of each sample collection must be written on the bottle and on the recording

sheet.

- Ask the respondent to make full use of the comments column if something goes wrong. For example if they accidentally put a sample in the wrong collection bottle. If we know about things then we can do something about it!
- If the respondent forgets to take a sample on a particular day tell them to leave the bottle empty and then continue collection in the normal way, the next day.

H. SAMPLE STORAGE BY RESPONDENTS

- Respondents should refrigerate their samples in the containers and box, if at all possible.
- If not then store in a cool dry environment such as an unheated garage or garden shed (this may not be a suitable environment in hot weather).
- Samples must NOT be frozen!

I. TELEPHONE REMINDER

- Remember to call the respondent midway through the collection period, to check on progress. If the respondent forgets to take a sample on a particular day tell them not to worry but to leave the bottle empty and then continue collection in the normal way, the next day. The samples will still be of use to us.

J. COLLECTION AND RETURN OF SAMPLES

- You should pick up samples from the respondent as soon as the collection period is over.
- Check that day 10 has been collected. If not, please ask the respondent kindly whether s/he can produce one final sample there and then.
- Check that samples have been collected, are correctly labelled, securely packaged and most importantly that the correctly filled out record sheet is in each box. Secure the full despatch box with an elastic band, and place the box in the plastic returns bag provided. Write your name and address on the returns bag in the appropriate 'sender's box' space.
- Store the box in the fridge or other cool dry environment until you are ready to return the package to HNR.
- Take the package to the post office and retain the special delivery tracking number ticket that should be given back to you by the cashier.
- Call HNR to inform them that you have posted the samples and to give them the special delivery tracking number from the retained ticket.
- Use all packaging material provided as this conforms to all postage requirements.

You will give respondents completing the DLW tasks a note informing them that Brentwood will send them a £30 high street voucher. Please inform respondents that they will receive their vouchers within about four weeks.

K. CAPI ADMINISTRATION

The parallel block **DLW_Admin** contains a number of detailed questions relating to progress with DLW recruitment and administration. Please complete questions as you go along, to ensure that all relevant questions are answered before you transmit the case back to the office (see section 16 for more information on CAPI DLW administration).

L. CONTACT DETAILS

General queries about the NDNS study should be directed to the Blue team in Brentwood or a member of the *NatCen* research team.

All DLW dose requests, sample returns, problems and queries should be directed to the NDNS DLW co-ordinators at HNR. They can all be contacted **during normal office hours** via HNR reception

HNR address: Human Nutrition Research
Fulbourn Road
Cambridge
CB1 9NL

APPENDIX D: ACTIGRAPH (AG) PROTOCOL

A. BACKGROUND & ELIGIBILITY

All respondents aged 4-10 will be asked to wear an AG. The AG is a small lightweight accelerometer which measures physical activity. It is worn on a belt above the right hip. Respondents will be asked to wear the AG for seven consecutive days while they are awake and remove it when they are sleeping, swimming, showering or having a bath.

The AG records their energy expenditure by capturing the respondent's movements in its digital memory. Respondents also complete an activity log to record when they wear and don't wear the AG. Researchers use this information to find out if the respondent did any activities that are not recorded by the AG e.g. cycling, or any activities when they had removed the AG, for example whilst swimming.

The seven day period will start on the day after the interview.

B. ACTIGRAPH EQUIPMENT AND DOCUMENTS

You will be provided with the following in your workpacks:

2 x actigraphs
AG charger
AG adapter
Roll of elastic
Belt buckles
AG activity logs
AG despatch notes
Pre-paid Jiffy bags
AG leaflets - Parent leaftlet
Child leaflet
Young child leaflet
Promissory notes

Actigraphs

Two AGs are provided in your workpack. In the unlikely event that you have more than two respondents, all of whom will be wearing the AG at the same time, please contact the Blue team for further supplies. Please do this in good time so that they reach you when you need them.

At various stages of the interview you will be asked to record the AG serial number. This is a 4 digit code and check letter starting with a 9 e.g. 9000H. This can be found on the back of the actigragh on a white label with black font (you do not need to record the 3 letters in green font).

Chargers

When you receive the AGs they will have been fully charged and programmed. However, the battery life is only 14 days so before you hand the AGs to respondents you must **boost the charge** on the AG. A charger and adapter is provided in your workpack.

CHARGING AGS

- Plug the AG into the charger using the leads provided
- Plug the charger into the mains supply, via the adaptor provided
- When the AG is fully charged it will display a steady red light

You should NEVER plug the AG into your computer.

How long will it take to charge the AG?

Charging time varies depending on how run down the battery is. To charge from flat takes three hours. When you first receive them, the battery will already have been charged by the Blue Team so it should just need a top-up charge which will take around one hour.

What does it mean if the red light flashes?

The red light on the actigraph displays different statuses to indicate how much battery is left:

Off	Fine. The actigraph is collecting data.
Flashing steadily	Fine. The actigraph is collecting data.*
Flashing twice every three seconds	Battery is low. Actigraph needs recharging.
On (steady, not flashing)	This should only occur when the actigraph is plugged into the charger and indicates that the monitor is charging.

*Most NDNS actigraphs will have the flash disabled so that it only flashes if the battery is low. However if you receive one that constantly flashes (a steady flash) do not worry – the battery is fine.

Belts & buckles for actigraphs

You will be given a role of elastic in your workpacks rather than individual lengths, so that you will be able to cut the belt to the right size for the respondent. If you need to purchase scissors to cut the elastic you can claim for these.

Please follow the procedure below for attaching the belt to the belt buckles.

1. Thread the AG onto the elastic.
2. Start with buckle so the ridge is on the top ie. it does not appear to be sunken when viewed from the top.
3. Thread the end of the elastic UP through Slot 1, allowing approximately 10cm (3½in) of overhanging elastic.
4. Thread the same end of elastic (the overhang) DOWN through Slot 2.
5. Thread the same end back up and over itself by threading DOWN Slot 1
6. Pull taught on the end of the elastic to tighten.
7. Fit the elastic, with the buckle, to the respondent so that the AG is positioned on their right hip.
8. Insert the free end of the elastic UP through Slot 1, of the other end of the buckle, allowing for some overhang.
9. Insert the same end DOWN through Slot 2.
10. At this point, adjust the belt so it sits comfortably by pulling on the end of the elastic to tighten and

loosen it. The belt needs to be comfortable enough for the respondent to wear daily, but not so loose that the actigraph does not stay on the respondents' right hip.

11. Once the elastic belt is at the correct length, thread the overhanging elastic up and over itself by threading DOWN Slot 1, pulling the end to tighten.
12. Cut off any excess elastic.

Note: You can prepare up to Step 6 at home for the first AG, before you go to your appointment.

AG information leaflets

Three leaflets have been provided to help explain the AG to the respondents. There are two leaflets for children – one is aimed at very young children, the other at slightly older children but you should use your judgement to decide which is most appropriate for your respondent. There is also a leaflet for their parent. Leaflets should be given to the respondent and their parent when you introduce the actigraph.

C. EXPLAINING THE AG TASKS

The parent or guardian and the child should both be present. You can explain the AG tasks to the child directly if they are able to understand the tasks, but the parent should understand the tasks and may need to help the child with the tasks. First, ensure the respondent has an AG leaflet then show the equipment and explain the AG tasks. The prompt to introduce the AG comes after the measurement section of the CAPI.

1. Show the AG to the respondent (and the parent/guardian) and ask the respondent (or the parent/guardian) to fasten the belt round their waist. Explain to the respondent (and the parent/guardian) the **protocol for putting on the AG** and check they understand each of the following points:

- The AG should be worn over a layer of light clothing. It should not be worn on top of thick outdoor clothing like coats.
- The AG should be positioned above the **right hip**. It does not matter if it rides up but the best place is above the right hip. We ask everyone to wear the belt in this position.
- Respondents must adjust the belt to be snug but not too tight. It should not 'flop around'.
- The respondent should know how to adjust the belt size. This is important in case they wish to loosen or tighten the belt to make sure it stays snug but not too tight throughout the day.
- Show the respondent how to unfasten the belt.

Does the respondent have to wear the AG around their waist?

Yes. We need to be able to compare the AG data for all of the respondents who agree to wear it. We cannot do this unless they all wear the monitor in exactly the same way. The monitor measures up and down movements and is designed to be worn on a belt around the waist.

What should the respondent do if they are finding the AG belt uncomfortable to wear?
They should wear the belt over a thin layer of clothing to avoid rubbing. They can also adjust the length of the belt if it is too tight. However they should make sure the belt is not too loose, otherwise it will record its own movement as it flops around rather than just the respondent's movement.

Activity booklet

The AG provides us with valuable objective data about the respondent's physical activity. However, there are some things that the actigraph does not record:

- Cycling
- Rowing

This is because the monitor can only record **up and down movement**.

Also, there are some things that the respondent will have to take the AG off for. These include activities such as swimming and doing martial arts. We will be able to see from the data that the respondent took the monitor off, but we would not know what they were doing when they were not wearing it, and whether or not they were doing something physically active.

For these reasons, each respondent needs to fill in the activity log for each day they wear the AG. The CAPI program will prompt you to give this to the respondent and explain to them how to fill it in.

The booklet needs to be sent back to the office along with the AG (see section D). The information will be used when we are analysing the AG data. It is therefore important to spend as much time as necessary to make sure that the respondent understands what they need to do. There is an example of how to fill in the activity log on the next page.

2. You will also need to explain to the respondent (and the parent/guardian) **when to wear the AG**:

- They should wear it for **seven full days** (beginning the day after the placement visit).
- They should put on the AG **first thing in the morning** on the day after the visit (unless you are giving it to them before 9.a.m. in which case they can wear it immediately).
- If they have a bath/shower immediately after they get up then they can put it on afterwards.
- They should keep it on at all times when they are awake during the day and take it off last thing at night. Again, if they have a bath or shower immediately before going to bed they do not need to put it back on in between.
- They should not wear the AG if they are doing any contact sport where the device could be struck. Examples of such sports include rugby, wrestling, or karate. This is to protect the people doing the sport rather than the device. Explain to the respondent that if they are concerned about safety while playing any sport they should take it off.
- The AG is **not waterproof** so the respondent cannot wear it when swimming or in the bath or shower. It is splash proof so it will not get damaged in the rain. If a respondent gets the AG wet by mistake the respondent will not be harmed.

3. Explain to the parent/guardian that they will need to **fill in the activity booklet on behalf of their children**. When you place the AG, the CAPI will prompt you to hand the activity log to the (and the parent/guardian) then complete the following tasks:

- **Fill in the respondent's details** on the front page (name, serial number, AG serial number and dates they will wear the AG from and to)
- Point out to the parent/guardian that there are some **instructions** on page 2 of the booklet.
- **Fill in the days of the week** in both the **weekly activity log (page 3)** and the **daily events log (pages 4-7).** This should begin with the day after the placement visit.
- Explain to the parent/guardian that they will need to fill in the **weekly activity log** every day, recording the time the respondent put on the AG at the start of the day, the time they took it off at the end of the day and whether or not they took it off at any time in between. We are asking parents/guardians to fill this in using 24-hour format. There is a table on page 2 to help them with this.
- Ask them to record any time the respondent spent **cycling or rowing** as the AG does not record these movements.
- If the respondent took off the monitor at any point during the day the parent/guardian will also need to fill in the details of this in the **daily events log (pages 4-7)**. There is a space for them to record the time they took it off, their reason for taking it off and the time they stopped the activity. They may have done more than one activity in the time they took the monitor off. These activities should be recorded on separate lines. There is a box they should tick to say whether they put the monitor back on again after each activity.
- Finally, point out that there is further helpful information on the back of the booklet.

Why do respondents need to fill in these booklets?

To enable us to see what they were doing when they were not wearing the AG and adjust our analysis accordingly. The information in the activity booklet will also help us to check the AG data if we need to, for example checking that the dates and times given by the data match those in the booklet.

Example – filling in the activity booklet

Case study

Kitty is 4. She wore the AG from Monday 8th - Sunday 14th January.

On Saturday she cycled to and from the park, which is a 10 minute journey each way.

She also went swimming on Saturday and so she took the monitor off for one hour. 50 minutes of this was spent actually swimming, and 10 minutes was spent showering before she put the monitor back on.

To account for the time Kitty spent cycling, in **page 3** of the **weekly activity log**, Kitty's parent should have ticked '**yes**' at column 3 and wrote in the **total** number of minutes she spent cycling:

2. What time did you take the monitor off at the end of the day?	**3. Did you take the monitor off at any other time that day?** (This includes taking it off to go swimming or play contact sports like rugby or martial arts)		**4. How many minutes that day did your child spend cycling?** Please include using an exercise bike. If you did not cycle please write in '0'
	YES	**NO**	
	Please tick √ Please record the details in the daily events log (pages 4-7)	Please tick √	
19.15	√		*20 mins*

Because Kitty took off the monitor during the day, her parents then turned to **page 4** to fill in the **daily events log** for Saturday:

Day 1 *Saturday*

1. What time did you take the monitor off/start this activity? Please use the 24 hour clock	**2. What was your reason for taking it off?**	**3. What time did you finish this activity?** Please use the 24 hour clock	**4. Did you put your monitor back on immediately afterwards?** Please tick √	
			YES	NO
11.00	*Swimming*	*11.50*	☐	☑
11.50	*Showering*	*12.00*	☑	☐

Why does the respondent have to record cycling in the activity log?
The AG measures up and down movements, but does not accurately measure sideways movements like cycling. We need the respondent to record these in the booklet to make it possible for us to adjust the data from the AG if necessary.

Why does the respondent have to record the days of the week and time of day they wore the monitor?
The monitor is constantly recording movement from the moment it is sent out in the post from Brentwood. We need to programme our software to look at the exact dates the AG was worn to give us the correct data. Recording the times it was put on and taken off will mean that if there are any queries with the data we have something to check against, for example if we suspect two AGs have been mixed up.

4. Once the respondent understands the AG protocols, you need to make an appointment to collect the AG and activity booklet.

D. AG COLLECTION AND DESPATCH

The parent/guardian and the child should both be present at the **collection visit**. This should be as soon as possible after the 7 days of wearing the AG. Whenever possible, AG collection should take place at the same visit as diary collection.

During the collection visit you need to make sure you complete the following tasks:

1. Collect the AG and activity booklet.
2. Administer a short CAPI questionnaire. This will prompt you to go through the activity booklet with the respondent and check that it is completed and all the information is accurate.
3. If any information is missing or incorrect in the activity booklet, go through it with the respondent and fill it in.
4. If the respondent has completed all AG tasks, and returned the monitor in working order, give them a promissory note for **£20 in High Street Vouchers**. The vouchers will be automatically sent out from the office. Respondents should allow 4 weeks for this.

After the collection visit you need to send back the AG, booklet, despatch note and promissory note to Brentwood.

1. Complete the despatch note. Be careful that you have entered the correct serial numbers for the respondent and the AG.
2. Send the despatch note, activity booklet, AG and signed promissory note back to the Blue Team in Brentwood in the pre-paid jiffy bag provided.

It is very important that you do not send more than one AG, booklet and despatch note per jiffy bag otherwise we risk confusing the data for different respondents.

Some other surveys are also using AGs. It is important that you only use NDNS AGs on NDNS. To distinguish between surveys all NDNS AG serial numbers start with a 9.

E. CONTACT DETAILS

General queries about the NDNS study should be directed to the Blue Team at Brentwood or a member of the *Natcen* research team. To discuss Actigraph delivery call the Blue Team.

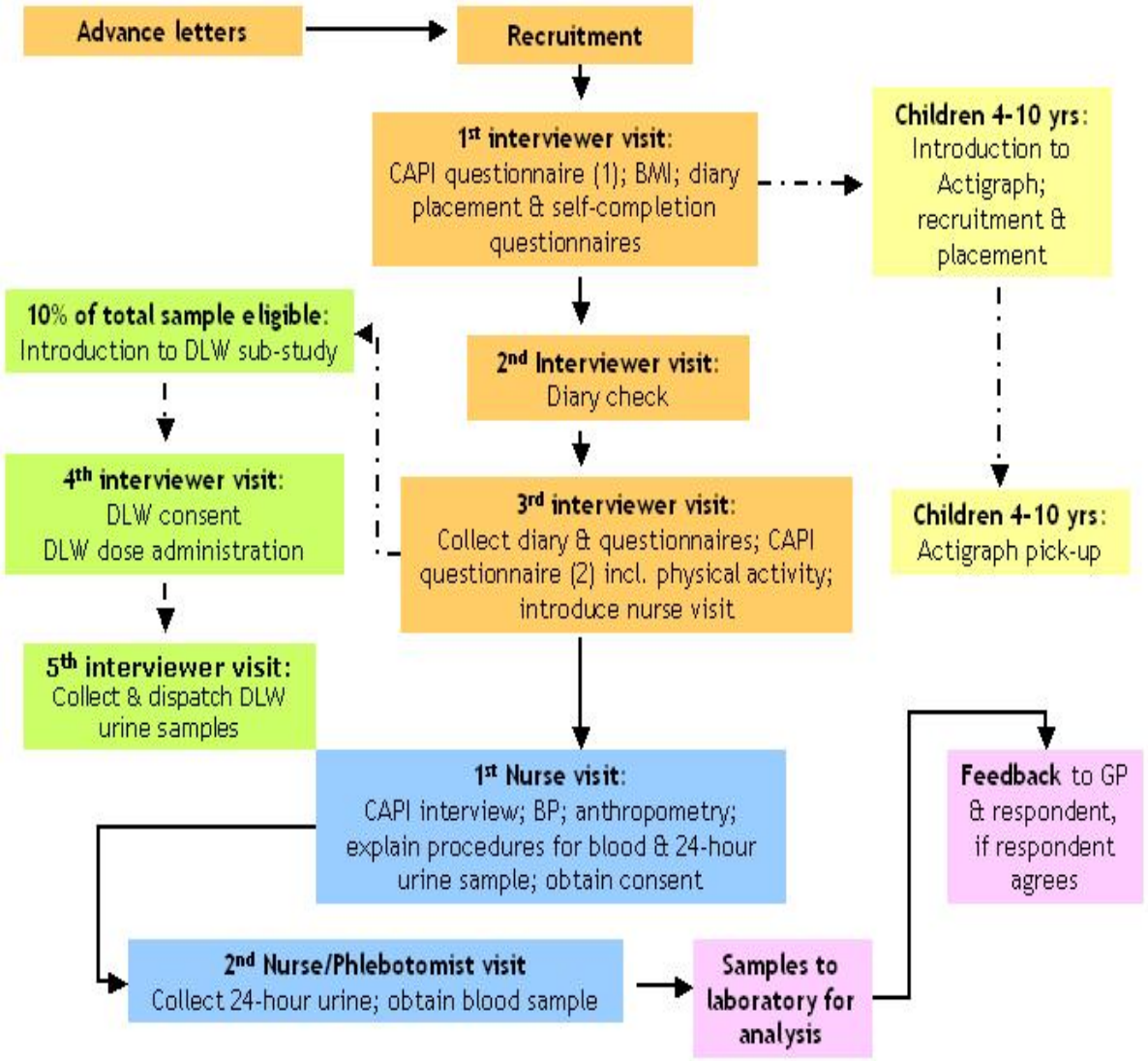
APPENDIX E: LOOK UP CHART

(For 13-100 Dwelling Units/CUs at one issued address)

NUMBER OF DUs / CUs / Persons:	SELECT NUMBER:	NUMBER OF DUs / CUs / Persons:	SELECT NUMBER:
13	12	57	39
14	8	58	3
15	11	59	48
16	7	60	35
17	13	61	22
18	3	62	10
19	14	63	51
20	2	64	37
21	14	65	64
22	8	66	65
23	13	67	66
24	5	68	28
25	12	69	45
26	6	70	53
27	17	71	25
28	17	72	48
29	2	73	50
30	21	74	39
31	10	75	51
32	26	76	11
33	8	77	12
34	22	78	74
35	8	79	42
36	3	80	9
37	28	81	33
38	19	82	51
39	25	83	69
40	16	84	78
41	41	85	53
42	32	86	19
43	9	87	66
44	40	88	23
45	7	89	17
46	35	90	19
47	8	91	40
48	36	92	11
49	15	93	35
50	44	94	12
51	35	95	41
52	2	96	3
53	24	97	10
54	17	98	25
55	49	99	61
56	27	100	99

APPENDIX F: Flow chart of NDNS survey design

Below is a flowchart of the NDNS process, which you might find useful when mapping out your visits.



1 FOUR-DAY FOOD DIARY

Respondents are asked to keep a record of all they had to eat and drink over a four day period including Saturday and Sunday. You will need to place the diary with the respondent and then collect it after the four day dietary recording period is finished.

1.1 Placing the food diary

Introducing the food diary

There are two types of diary:

Adult diary (A5)
Child diary (A4)

For children aged 12 and under, the parent/carer will be asked to complete the four-day diary with help from the child as appropriate. Additional detail and information may need to be obtained from the main food provider (MFP) if they are not completing the diary on behalf of the child. Children over 12 will be asked to complete the diary themselves but will be expected to confirm details, where necessary, with the MFP.

Respondents are asked to record food and drink consumed at home and away from home e.g. restaurant, friend's house and school. Therefore they are expected to take their diary with them when they are away from home. For young children this may mean another adult such as a teacher or friend's parent completing the diary for the child. It is important that filling in the diary is done as close as possible to the eating occasion rather than the respondent trying to recall what they had at the end of the day.

Based on the day of the first individual CAPI interview, the laptop will select four consecutive days (including both weekend days) as the diary recording period. If a Catering Unit contains two respondents, both respondents will be assigned the same diary days. CAPI will also prompt you to make an appointment to collect the diary up to three days after the last diary day.

When placing the diary with the respondent you will need to tell them when to start keeping the diary and write the date of the first day on the Reminder Card and ask them to put this somewhere prominent such as on their fridge door, bedroom mirror etc. You will then need to give the respondent, or *the person who will be completing the diary*, a few key instructions as to how to complete it. These instructions are on the card entitled Instructions for respondents on how to complete the food diary and are also detailed on the following pages.

When handing over the diary please complete the details on the front cover of the diary with the respondent's name, serial number etc.

Respondent's typical eating pattern

You will find this on page 1-2 of your Food and Drink Diary Assessment Schedule booklet. You will need to complete the TYPICAL EATING PATTERN section with the respondent BEFORE leaving them with their diary. The respondent is shown CARD D1 and, for each time slot, tells you whether they would typically eat and/or drink something on different days of the week. We know, from previous studies, that for most people behaviour on weekdays varies from that on weekend days, and that Saturdays are often different from Sundays.

When you return to collect the diary, you will need to use the TYPICAL EATING PATTERN to identify possible omissions. For example, if you know that the respondent has breakfast on weekdays and weekend days, and there is no entry at breakfast time for a particular day, you should be alerted to the fact that it is missing and check with the respondent whether they did skip breakfast that day or whether they forgot to record what they ate. Or if a respondent has a drink to take to bed, this should alert you to checking that there is such an entry each day. If this record shows that typically the respondent has a cooked meal at lunchtime, but the entries show only a snack, again you should be ready to check whether their normal habit changed (and why) or whether they are failing to record accurately what they are eating.

Remember: this is not infallible information; people change their habits for good, and valid reasons, but you should be alert to these changes so that you can always check that the record is complete and accurate.

Plastic bags

Each respondent should be given a clear, plastic zipper bag in which to place wrappers, labels etc that may help in identifying or clarifying food and drink consumed. Plastic bags should be labelled with the respondent's serial number.

Instructions for respondents on how to complete the food diary

These are the key points that you need to explain. Please read out to the respondent(s) and ask them to find the relevant pages as you go through. Words that appear inside square brackets are instructions to you.

SAY:

1. The diary should be **completed for 4 days** starting on the day on your reminder card.
2. The diary should include **ALL food and drinks (including water)** consumed throughout the day and night, including snacks, and food and drink consumed away from the home.
3. It is important that you do NOT change what you normally eat just because you are keeping a diary.
4. You should write down everything **at the time of eating** rather than from memory later. This means taking the diary with you when you go out.
5. There is an example of how to fill in your diary. [RESPONDENT 1 TO TURN TO PAGE 2-4] [RESPONDENT 2 TO TURN TO PAGE 2-4]. [GO THROUGH THE DIFFERENT COLUMNS WITH THEM SAYING]:

a) **When, where and with whom** – record this for each eating occasion and, for occasions when you ate at home, record whether you ate at the table and/or watching TV.
b) **What** – record details about every food or drink consumed. There are prompts to help you in the diary. [RESPONDENT 1 TO TURN TO PAGE 8-13] [RESPONDENT 2 TO TURN TO PAGE 7-12]. Wherever possible, you should record the brand of food or drink e.g. Hovis, Kellogg's.
c) **Amount** – describe how much you have consumed of each food or drink. Again there are prompts to help you. [FOR RESPONDENT 1 ONLY] where appropriate, you can describe the amount using the photos on page X. [RESPONDENT 1 TO TURN TO PAGE 14-17]. [FOR BOTH RESPONDENTS] there is also a picture of a life-size glass which can help in describing size or volume of drink. [RESPONDENT 1 TO TURN TO PAGE 18] [RESPONDENT 2 TO TURN TO PAGE 13].
d) **Packaging** – there is a list of codes to describe what your food and drink was packaged in when it was bought. [RESPONDENT 1 TO TURN TO PAGE 19] [RESPONDENT 2 TO TURN TO PAGE 14].

6. [FOR RESPONDENT 1 ONLY] if you have eaten any homemade recipes you should record ingredients and cooking method on the relevant pages. [RESPONDENT TO TURN TO PAGE 6]. You should also record as much detail as possible about takeaways or other made-up dishes such as those eaten in restaurants or at a friend's house.
7. [FOR RESPONDENT 2 ONLY] if you have eaten any homemade recipes NOT recorded in the adult diary (that is, the RESPONDENT 1 did NOT eat the dish), you should record ingredients and cooking method in the space provided. [RESPONDENT 2 TO TURN TO PAGE 6]. You should also record as much detail as possible about takeaways or other made-up dishes such as those eaten in restaurants or at a friend's house.
8. [FOR BOTH RESPONDENTS] you should collect wrappers or labels from any unusual foods or ready meals and put them in the plastic bag provided.
9. **After filling in each diary day** you should record details of any dietary supplements in the box provided. [RESPONDENT 1 TO TURN TO PAGE 5] [RESPONDENT 2 TO TURN TO PAGE 6].
10. **After completing all four days of the diary**, you should go to the end of the diary and answer the questions. [GET RESPONDENT 1 TO TURN TO PAGE 44] [RESPONDENT 2 TO TURN TO PAGE 27].
11. There is a **freephone number** in the diary that you can call if you have any questions.
12. Please remember to read the instructions in the diary before starting.

1.2 Checking and collecting the food diary

On page 3 of your Food and Drink Diary Assessment Schedule booklet is a checklist. This will help ensure that you have fully checked all sections of the diary with the respondent while you are still in their home.

The checklist is as follows:

1. **Day and date:** has this been recorded for each new day?
2. **Time eaten:** has a time been recorded for each meal/snack?
3. **Place:** has a place been recorded for each meal/snack?
4. **With whom:** has this been recorded for each meal/snack? If the respondent ate alone, this should still be recorded in the diary.
5. **Missing meals and snacks:** use the information you collected on pages 1-2 of the schedule booklet on TYPICAL EATING PATTERN to check whether the respondent has skipped meals/snacks they would normally have i.e. breakfast between 6am and 9am on a weekday, or whether they forgot to record what they ate. If they have genuinely missed a meal/snack, write this into the diary i.e. "Not taken" so that it is clear that you have confirmed this.
6. **Descriptions of food and drink:** has each food and drink item been recorded separately? Have sufficient details been recorded including brand name? Probe the respondent for missing information using the prompts on page 4 of the schedule booklet and the food description pages in the diary itself.
7. **Portion sizes:** ensure that each food and drink item has a corresponding portion size.
8. **Packaging:** has the respondent entered a packaging code for each food and drink item EATEN AT HOME? Try and fill in any missing codes with the respondent or enter **P** if they don't know.
9. **Homemade recipes:** if the respondent has consumed any homemade dishes, have details been recorded on the relevant pages along with the cooking method? Probe for ingredients they might have forgotten e.g. water for boiling/stewing, oil for frying, milk or spread for mashing, herbs, spices. Has the respondent recorded the amount they ate of the recipe?

10. **Other made up dishes and take-aways:** have details been recorded of what these dishes contain, either in the diary itself or on the recipe pages?
11. **Dietary supplements:** have sufficient details have been recorded for any supplements taken? If the strength of the supplement is missing e.g. 100mg or 25µg, ask to see the container.
12. **Eating habits:** has the respondent completed the questions at the back of the diary? If not, please ask them to fill these in. Ensure that they have recorded sufficient details about the fat spread, cooking oil and bread they used over the 4 diary days.
13. **Food labels/packaging:** if the respondent has collected any of these, make sure they are in the plastic bag provided and clearly labeled with the respondent's serial number.

1.3 Interviewer feedback and returning the food diary

On page 5 of your Food and Drink Diary Assessment Schedule booklet are some questions for you to fill in as soon as possible after collecting the diary. These give an indication of how complete or accurate you feel the information recorded by the respondent is.

For each respondent you will need to return the diary, assessment schedule form and (if any collected) the plastic bag of wrappers to Brentwood.

The National Diet and Nutrition Survey 2008/09

Nurse Project Instructions

P8709

Use from 01/01/2009

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1 HOW TO USE THESE INSTRUCTIONS

This manual sets out the survey procedures for nurse assignments in the National Diet and Nutrition Survey (NDNS) 2008/09.

The instructions are divided into sections explaining:

- Background information about the NDNS
- Overview of the fieldwork structure and sample design
- Content and procedures of the various stages of the NDNS interviewer and nurse visits
- Introducing your measurement task and carrying out the interview

This manual must be used in conjunction with the Nurse Protocols Manual and existing Clinical Procedure Guidelines (CPG's).

2 BACKGROUND & AIMS

2.1 Key features of NDNS

Subject	Diet, nutrition, health and physical activity
Sponsor	The Food Standards Agency (FSA)
Eligibility	People aged 18 months and over, resident within private households/catering units
Sample size	Approx 1000 people per year, plus 500 in country boosts
Data collection method	Face-to-face CAPI interview, self completion, food & drink diary, objective measurements, blood and urine samples

2.2 The Purpose of NDNS

The National Diet and Nutrition Survey (NDNS) rolling programme has been commissioned by the UK Food Standards Agency (FSA).

The FSA was set up as a new organisation in April 2000. Its aims are to 'protect public health and the interests of consumers in relation to food'. The nutrition remit of the FSA is to encourage and facilitate the eating of healthy diets in order to improve the nutrition and diet of the UK population.

The FSA's information needs are obtained through its dietary survey programme, of which the NDNS is the major component. In the past, the NDNS involved a series of cross-section surveys, each covering a different age group: pre-school children (1.5 to 4 years); school-aged children and young people (4 to 18 years); adults aged 19-64 years; and older adults aged 65 and over. The first survey was carried out in 1986/87, and since then there has been a survey about every three years, with the most recent carried out in 2000/01. Each has been conducted as a 'one-off' survey. However, changes over time in people's eating habits, lifestyles, cooking skills, the availability of different types of food, and formulations in manufactured foods mean that ongoing surveys are required to monitor changing patterns in diet and nutrition. This will enable FSA to provide the best advice to government to develop, implement and monitor policies that affect the nation's diet and nutritional status. This is particularly important at a time when undernutrition, particularly for some micronutrients, is accompanied by overnutrition, particularly for calories, fats, salt, and added sugars, all of which have adverse implications for health.

The main aims of the continuous NDNS survey are:

- to provide annual data about the nation's dietary intake and nutritional status;
- to estimate the proportion of individuals with compromised nutritional status; and
- to estimate the proportions attaining recommended intakes.

The data from the NDNS will be used to estimate the nation's diet and nutritional status, and that of sub-groups of the population. These data will play an important role in monitoring progress towards some specific targets relating to government strategies from both the Department of Health and FSA.

As well as providing the detailed food consumption data essential to support risk assessments for food chemicals, the rolling programme will also benefit a wide range of Government activities related to diet and health. It will be the primary method for monitoring progress against nutrition targets in the Agency's Strategic Plan 2005-2010, for example on salt and saturated fat intakes, and will also be key to monitoring progress on diet and nutrition objectives set out in the 'Choosing Health' White Paper.

A comparison study was carried out in 2007 to determine the most appropriate method for collecting information on diet for the main survey. The comparison study compared the use of a 4-day unweighed diary ('the diary') with 4 interviewer-administered recalls of food consumed in the past 24-hours (the '24-hour recalls'). The two methods yielded very similar response rates. The diary was chosen because of the reduced respondent and interviewer burden (compared with strictly timetabled multiple interviewer visits with the 24-hour recall method).

Fieldwork for the mainstage launched in April 2008, preceded by a small-scale "run in" which consisted of five points being issued in February and five in March. The "run in" tested all survey components, procedures and protocols involved in the interviewer and nurse stages.

2.3 Data collected

The key elements to the survey are as follows:

- face-to-face interview and self-completion questionnaires.
- dietary data collection (4-day unweighed diary).
- taking of physical measurements (e.g. height, weight, waist & hip, demispan, mid upper arm circumference, blood pressure).
- wearing of physical activity monitors (Actigraphs).
- a sub-study involving Doubly Labelled Water (DLW) for a sub-sample of respondents.
- blood sample collection (and analysis of nutritional status indices).
- 24-hour urine collection.

The study will sample people living in private residential Catering Units only. The sample will include adults and children (aged 18 months and older). Pregnant and breastfeeding women are to be excluded, because they have different nutritional needs.

Information about the survey, its objectives and design has been submitted to a Multi-Centre Research Ethics Committee (MREC), which approves the ethical aspects of medical research. Committee members represent medical, professional and patient interests. They have approved the National Diet and Nutrition Survey.

2.4 Further information about NDNS

NDNS has its own website. It is designed to give respondents more information about the survey. You can refer respondents to the website if they would like further information. The website address is also on advance letters.

The website address is: **www.natcen.ac.uk/NDNS**

3 THE NATCEN, HNR AND UCL TEAM

3.1 The Research Team

The research team comprises researchers from NatCen and HNR[1] whose role it is to develop, implement and analyse findings from NDNS. Within NatCen, the research team in London are responsible for the nurse and paediatric phlebotomist elements of the study. The Blue team in NatCen's Operations Department are responsible for nurse/phlebotomist liaison, and providing nurse equipment.

3.2 The Survey Doctor

The 'Survey Doctor' is responsible for providing nurses with medical support and for liaising with GPs in relation to blood pressure or blood sample abnormalities that are detected as a result of this survey.

The survey doctor is available most of the time (apart from between 10.30pm and 8.00am). If you leave a message the doctor will get back to you in good time.

3.3 The Fieldwork Team

Each nurse will be supported in her/his area by a local fieldwork team consisting of the Area Manager, a Nurse Supervisor and a NDNS manager. The Nurse Supervisor is the person you should consult if:

- You have any queries about your equipment and how to use it in field,
- You have other problems about carrying out the interview and measurements.

The nurse supervisor will from time to time accompany you in the field.

The NDNS manager supervises interview work on the NDNS within each field area (including allocation of work to interviewers and fieldwork progress), and will work with the Nurse Supervisor to oversee nurse progress. The supervisors are there to help you do your job to the best of your ability. Please consult them whenever you feel you need help. The names of your supervisors are listed on page 1 of these instructions.

[1] HNR (Human Nutrition Research) are part of the Medical Research Council (MRC) based in Cambridge

4 FIELDWORK OVERVIEW

4.1 Stage 1: the interviewer visit

Interviewers make three main visits to a participating Catering Unit. The interviewer visits cover:

- Questionnaire administration:
    - Most of the interview will be an interviewer-administered CAPI questionnaire carried out face-to-face. It will also include self-completion booklets to record smoking and drinking habits of children and young people.
- Collection of dietary data for four consecutive days using a diary.
- Taking of physical measurements of standing height and weight.

All children aged 4-10 will be asked to wear an Actigraph. There may be an additional visit, for interviewers, to collect the Actigraph.

Additional interviewer visits will be made to a sub-sample of respondents who are invited to take part in the Doubly Labelled Water (DLW) sub-study.

At the end of the interviewer stage, the token of appreciation (£30 in high street vouchers) is given, the DLW sub-study is introduced to eligible respondents, the second stage of the survey is introduced and the interviewer asks for permission for the nurse to visit.

The table below summarises the tasks carried out at each main visit.

1st visit	CAPI questionnaire (part 1). Self-completion questionnaires. Height & weight measurements. Place diary. • *Actigraph sub-sample: explain to the respondent how to wear the activity monitor and how to fill in the activity log.*
2nd visit	Midweek diary check up (can be done by telephone ONLY if interviewer is sure this is appropriate).
3rd visit	Collect diary & complete checklist. CAPI questionnaire (part 2). Give token of appreciation. Introduce the nurse visit. • *DLW sub-sample: ask for verbal consent to administer.* • *Actigraph sub-sample: collect the activity monitor & paperwork.*

For the DLW sub-sample, there will be two further visits to administer the DLW dose and to collect the urine samples.

4.2 Stage 2: the nurse visit

A qualified nurse carries out the second stage of the survey. A list of nurse measurements are on the next page.

Measurements include an infant length measurement (aged 18 months or over but under 2 years), blood pressure (age 4+), mid upper arm circumference (aged 2-15), demispan (aged 65 and over) and waist and hip measurements (11+). These results can be written on the Measurement Record Card which was started by the interviewer for each person. With the respondent's permission, blood pressure readings will be sent to their GP.

Respondents aged 16+ will be asked to provide a small fasting blood sample (approximately 35ml or two teaspoons), subject to written permission from the respondent. The blood samples will be delivered by the nurse to local laboratories and some samples posted to the lab at Addenbrookes.

Respondents aged 4-15 will also be asked to provide a small fasting blood sample and those aged 1.5 yrs to 3 yrs will be asked if they are willing to provide a non-fasted sample. Paediatric phlebotomists have been specifically recruited to take blood from children aged 1.5 yrs to 10 yrs. (See Section 15.12)

All respondents aged 4 and over will also be asked to give a 24 hour urine sample. See section 17 for further details.

4.3 Summary of data collected

Some items of information are limited to particular age groups. The tables below summarise the data to be collected during the interview and the data and measurements included in the nurse visit.

4.3.1 Interviewer content summary

CAPI questionnaire	**Respondent**
Catering Unit information	Main Food Provider/Selected adult
Food preparation, storage, cooking facilities	MFP
Cooking skills	MFP, All ages
Eating habits, social eating	All ages
General health	All ages
Dental health	Adult (16+)
Smoking	Adult (18+), self-completion for child aged 8-17
Drinking	Adult (18+), self completion for child aged 8-17
Dietary supplements	All ages
Physical activity	Adult (16+), child aged 11+ (separate version of module for 11-15 year olds)
Sun exposure	Adult (16+), all children aged 11+
Employment status, educational background	16 years upwards
Measurements	
Height measurement	Ages 2+

Weight measurement	Ages 2+
Collection of dietary data	
Diaries	All ages (separate version of diary for under 16s and for toddlers aged 1.5-3 years).

4.3.2 Nurse content summary

The table below shows which measures the nurse will attempt to collected from each age group.

	18-23 mths	**2-3**	**4-10**	**11-12**	**13-15**	**16-64**	**65+**
Nurse visit							
Infant length measurements	•						
Prescribed medicines	•	•	•	•	•	•	•
MUAC		•	•	•	•		
Blood pressure			•	•	•	•	•
Waist and hip circumference				•	•	•	•
BMI						•	•
Demi-span						•[a]	•
24 hour Urine			•[b]	•	•	•	•
Non-fasting blood sample	•	•					
Fasting Blood Sample (include venepuncture check list)[c]			•	•	•	•	•

[a] This will only be taken for those aged 16-64 where the interview collected valid weight measurement but not valid height measurement.

[b] Urine will only be taken from children fully out of nappies

[C] Diabetics can provide a non-fasting sample, if not willing to fast.

5 THE SAMPLE

5.1 Sample design

5.1.1 Core addresses

Address numbers 1 – 9 are our core addresses. At these addresses, one adult aged 19 and over and one child aged 1.5 years – 18 years (if present) are eligible to be selected. Therefore, it is at these addresses ***only*** where:

- ♦ People aged 19+, as well as children, will be offered a nurse visit.
- ♦ Up to 2 people per household can be selected and see the nurse together (1 adult, 1 child).

5.1.2 Child Boost addresses

Address numbers 10-27 are our "child boost" addresses. The interviewer will call on these addresses and establish if someone aged 1.5 years to 18 years is resident there. If so, one person from this age group will be selected at random. Therefore at these addresses nurses will only ever:

- ♦ Have nurse visits with people aged between 18 months and 18 years
- ♦ Only ever see one person per household.

If there are no children aged 1.5 years – 18 years present at a child boost address, the address will be 'screened out'.

5.1.3 Information from the interviewer

The interviewer will provide you with full details of the outcome at addresses. This includes households where respondents are willing to have a nurse visit, as well as households at which no one co-operated or households where no one was eligible. If you come across someone who originally refused to take part in the interview stage but has subsequently changed his/her mind, explain that without the information obtained at the interview stage, the measurements obtained by the nurse will have little meaning. Do not take measurements from a respondent if they have not been interviewed in person by an interviewer.

5.2 Eligibilty to see the nurse

All people (aged 18 months and over) who have been interviewed by the interviewer AND provided 3 or more days of diary data are eligible to see the nurse.

Please note that people who have not provided 3 or more days of diary data are not eligible to see the nurse. This is because we do not have enough nutritional information with which to correlate the findings of the nurse measurements.

5.3 NRF labels/Serial numbers

Each address/household/person in the survey has been assigned a unique identity number. This number is called the Serial Number. It allows us to distinguish which documents relate to which person.

The year, month, point and address plus the check letter are all found on the address label at the top of the nurse record form (NRF) which the interviewer sends you, or on the label on the No Nurse Visit sheet (see Section 5.6).

The person number is the number beside the name on page 2 of the NRF.
Great care must be taken to ensure that the correct serial number for a particular person is used on all documents and labels for that respondent. It is vital that the information the interviewer collects about someone is matched to the information you collect about him or her. If the wrong serial numbers are entered on documents or on the samples, data from one person will be matched with that of someone else.

GR is the Ordnance Survey grid reference for the address. This is to help those in rural areas to locate addresses. You will be sent a map with all the addresses selected for the assignment you are working in marked on it. If this is not clear, the postcode can also be used to locate addresses and to obtain a map using one of the following web pages: www.multimap.co.uk or www.streetmap.co.uk. If you cannot search these yourself, please contact the Blue Team in Brentwood who will be happy to help.

Also, your interviewer may be able to provide some household location details on the first page of the NRF.

5.4 Nurse sample cover sheet

At the start of each month's fieldwork you will be given a list of the issued addresses in the point you and your interviewer are covering. You will also be given a nurse sample cover sheet. This tells you the postcode sector or area in which you will be working and its point number. There is room on the sample cover sheet to record your own progress. This is useful for when your nurse supervisor calls, so that you have in one place the details of your workload and planned appointments.

At the end of the interviewer's fieldwork period you should be able to account for all addresses on your sample cover sheet. Keep your sample cover sheet for a couple of months after you finish your month's fieldwork as they are sometimes useful when sorting out a query from the office.

5.5 Nurse Record Form (NRF)

You will receive a **Nurse Record Form (NRF)** for each household where there is work for you to do. The key information about the respondents in that household, their names and ages, and whether or not they are to have a nurse visit is transmitted by the interviewer to the office.

The NRF has two functions:

- it tells you the outcome of the interviewer's attempts to get agreement to see the nurse from the selected people at this household.
- it is also the form on which you report to the office how successful you have been at those households.

The NRF will arrive with pages 1 and 2 completed by the interviewer. On the Address Label you will find the:

- address
- household serial number

On the front of page 1 will also be:

- detail relating to the location of the household within the address.
- any tips about the household location or the occupants that the interviewer feels you might find useful
- the household's telephone number, if known, and the name of the main contact person.

In the box labelled **Interviewer Outcome Summary** the interviewer will have ringed code A to show that there is something for you to do at that household, and filled in pages 1 and 2 of the NRF. He/she will have completed:

Date

The date on which he/she conducted the household interview at that household.

Question 4

The grid at Question 4 on page 2.

In the column to the left of each person's name is their **Respondent/Person Number**. Whenever you enter a serial number for that person you must use this and only this Person Number.

Nurse visit outcome:
Each respondent at section 4 has a ringed code of 1, 2, or 3.

1. Agreed nurse visit: **carry out a nurse visit only with those persons for whom code 1 has been ringed** - these are the household members who agreed both to be interviewed (and provided 3 or 4 days of diary data) and to see you.

2. Refused nurse visit: code 2 will be ringed if the person was interviewed (and provided 3 or 4 days of diary data) but refused to see you. If this person then changes their mind while you are in the household, you can carry out a visit with them.

3. No interview: code 3 will be ringed if the person could not be interviewed (they were mentally incapable, refused, etc) OR they did not give us at least 3 days worth of diary information. **Do not carry out a nurse visit with people who have not (yet) had an interview OR given us at least 3 days worth of diary data.**

Question 4, person 2

In the grid for person 2 there will be details if a child has been selected for the survey.

The person number of the selected child's parent(s) will also be recorded alongside whether they are an actual parent or whether they have legal parental responsibility. If you see a code 97 in the box for person number for parent 2 this means there is only one parent in the household. Note that if the parent of the child is not one of the selected eligible respondents they will not

appear in grid 4 so their name is written in the child grid.

Occasionally you may find someone in a household who has been interviewed but refused the nurse visit (code 2) and then decides to take part. You **can** take the measurement as these people have already completed a full interview. Make a note on the NRF explaining what has happened. If they are code 3 (i.e. not interviewed) you **cannot** take any measurements. Under no circumstances must you ever measure an individual before an interviewer has completed a full interview on CAPI.

You complete **PART B** of the NRF.

5.6 No Nurse Visit Sheet (NNV)

Where there is no work for you to do at an address (for example, it was a business address and therefore 'deadwood'), the interviewer will affix the address label to a **No Nurse Visit Sheet (NNV)**, and code the reason. The interviewer should send these sheets to you on a regular basis. **You do not need to complete any admin for these addresses.** They will automatically be coded 93 when you connect to the host machine to pick up your work. However, it is important that you keep track of which addresses are deadwood etc., so that you can account for every issued address in your assignment and are aware of which ones require a nurse visit. Each time you receive details of an address on a NNV sheet, enter the date of receipt and code the outcome on your Nurse Sample Cover Sheet. Send the NNV to the office once you have done this.

5.7 The 'Nurse Link'

Information recorded by the interviewer on the NRF is transmitted back to the office by the interviewer. Within a day or two this information is available to load onto your machine. When you log onto the host machine, this information is automatically picked up by your laptop. This process is called the nurse link, and it is very useful for ensuring that both you and your interviewer use the correct names and person numbers, which in turn means that all the information regarding one person is matched up.

IMPORTANT

The person number assigned to someone **by the interviewer** is the number that **must be used on every document and every blood/urine tube for that person**.

IMPORTANT

- Connect to the host machine regularly to pick up the nurse link data. This will tell you where visits are to be conducted.
- Before you go to a household check that the nurse link data is on your laptop by entering the household serial number.
- If the nurse link has not worked because of a technical problem you will need to contact the help desk for assistance.

WHAT DO I DO IF A RESPONDENT HAS A BIRTHDAY BETWEEN THE INTERVIEWER AND NURSE VISIT?

The age of the respondent is 'frozen' at the time the interviewer has made her/his visit and administered the household questionnaire. The age that has been **entered on the NRF** by the interviewer is the age you must use.

This means that even if an individual has had a birthday which moves them into a category where they

6 NURSE - INTERVIEWER LIAISON

6.1 Liaising with your inteviewer partner

Experience has shown that we get the highest number of productive nurse visits when the interviewer makes the appointment. If the nurse phones to make the appointment it is much easier to say no on the phone than it is in person. If at all possible, this is the way your appointments should be made.

<table>
<tr><th colspan="2">BEFORE FIELDWORK STARTS</th></tr>
<tr><td>You need to know…
Whether you have any holiday planned
Whether there are any times you know you will definitely not be working on NDNS (for example if you are working on a different project or working a shift at the hospital)
How you and your interviewer(s) are going to keep in touch (e.g. email, telephone, text)</td><td>The interviewer needs to know…
Your availability for the fieldwork month (as much as you know at this stage).
The make, registration number, model and type of car, to put on the police letter.
Your personal information…
Your name
How you would like to be introduced
What type of nurse you are/were (e.g. midwife/district nurse – this information can be very reassuring for respondents)
How you are both going to keep in touch.</td></tr>
<tr><th colspan="2">DURING FIELDWORK</th></tr>
<tr><td>You need to know…
Where appointments have been made and the details of these appointments:
time, number of respondents, their names and ages, household location details, any unusual circumstances (e.g. elderly person who should only be seen with a relative).
About respondents that agreed the nurse visit but where the interviewer was unable to make an appointment - you will need to arrange this appointment with the respondent.
About respondents where nobody has agreed a nurse visit so that you can cross these households off your worklist.
An update of when your interviewer(s) will not be working on NDNS.</td><td>The interviewer needs to know…
An update of your availability. You will give your availability before the interviewer starts fieldwork but you will need to update your interviewer(s) if your plans change.
If your availability is not used, your interviewer(s) should ring to tell you at least 4 working days in advance of the date you have given to your interviewer.
An update of when you will not be working on NDNS.</td></tr>
</table>

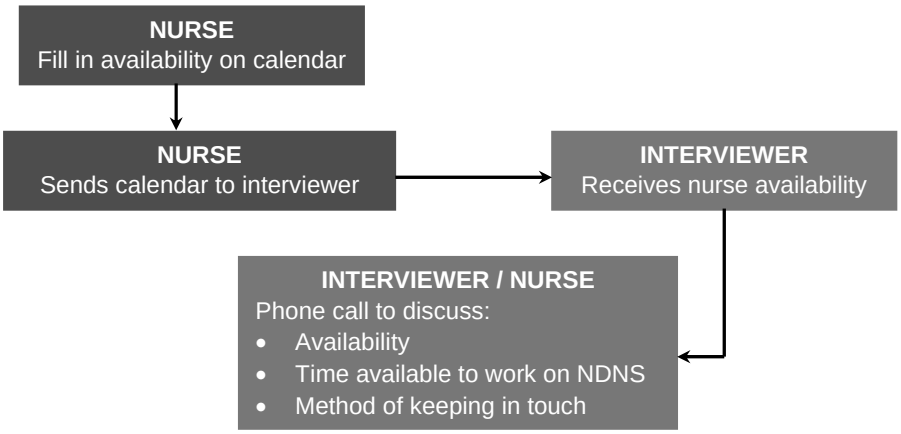
You and your interviewer partner will need to work very closely together, so a good working relationship is essential. In order to help forge this it is important that you meet each other. If possible, you should arrange to **meet up before** you start work on NDNS. If your interviewer has not been in touch, you should make contact and set this up. Contact your Nurse Supervisor if you do not know who your interviewer partner is. In addition, there is an arrangement, which allows you to accompany your interviewer to see their side of the work, and vice versa. You will receive a payment for this. Please contact your Nurse Supervisor to arrange this.

The interviewer will do everything possible to provide you with an even flow of work and to minimise the number of visits you have to make to an area, but this will be limited by respondent availability. Discuss with your interviewer the time you will need to travel to the area so that he/she can take account of this. Plan together how best to make this appointment system work. Some interviewers and nurses may prefer to start making appointments earlier in the month than the second week if the interviewer will be doing a lot of work during the first two weeks of the month.

6.2 Best practice for communication

To achieve a fully productive NDNS visit (i.e. a complete interview and participation in the nurse visit) the key is regular communication between you and your interviewer. The following diagram outlines the formal and informal lines of communication between you and your interviewer(s).

Before fieldwork:



The formal lines of communication between you and your interviewer are described in Section 5.5 and 5.7 (the NRF and the nurse link). The informal lines are equally important. An important part of the interviewer's job is to keep you fully informed about the outcomes of all his/her attempts to interview people, whether or not they are productive. We want to minimise the length of time between the interview and your visit. You will therefore need to talk to each other frequently by telephone. Make sure you let your interviewer know the best times to get in touch with you.

6.3 Nurse appointments & availability

You and your interviewer will be given a **Nurse appointment calendar** to record dates and times of your availability. For the interviewer this forms part of a diary where they can record appointments which they will then inform you about. You will have a calendar page to help you keep track of your availability to work on NDNS. You will receive two copies with your sample cover sheets. You should keep one copy for your records and send the other copy to the interviewer.

- Fill in the days and times when you are available to work on NDNS by the first of the month you have been allocated.
- Send a copy to your interviewer so they can make appointments
- Keep a copy for yourself as a reminder of the availability you have given.
- Update your interviewer on your availability later in the month.

On the back of the calendar is a page where you can inform interviewers of your preferences for appointment s such as whether you prefer evening or day time work, weekday or weekend work, appointments close together or spaced out. The times of appointments will depend on the availability of respondents but the system works best when the interviewer is aware of what suits you. You should go through the calendar and your preferences together before you start work.

6.4 How much availability to give?

You should provide availability for a four week period from the second week of fieldwork to the sixth. Any appointments required after this 4-week period should be arranged by you, and not the interviewer. If you give your availability in this way, difficulties in providing your interviewer with availability for consecutive assignments can be reduced.

Make sure you keep a careful note of the dates and times you give your interview. **Never** put the interviewer in the situation where he/she makes an appointment for you in good faith, only to discover you have a prior commitment.

If you are working on NDNS for the first time you must contact your Nurse Supervisor before agreeing early dates of the month with your interviewer because your supervisor will be assisting you on your first visit.

6.5 Your appointment

When the interviewer has made the appointment for you there is no need for you to ring the respondent before your visit. Speaking to the respondent on the phone just offers them an opportunity to refuse or cancel the appointment. If you are unsure of the time or how to find the place, speak to your interviewer.

7 WHAT DO RESPONDENTS KNOW ABOUT YOUR VISIT?

The interviewer introduction

The interviewer introduces your visit at the end of their interview by reading out the following:

> "We would like you to help us with the second stage of this study. This is a visit by a qualified nurse to collect some medical information and, if you agree, carry out some measurements. The nurse would like to come round and explain some more about what is involved and answer any questions you have. May I get him/her to contact you?"

Interviewers provide the following information to potential questions about the nurse visit:

- It is an integral part of the survey - the information the nurse collects will make the survey even more valuable.
- The nurse is highly qualified. They have all had extensive experience, working in hospitals, health centres etc and have also been specially trained for this survey.
- If the respondent wants, he/she will be given the results of the measurements carried out by the nurse, including the results of any blood pressure (age 4 years and over). If he/she likes, this information will also be sent to their GP.
- Respondents are <u>not</u> committing themselves in advance to agreeing to everything the nurse wants to do. The nurse will ask separately for permission to do each test - so the respondent can decide at the time if he/she does not want to help with a particular one.
- The Multi-Centre Research Ethics Committee has approved this study.

If a person is reluctant, the interviewer is asked to stress that all they wish to do is obtain permission for you to go and explain what is involved. They point out that by agreeing to see you, respondents are not necessarily agreeing to take part in all, or any, of the measurements. We hope your general professional approach will convince nervous respondents more effectively once you arrive.

At the end of the interview each respondent is given a Stage 2 Survey Leaflet by the interviewer. The leaflet briefly describes the purpose of your visit. A copy of the Stage 2 Survey Leaflet is in your supplies for information. When you arrive for your appointment, make sure that the respondent has the Stage 2 Leaflet (if necessary provide another copy) and explain in detail the measurements and samples involved in your visit. Note there are different Stage 2 Leaflets for different age groups.

8 CONTACTING RESPONDENTS

8.1 Making appointments

Hopefully, the interviewer will have made your first appointment for you. If not, they should have notified you via the NRF that at least one respondent in a household has agreed to see you. If the household has provided a telephone number, this will be provided on the front page of the NRF and you can try to make an appointment over the telephone. Do bear in mind that it is easier for them refuse over the telephone than face to face so you need to be prepared to be persuasive.

If no telephone number is provided (either because the household does not have a telephone or they refused to give the number), you will have to make a personal visit to arrange an appointment.

8.2 Second and third visits

Do remember when booking blood taking appointments that you are limited by the opening hours of your designated local laboratory, as well as the fact that your respondents (aged 4+) will have fasted overnight. Hence you can only take blood on Monday-Thursday mornings.

It is likely that in order to take fasting samples, and to fit in with the opening times of the local laboratory, you will, on occasion, have to make two or three visits to the household. At the first visit you would conduct the CAPI interview and take the measurements before making a return visit to take blood samples from respondents. Whilst the first visit could take place at any time (of the day or week), the second visit will be timed to fit in with the opening hours of the local laboratory. It is therefore likely that many second visits will take place early in the morning to catch adults before they go to work and children before they go to school. In order to maintain co-operation, you must endeavour to make the gap between visits as short as possible.

8.2.1 Making the initial contact by telephone

If you contact the household by telephone to book an appointment, keep the call short, simple, clear and to the immediate point. The purpose of the call is to book an appointment and whilst respondents may have queries or concerns, you will be much better placed to explain what your visit will cover and address any concerns face-to-face when you visit for the appointment.

An example of how to introduce yourself over the telephone is given below.

Say who you are:	*"I am a nurse called …."*
Say who you work for:	*"I work for The National Centre for Social Research"*
Remind respondents about the interviewer visit :	*"A few days ago, one of our interviewers (NAME) visited you for the National Diet and Nutrition Survey and you kindly agreed to see me. I'd now like to make an appointment to come and see you. Would (DATE/TIME) be convenient for you"*

If the suggested date is not convenient for the household, then you can negotiate an alternative that is convenient to you both (remembering of course, to take the opening times of the local laboratory into account).

8.2.2 Personal visit to book an appointment

If you were not able to book an appointment over the telephone, your first visit to the household will be to arrange an appointment. While you will need to answer queries that respondents may have, you should keep your introduction short and concise. As already noted, some of the people you approach may be hesitant about continuing with the survey, and if you say too much you may simply put them off. The general rule is to keep your initial introduction short, simple, clear and to the immediate point. An example of how to introduce yourself on the doorstep is given below.

Show your identity card	
Say who you are:	*"I am a nurse called …."*
Say who you work for:	*"I work for The National Centre for Social Research"*
Remind respondents about the interviewer visit:	*"A few days ago, one of our interviewers (NAME) visited you for the National Diet and Nutrition Survey and you kindly agreed to see me. I'd now like to make an appointment to come and see you. Would (DATE/TIME) be convenient for you"*

For most people this will be enough and they will be happy to book an appointment.

8.3 The nurse appointment

In most households, all you will need to do by way of an introduction is explain what your visit will cover and what you want the respondent(s) to do. However, some respondents will be reluctant and will need further persuading. Be prepared to answer questions about the survey. Some respondents may have forgotten what the interviewer told them about the survey's purpose or about what your visit involves. You should therefore be prepared to explain again the purpose of the survey. You may also need to answer questions, for example, about how the household was sampled. Some points you might need to cover are shown in the following box:

- *Who you are working for* – the *National Centre for Social Research* (in collaboration with Human Nutrition Research (HNR), Cambridge and University College London (UCL)).
- *Who the survey is for* - for the government (it has been commissioned by the Food Standards Agency)
- *Why the survey is being carried out* (see Sections 1 and 2)
- *What you are going to do* (see Section 4.3.2)
- *How the respondent was selected* - it was the address that was selected. Addresses in this area were selected from the Postcode Address File. This is a publicly available list of addresses to which the Post Office delivers mail. The addresses have been picked at random from areas across the country in order to get a good representation of the groups in which we are interested. Once an address is selected, we cannot replace it with another address. Otherwise we would no longer have a proper sample of the population.
- *The confidential nature of the survey* – individual information is not released to anyone outside the research team.
- *How much time you need* - this varies a bit but it is best to allow around 30 minutes for each person plus another 15 minutes per household (to put equipment away and so on).

Only elaborate if you need to, introducing one new idea at a time. Do not give a full explanation right away - you will not have learned what is most likely to convince that particular person to take part. Do not quote points from the boxes except in response to questions raised by the respondent.

Be careful to avoid calling your visit a "health check". One of the most common reasons given for respondents refusing to see the nurse is "I don't need a medical check - I have just had one". Avoid getting yourself into this situation. You are asking the respondent to help with a survey.

8.4 Being persausive

It is essential to persuade reluctant people to take part, if at all possible.

You will need to tailor your arguments to the particular household, meeting their objections or worries with reassuring and convincing points. This is a skill that will develop as you get used to visiting respondents. If you would like to discuss ways of persuading people to take part, speak to your Nurse Supervisor or your Area Manager. The most important thing is to find out what the respondent's concern, or reason for being reluctant about the nurse visit (is it the time taken? the content of the visit? the purpose of the study?), and then answer this question only.

What you might mention when persuading someone to take part in the survey:
If the respondent is unsure about the measurements:
• You will ask for their permission before taking each measurement and sample. • The respondent does not have to do anything - perhaps you could just ask the questions about medicines, and take the blood pressure? (once inside, you may find that the respondent then agrees to more measurements)
Why the NDNS is important (and a good use of government money):
▪ It is a very important survey. ▪ It is carried out annually. ▪ It is the largest national survey to look in depth at the diet and nutrition of the nation ▪ Results will be published annually and reported in the national press. ▪ It is a national (government) survey. • It provides the government with accurate and up-to-date information on the diet and nutrition of the population. • The information is available to all political parties. • The information will be needed by whichever government is in office.
Why we want to include everyone:
• The survey covers the whole population, including people who have varied and unvaried diets. • To get an accurate picture, we **must** talk to all the sorts of people who make up the population - the young and the old, the healthy and the unhealthy, and those who like the current government's policies and those who do not. • Each person selected to take part in the survey is **vital** to the success of the survey. Their address has been selected – not the one next door. No one else can be substituted for them.
If they have concerns about confidentiality
• No-one outside the research team will know who has been interviewed, or will be able to identify an individual's results.

- The government only gets a statistical summary of everyone's answers.

8.5 Broken appointments

If someone is out when you arrive for an appointment, it may be a way of telling you they have changed their mind about helping you. On the other hand, they may have simply forgotten all about it or had to go out for an urgent or unexpected reason.

In either case, make every effort to re-contact the person and fix another appointment. Start by leaving a **Broken Appointment Card** at the house saying that you are sorry that you missed them and that you will call back when you are next in the area. Add a personal note to the card. Try telephoning them and find out what the problem is. Only telephone respondents if you are confident that you can deal with the situation on the telephone, as it is easier for respondents to refuse or try to put you off re-visiting on the telephone than it is face-to-face. Allay any misconceptions and fears. Make them feel they are important to the success of the survey. A chat with your interviewer partner might help. He/she might be able to give you an indication of what the particular respondent's fears might be, and may have notes that would tell you when would be the most likely time to find the respondent at home.

8.6 Number of calls you must make

You must make at least **6 personal visits per household** before you can give up. Each of these calls must be at different times of the day and on different days of the week, including evenings and weekends. However, we hope you will make a lot more than four calls to get respondents that are difficult to contact. If you fail to make contact you should try again but let the Blue Team know as they may be able to help you.

You are asked to keep a full account of each call you make at a household on page 3 of the **Nurse Record Form**. Complete a column for each call you make. Include telephone calls to the household as well as personal visits. Note the exact time (using the 24-hour clock) you made the call, and the date on which you made it. In the notes section keep a record of the outcome of each call. Label your notes with the call number.

9 CARRYING OUT THE INTERVIEW

9.1 The interview documents

The nurse questionnaire is on computer (CAPI). As well as the computer schedule, you will use other documents during the interview itself. These include:

- the office consent booklet
- the personal consent booklet
- the urine information leaflets
- the PABA information sheet
- the Ametop information leaflet
- the child information leaflet
- the coding prescribed medications booklet
- measurement record card

The CAPI will prompt you when to use them (see appendix B for a list of all nurse documents).

9.2 General tips on how to use the documents/CAPI

Read out the questions in the Nurse Schedule **exactly as worded**. This is very important to ensure comparability of answers. You may think you could improve on the wording. Resist the temptation to do so. Enter the code number beside the response appropriate to that respondent indicating the answers received or the action you took.

Some questions take the form of a 'CHECK'. This is an instruction to you to enter something without needing to ask the respondent a question. The convention is that if a question appears in capital letters, you do not read it out.

If you get a response to a question which makes you feel that the respondent has not really understood what you were asking or the response is ambiguous, repeat the question. If necessary, ask the respondent to say a bit more about their response.

9.3 Preparing the documents & CAPI

Before you visit the household you should connect your computer to the modem (separate instructions about this are provided) and pick up any work which is ready for you.

Check that the information from the interviewer is on your laptop BEFORE you leave home for the appointment. If the interviewer's information has been successfully transferred, the computer will show you the information about the members of that household, and you can go ahead with that household.

If the information is not there on the day of the appointment, enter it manually from the NRF or interim appointment form. This takes a few minutes so it is best to do it at home.

When you arrive at the household, you should go into the household schedule and check that it is the right one by looking at the serial number and/or viewing the information about the household members.

Immediately before you start to carry out measurements on a respondent, complete the first half of page 1 of both Consent Booklets. **Never do this before your visit to the household.**

10 THE NURSE SCHEDULE

10.1 Organising the interview

Before setting out to conduct any interviews, you must check to make sure that you have either received the household information via electronic transfer or through manual input. You will not be able to conduct the interview without having done this.

You also need to make sure you fully understand the differences in the protocols for children and adults.

When you arrive at the household, check whether any of the people you have come to see have eaten, smoked, drunk alcohol or done any vigorous exercise in the last 30 minutes. This could affect their measurements. If someone has done any of these things, arrange to see other member of the household (if there is one) first in order to give time for the effects to wear off. Similarly if someone in the household wants to eat, smoke or drink alcohol in the near future (e.g. one person is going out and wants a snack before they leave) then try to measure that person first. Adapt your measurement order to the needs of the household.

You may feel that if you try to rearrange things in this way, you are likely to lose an interview with someone you may not be able to contact again. In such cases, give priority to getting the interview rather than rearranging the order.

10.2 Getting into the nurse schedule

Once you have logged on to CMS, the first menu displayed is the **MAIN MENU** screen from which all subsequent menus and screens are selected. The **MAIN MENU** allows you to select several options on the work you want to commence. To access NDNS nurse work, you will need to select **VIEW AMEND LOADED WORK.** This displays the projects/slots by survey month that have been loaded on to your laptop.

To get into the nurse schedule, select **P8709** and the relevant survey month you are working on. This will then display a screen with the serial numbers of all the addresses in your sample (plus related information). Use the arrow keys to select the household you would like to work on, then press <Enter>.

You are now in the nurse schedule and ready to start entering data.

If you want to practice at home before ‘going live’, at the **MAIN MENU** you can select working at home **_PRACTICE INTERVIEW** _ select project. The screen displays all the serial numbers for practice interviewing (calls will not be made/entered when practice interviewing). **Do not** use a practice interview slot for a visit to a respondent’s home.

10.3 Household information instructions

The household information should be checked or completed **before** making the visit.

ScrOut

This screen will be displayed only if the information has not yet been received electronically from the interviewer. If you need to enter the information manually (option only available for core non-actigraph addresses), you should enter code ‘1’. If there is no work for you to do at that household (i.e. because

no one was eligible for a nurse visit or no one was interviewed or no-one agreed to the nurse visit), you should enter code '3'. If you are able to wait until the information does arrive electronically, you should enter code '2'.

HHDate
This is necessary to allow the computer to calculate the respondent's age at the time of the interviewer visit, as this is the age that dictates which sections of the schedule apply. You will find this date at Q.2 on the NRF or the Interim Appointment Record.

Intro - OC
This set of questions only appears when you have elected to enter the household information manually. It asks you to enter the data found on page 2 of the NRF, i.e. person number, name, sex, age, and outcome of interviewer visit and (for children) details of parents in household. From this information, the computer will work out how many individual schedules are required, and which questions should be asked of each individual.

It is important that you enter the individuals in ascending order of person number. Otherwise, you will find it very confusing to find your way around the computer program.

More
If you are entering the household information manually, at the end of the information for each individual, the computer will ask you if there is anyone else who was seen by the interviewer. If you enter "yes", another row on the household grid will be created for you to complete. If you enter 'no', that signifies that you have entered details of all eligible persons in that household.

If, after entering "no" at *More*, you realise that there are other household member(s) to be added, you can do this by pressing <End> then the Up Arrow key, and changing *More* from 'no' to 'yes'.

OpenDisp
If the household information has been electronically transferred, this will be one of the first things you see. If you have entered the household information manually, it will summarise the information you have entered so that you can check it is correct before proceeding. Note that it will only display information about individuals who were interviewed by the interviewer (as these are the only individuals who *you* can interview) or adults who have not agreed. Other household members may be listed on the paper documents, but they will not be listed on the computer.

For all individuals who were seen by the interviewer, *OpenDisp* shows the person number, name, sex, age, and whether or not a nurse visit was agreed. For those aged 0-15, it will also show the person numbers of the parents (under the columns headed Par1 and Par2). The parental status is shown under the columns headed *NatPs1* and *NatPs2* for Parent 1 and Parent 2 respectively.

Once you have checked the grid at *OpenDisp*, press <Ctrl+Enter> to bring up the Parallel Blocks screen from which you can either exit the household (by pressing <Alt+Q>), or select an individual schedule (by highlighting the schedule and pressing <Enter>), or go into the admin block.

10.4 Parallel blocks

The computerised nurse schedule consists of four main components:

- the household information
- the individual schedule comprising potentially of :
    - Nurse schedule (Nurse visit 1)

    - Nurse visit 2
    - Nurse visit 3
- the drug coding block
- the admin block

Each component is known as a ‘parallel block’. This means that you can enter any component at any time, no matter where you are in the schedule (after you have reached *opendisp)*. For example, you can enter the drug-coding block at any convenient moment in the individual schedule.

The way to move between parallel blocks is by pressing <Ctrl+Enter>, which brings up a screen called ‘Parallel Blocks’. This screen is the ‘gateway’ to the other components of the schedule. It lists all the possible blocks you could go into, and looks like this:

Parallel blocks
+ NNDNS + Nurse_Schedule_Frank + Nurse visit 2_Frank + Nurse visit 3_Frank + Drugcode_Frank - Admin

The list of blocks will vary depending on the number of people in the household and the extent to which you have completed the drug coding. There will always be a ‘NNDNS’ and an ‘Admin’ for each household. In addition, there will be a ‘Nurse_Schedule’ for each eligible individual in the household (in the above example, there is only 1 eligible respondent). As soon as you tell the computer that an individual has some prescribed drugs, it will create a ‘Drugcode’ block for that individual. Thus, you may have fewer ‘Drugcode’ blocks than ‘Nurse_Schedule’ blocks.

Each nurse schedule/visit has the person’s name listed after it. The drug-coding block also lists the person’s name, so that you can be sure you are interviewing the correct person and coding their drugs correctly.

The final thing to note about the parallel blocks screen is the ‘+’ or ‘-’ which precedes each block. All blocks will have a ‘-’ to start with, and this will turn into a ‘+’ when the computer is satisfied that that block has been fully completed. In the above example, the nurse has completed the household grid, nurse visits 1, 2 and 3, and the drug coding for Frank but not the admin block.

10.5 Individual information

The individual information should be collected when you are in the household. This section includes the protocols for measurements, as well as some background and CAPI information on each measurement. This section aims to deal only with CAPI questions, which are particularly problematic or important. If you have another problem you can usually solve it in one of these ways:

- If someone does not understand the question, repeat it, before trying to rephrase
- If you are given an answer we have not provided for, open a note by pressing <Ctrl+M>, to write in the nature of the query.

10.6 Is anyone pregnant?

Anyone who is pregnant should have been screened out during the selection process carried out by interviewers. Pregnant people are not included in this survey since they have different nutritional needs from those who are not pregnant. However, just in case an error has occurred during the selection stage, when you are at a household where you will be interviewing a girl aged 10-15, start off by making a general statement to everyone of all ages: "Before I start, can I check is anyone pregnant? I need to know as some measurements do not apply to pregnant women." This will give a pregnant girl the opportunity to tell you, if she wishes to. We have not put a formal question into the schedule, as we do not wish to embarrass girls of this age group in front of their parents. In addition, the interviewer selection process should have screened out any pregnant women. In the unlikely event you encounter a pregnant girl aged below 16 years, question *UPreg* will prompt you to enter this fact once you have asked the questions which apply to all respondents. The computer will then terminate the interview at the appropriate point.

10.7 Prescribed medications (all respondents)

This is about prescribed medicines currently used only. Ignore anything else. Medicines should be being taken now, or be current prescriptions for use "as required".

Make sure you get details of all medicines by checking "Are you taking any other medicines, pills, ointments or injections prescribed for you by a doctor?" Try to see the containers for the medicines. Respondents should be prepared for this, but if they are not ask early on in your visit for the containers to be fetched. Check the name of the medicine very carefully and type it in accurately. Record the brand name or generic name so that you can code it.

Do not probe for contraceptive pills, as this may be embarrassing or awkward for some respondents. If it is mentioned, record it. Pills for hormone replacement therapy should also be included. Include suppositories, injections, eye drops, and hormone implants if they are on prescription.

One of your tasks is to enter a six-digit code for the drug. You do not have to do this as soon as you enter the names of the drugs, but the computer will not let you leave the schedule until it is done as it will give you the chance to query any hard-to-find drugs and to ask a respondent what a drug is used for if it has several uses. There are also one or two follow-up questions to ask if the drug is one commonly prescribed for CVD conditions to find out whether or not it has been prescribed for one or more of these conditions.

You can do the drug coding whenever you wish by pressing <Crtl+Enter> and selecting ‘DrugCode’. If you are doing more than one interview in a household, you will be given the choice of several drug-coding blocks. You should choose the one which matches the individual schedule, e.g. if you are completing ‘Nurse_Schedule [Frank] that person’s drug coding block will be called ‘DrugCode[Frank]’. If you go into the wrong drug-coding block by mistake, just press <Ctrl+Enter>, then select the right one.

To get out of the drug-coding block, press <Ctrl+Enter> and select whichever ‘Nurse_Schedule’ you are currently completing. This will take you to back to the start of that individual schedule, so you will have to press <End> to get back to where you were before.

The ideal time to code the drugs is while the respondent is resting with the cuff on prior to the blood pressure measurement. With practice, you will get to know the more common drugs and will be able to code them quickly.

Drugs are to be coded using their British National Formulary (BNF) classification codes - down to the third level of classification. These should be recorded in a six-digit format, using a leading zero where appropriate. You have a copy of the BNF (make sure it is the September 2007 edition), in your nurse bag. You also have a drug coding booklet which lists the 400 (or so) most commonly used drugs in alphabetical order and gives their BNF classification code.

Taking *Premarin* tablets as an example, the alphabetic listing gives the entry 06 04 01. Enter this as a continuous string of numbers, i.e. 060401 (no spaces or dashes). Alternatively, if you had looked up *Premarin* (tablets) in the BNF itself, you would have found it listed in section 6.4.1.1. It is classified down to a fourth level. For our purposes we are only interested in the reference 6.4.1. With leading zeros, this becomes 06 04 01.

If you are unable to find the correct code, enter ‘999999’.

If you cannot find a drug in the BNF, or it is has more than one reference and you are not sure how to deal with it, record its full name clearly and what it is being taken for.

If the respondent takes aspirin, record the dosage as this can vary.

11 INTRODUCING YOUR MEASUREMENT TASK

11.1 The introduction

The interviewer will have introduced your visit, but has been told to give only a brief outline of what it is about. He/she will have told respondents that you are the best person to explain what your visit is about. So, before you take any measurements, you will need to explain what you hope to do during your visit and to reassure nervous respondents that every stage is optional.

If the respondent wishes, they and their GPs will be sent their blood pressure, results of some clinically relevant blood samples and for those aged 16+, BMI (by letter).

11.2 The Stage 2 leaflet

A copy of the Stage 2 leaflet will be given by the interviewer at the interview stage. This will tell respondents about the nurse visit and content before you call. After you have explained what you are going to do and the order in which you wish to see the respondents, you should ask respondents to find their copy of the Stage 2 leaflet and read it before you start doing any measurements. It describes what you will be doing and sets out the insurance implications of allowing the information to be passed to GPs. If respondents do not have a copy to hand, you **must** give them another copy to read. This will give them something to do, allow them time to read it and give you time to sort yourself out. Be prepared to answer any questions they may have at this point.

There is a **child information sheet** for use with younger respondents who may find the Stage 2 leaflet difficult to understand. It also explains in simpler language the agreements in the consent booklet, which their parent is asked to sign. Each time you ask for a child's verbal consent to a measure, you should point out the relevant part of the information sheet, so that the child can give informed consent.

12 THE CONSENT BOOKLET

12.1 Completing the consent booklet

Complete a consent booklet for all individuals who have a nurse visit and consent to at least one sample or measurement listed below.

The consent booklets contain the forms the respondent/parent of respondent has to sign to give written consent for:

- blood pressure readings to be sent to their GP (child (4+) or adult).
- BMI measurements to be sent to their GP.
- a sample of blood to be taken, results sent to GP/respondent, sample for storage.
- 24hr urine sample including separate consents for: 1) Use of PABA; 2) Storage and 3) Lab analysis.

12.1.1 Consent booklet format

There are two consent booklets: a respondent copy and an office copy.

The procedure for obtaining consent is the same for both booklets. The respondent must initial beside each procedure they give consent to, and print and sign their name at the end. As soon as they have initialled for one consent, ask them to sign, just in case they don't agree to any further samples or measurements. We would like you to always ask respondents to initial and sign. It is the initials and signature in the office consent booklet that are important. Without these there is no consent and we cannot use the measurements and samples obtained.

You should ensure that initials and signatures are obtained in BOTH copies and that the personal consent booklet is left with the respondent at the end of the visit. This is their legal record of what they have consented too.

The office consent booklet must be filled out for **every** respondent regardless of whether measurements requiring consents are to be taken. This is because it provides an important check in the office. Every piece of information on the front is important. It will form the basis of the BP and blood result letters which are sent to GPs (we won't send results letters if the respondent has not given consent). You are asked to record the date of birth again. This is an important identity check, along with your nurse number and the date of interview.

> Complete Items 1 to 5 **before** you start using the computer to collect information from the respondent. Items 6 to 9 are completed during your interview, and you will be prompted to do so by CAPI.

Fill in the full name and complete address of the GP on every consent booklet for a household, even when all members have the same GP. Each individual is treated separately once the booklets reach the office.

Throughout your visit you will need to record the outcome of the respondent's consent for the following samples or measurements:

SUMMARY OF CONSENTS - RING CODE FOR EACH ITEM	YES	NO
a) Blood pressure to **GP**	01	02
b) Body Mass Index (BMI) to **GP**	03	04
c) Take PABA tablet	05	06
d) Lab analysis of Urine	07	08
e) Urine sample for **storage**	09	10
f) Sample of blood to be taken	11	12
g) Blood sample result to **GP**	13	14
h) Blood sample for **storage**	15	16
i) Blood sample result to **respondent**	17	18

By the end of all nurse visits, every respondent should have **nine** codes ringed at Item 9.

The last few pages of the office consent booklet are despatch notes for blood samples and urine to be sent to the field laboratory and details for the office. These despatch notes are tear off sheets to go with the blood samples to the respective labs and the office copy is to be completed and returned to the Blue Team with the rest of the booklet. Again, it is essential that the information on these despatch notes is accurate. There are also two copies of the Addenbrookes laboratory despatch forms to be completed. These are included in the Addenbrookes postal packs and both need to be completed accurately and sent back to Addebrookes (inside the postal packs).

12.1.2 Respondent signatures

Use a black pen when completing the booklets, and ensure that signatures are always in pen, not pencil. Each respondent must initial each box if they have consented to the measurement or sample to be taken. The respondent must also sign and print their name at the end of the booklet. You should also sign and date the booklet. Do not erase any of the personal information. If necessary, cross out errors and rewrite so that any corrections can be seen.

12.1.3 Child Assent

For children aged 4 and over, nurses should attempt to get a countersigned signature from the child on the office and respondent consent booklets showing that they agree to the procedures. In the case of children who cannot sign their consent, provided they do not appear to or verbally disagree with the procedure, written consent can be sought from the parent/guardian only.

12.2 The child information/consents leaflet

This is designed to be used with the consent booklet. It explains the procedures and consents in a language that is easier to understand for children.

13 OBTAINING CONSENT TO INTERVIEW MINORS

The rules to follow depend on whether the minor is aged 16/17 years or is between 1.5 and 15 years of age. **Never break any of these rules**:

16/17 year olds:
You need to get consent from the respondent but you do not need parental consent to interview someone of this age. If the respondent lives with their parent(s), out of courtesy advise the parents what you will be doing.

1.5-15 year olds:
For children aged 15 and under, you will know from what your interviewer writes on the NRF who the parents or guardians are; these are the people from whom you need to get permission before you interview or measure a child.

The term 'parent' means the child's natural or adoptive parent. All other people who claim parental status have been classified on the NRF as having legal parental responsibility.

Verbal consent to interview and measure someone aged 1.5 to 15 has to be obtained from someone with legal parental responsibility. If this is not forthcoming then you cannot interview/measure that child. The agreement of the child should of course also be sought. Written consent is also required from the parent to send results to the GP, take blood and give urine. Where appropriate, child assent is also sought (see section 12.1.3)

Always give priority to someone defined as a parent when obtaining permission. If possible, when seeking consent obtain it from the mother.

If disagreement arises between parents and/or parent and child about whether or not to co-operate, always respect the wishes of the non co-operator.

For children of all ages 1.5 to 15 you should always ensure that a parent is present during your interview. This is to protect both the child and you. You will also require their presence in order to obtain written consents during the interview.

14 PROTOCOLS MANUAL

There is a new protocols manual to be used on all NatCen Surveys involving nurse work. You should refer to the manual and follow the protocols for all 2008 measurements and samples. These include:

- Infant length measurement (under 2 years)
- Mid-Upper Arm Circumference
- Blood pressure (aged 4+)
- Waist and hip measurement (aged 11+)
- Fasting blood sample (aged 4+)
- Non-fasting blood sample (aged 1.5 to under 4 years)

Further information is provided in the following chapters about the blood and 24-hour urine samples, and about the despatch of these samples.

15 BLOOD SAMPLING

15.1 Introduction

Blood sample donation and subsequent correct sample distribution is a very important part of the NDNS. One of the main objectives of the NDNS programme is to measure indicators of blood function, nutrition and other measures of health to relate these to dietary and social data.

The blood will be analysed for a large number of analytes including haematology measures (white blood count, haemoglobin, platelets etc), serum lipids (cholesterol, triglycerides), markers of inflammatory status, and markers of mineral and vitamin status.

The samples will **not** be tested for any viruses, such as HIV/AIDS, or for bacterial infections, nor will they be used for genetic testing.

Respondents will receive £15 in high street vouchers as a thank you for providing a blood sample.

15.2 Eligibility for blood sampling

15.2.1 General eligibility

All respondents aged 1.5 years and over, with the exceptions outlined in the Nurse Protocols, section 17.2, are eligible to give blood.

Respondents aged 4 and older will be asked to fast for 8 hours overnight before providing a blood sample. Younger respondents will not be asked to fast.

15.2.2 Obtaining blood samples from diabetics

Most diabetics can provide fasting blood samples, but there are some precautions to take into account as outlined below. (CAPI will take you through the relevant questions). The preference is to obtain a fasting sample if possible and you will provide reassurance about this but if the respondent remains anxious, a non-fasting sample can be taken.

***Acceptable procedures according to medication**:*

- Respondents on oral hypoglycaemic medication should be able to fast without complications
- Respondents on a combination of night time insulin and daytime tablets should also be able to fast unless they are known to have low blood sugar levels first thing in the morning. If they do have low blood sugar in the morning, they could still fast but should reduce their night-time insulin by a small amount and have breakfast as soon as possible after the blood is taken.
- Respondents on insulin alone can also provide a fasting sample, but should be given special consideration. They should omit their morning insulin and should be seen as early in the day as possible.

In every case, diabetics should have breakfast as soon as possible after blood is taken.

Note that the option of providing a non-fasting sample is only open to diabetics and respondents under the age of 4. Blood should <u>not</u> be taken from respondents who are willing to provide a sample but are not prepared to fast.

15.3 Overview of blood taking procedures

A fasting blood sample will be obtained from those aged 4 years and above. Those aged less than four years will not be asked to fast but CAPI includes questions about whether the child has had something to eat or drink that morning, to ascertain whether it is a fasting or non-fasting sample.

A maximum of two attempts at blood taking are permitted with adults (16+) and only one attempt with children.

The volume of blood taken will vary according to the age of the respondent, as follows:

Age	*Volume*	*No. of specimen tubes to be filled*
Adult 16+yrs	35.1 mL	8
Child 7-15yrs	19.3 mL	6
Child 1.5-6yrs	9.5 mL	4

The volume differs to ensure that we abide by guidelines for taking blood from children for research purposes. To keep children's blood sample volume as low as possible, some analytes will not be measured in younger children.

Blood samples will be taken by you from adults (aged 16 and over) and young people aged 11-15 years. For younger children (aged 1.5 to 10 years), the sample will be taken by someone with skills and recent experience in paediatric phlebotomy. If this is not you, you will accompany this person during the visit to the respondent's home (see section 15.12).

Some blood samples will be posted to Addenbrookes Hospital in Cambridge for analysis of routine analytes. Most of the blood tubes will be taken to local laboratories where samples will be centrifuged and aliquots of blood, serum, and red blood cells will be frozen for temporary storage.

An outline of the blood sampling tasks carried out prior to and at each visit is provided below:

During the first nurse visit

- Assess eligibility for blood sampling and explain procedure in detail.
- Obtain verbal consent to make appointment to revisit for blood sampling and instruct about overnight fast (age 4 and above only).
- If respondent is aged <11, inform respondent (and parent/guardian) that blood will be taken by a paediatric phlebotomist (if necessary).
- Arrange appointment with paediatric phlebotomist (if necessary).
- Record details in CAPI.

Prior to second visit

- If not yet done, arrange appointment with nurse/paediatric phlebotomist (if necessary).
- Ensure you have all phlebotomy items.
- Ensure cold packs are ready for use in freezer.
- Prepare label strips.

Second nurse visit

- Re-check eligibility for blood sampling and ensure respondent understands procedures.
- Confirm and obtain appropriate written consents.
- Obtain blood sample, filling tubes in priority order.
- Label Monovettes with pre-printed labels.

- Record details in CAPI.
- Leave bottom copy of blood sampling promissory note with respondent.

Immediately after the visit

- Send tubes and associated documentation (2x Addenbrookes biochemistry despatch notes, included in the postal box) to Addenbrookes.
- Take blood specimens, storage tubes, contaminated waste, and documentation to the local laboratory.
- Record details in CAPI.
- Use Milton wipes to wipe the cold packs before placing it into a new plastic bag in the freezer in preparation for the next appointment. Also, use Milton wipes to clean the insides of the carrying box.

15.4 The blood tubes (Sarstedt Monovettes®)

Up to 8 tubes need to be filled, depending on the age of the respondent. The tubes should be filled in the following order so that, if a situation arises where there will be insufficient blood to fill all the tubes, the analyses with the highest priority can still be undertaken.

The tubes, plus details of the analytes carried out on the sample contained in each, are detailed below. The destination for each tube is also provided.

Tube	Goes to	Label
Adults: 16+ years		
1. 2.6mL EDTA (red top)	Addenbrookes	E N1
2. 4.7mL serum (brown top)	Addenbrookes	SE N1
3. 4.5mL serum (white top)	Field Lab	SE N2
4. 7.5mL Li Hep TM (orange top)	Field Lab	LH N1
5. 7.5mL LiHep TM (orange top)	Field Lab	LH N2
6. 1.2mL Fluoride (yellow top)	Field Lab	F N1
7. 4.5mL Li Hep (orange top)	Field Lab	LH N3
8. 2.6mL EDTA blood tube (red top)	Field Lab	E N2
Children: 7-15 years		
1. 2.6mL EDTA (red top)	Addenbrookes	E N1
2. 7.5mL Li Hep TM (orange top)	Field Lab	LH N1
3. 2.6mL serum (brown top)	Addenbrookes	SE N1
4. 2.7mL serum (white top)	Field Lab	SE N2
5. 2.7mL Li Hep (orange top)	Field Lab	LH N2
6. 1.2mL Fluoride (yellow top)	Field Lab	F N1
Children: 1.5 to 6 years		
1. 1.2mL EDTA (red top)	Addenbrookes	E N1
2. 4.5mL Li Hep (orange top)	Field Lab	LH N1
3. 1.1mL serum (brown top)	Addenbrookes	SE N1
4. 2.7mL serum (white top)	Field Lab	SE N2

We are aware that typical clinical practice is not to use EDTA tubes first due to risk of contamination of subsequent samples. However, this considered less of an issue with Sarstedt monovettes compared to other tubes because of the way the rubber comes down over the end of the tube as you remove each one. So far, obtaining blood in EDTA tubes first has not proved to be a problem with samples in other surveys (National Survey of Health and Development) where a very similar priority

protocol is used. Although there is a slight risk of contamination, there is agreement that priority should be set by the analyte order agreed by the consortium including the FSA.

Further detail on each analyte and what it measures is provided in Appendix C.

15.5 Equipment and Consumables

The blood samples will be collected using the Sarstedt Monovette® blood-collection system with multifly needle (or Monovette fixed needle if preferred). Using the syringe rather than vacuum mode reduces the chance of haemolysis. This Monovette system offers trace element contamination control and is manufactured from plastic which allows for safe transport of sample through the postal system.

You will be provided with the following equipment for blood taking:

- Monovettes for blood specimen collection:
  - 2.6mL, 1.2mL EDTA Monovette (red top)
  - 7.5mL Lithium heparin Monovette for trace metal analysis (orange top)
  - 4.5mL, 2.7mL Lithium heparin Monovette (orange top)
  - 4.5mL, 2.7mL serum Monovette (white top)
  - 4.7mL, 2.6mL, 1.1mL serum Monovette (brown top)
  - 1.2mL fluoride Monovette (yellow top)
- Tourniquet
- Hand wash disinfectant
- Alcohol swabs/cotton wool balls or gauze swabs/plasters
- Micropore tape
- Adhesive dressing
- Ametop gel & tegaderm dressing (See section 15.9)
- Disposable gloves
- Sarstedt multifly needles: 21G with 60mm or 200mm tube length and 23G with 60mm tube length
- Sarstedt fixed needle: 21G
- Milton wipes
- Scissors
- Pen (permanent marker)
- Biohazard sharps box
- Biohazard labelled mini-grip bag

You will also be provided with the following equipment for the packaging and delivery/posting of samples:

- Plastic postal containers
- Pre-addressed padded envelopes
- Specimen and document bags
- Parcel tape
- Pre-printed labels for all tubes including those to be passed on to the laboratory
- Tray for specimen tubes
- Pre-packs of 2ml empty micro tubes to be delivered to local lab
- Carrying box for specimen delivery to local lab
- Cold packs
- Instant cold packs (limited to use in emergencies and on overnight assignments)

15.6 Obtaining written consents for blood sampling

Written consents are needed for the following:

- Giving a blood sample
- Notifying GP of clinically relevant blood analyte results
- Providing clinically relevant blood analyte results to the respondent (or parent/guardian of child respondents)
- Storage of blood sample.

There are three variants of the blood sampling consent forms in the consent booklets:

- Consent sheet CF (A2) is for respondents aged 16+
- CF (C2) is for respondents aged 4-15 years
- CF (YC1) is for younger children aged 1.5-3 years.

The appropriate blood consent form must be signed at the visit at which blood is taken, **before** blood is taken.

The different sections of the consent forms should be pointed out to the respondent and the form should be given to the respondent to read. After the respondent (parent/guardian) has read the consent form please encourage him/her to ask any questions they may have with regards to the procedure. Once they are content to sign, please ensure the respondent (or parent/guardian) **initials** all those boxes (procedures) they would like to consent to.

There are also tick boxes on the child consent sheets CF(C2) and CF(YC1) to indicate whether the respondent/parent consented to give a blood sample with or without the use of Ametop gel. Please ensure the appropriate box is ticked.

You must check that all appropriate boxes are initialled and signatures collected. If respondent is aged 1.5-15 years, you must make sure that you obtain the signature of their parent or the person who has parental responsibility. Children should be encouraged to provide written assent if they wish (and are able) to do so.

Please also note that if the respondent (or parent/guardian of a child respondent) does not wish to receive a report of their (child's) blood analyte results nor do they want results to be sent to the GP, they must sign the disclaimer form on page 8 of the consent booklet. This is to ensure that they understand that if there are any findings outside the normal range, we will not be able to notify their GP or anyone else as we do not have their permission to do so.

15.7 Labelling the blood tubes

15.7.1 Introduction

All labels are pre-printed for a particular respondent. This means that you will receive sets of labels that will not be used if the respondent does not provide a blood sample. These can be disposed of.

On each label there will be:

- the serial number (including the respondent number), followed by the check letter
- a code showing the sample type and the sequential label number in brackets; and
- a barcode with unique number (for HNR's use).

The labels will be used on documents and on blood and urine tubes. For each respondent a full set of labels (38) in a pre-specified order will be provided rolled up as a continuous strip. This strip provides all labels needed by the nurse and the field laboratory for processing the samples.

Note that it is your responsibility to label Monovette tubes for all respondents, even when blood is being taken from young children by a paediatric phlebotomist.

CAPI will guide you through which labels are to be used for each respondent, and which should be affixed to which tube or sent onto the laboratory. The protocol is also outlined in the following section.

Note that the full set of labels covers 24hr urine samples, as well as blood.

15.7.2 Identifying labels to be used

All of the 38 labels will be used for adult (16+ years) respondents who give blood and urine. This means all Respondent 1s and respondent 2s aged 16-18. Children aged 1.5-15years require fewer labels: 29 for children aged 7-15, 21 for children aged 4-6 years, and 15 for children aged 1.5 to 3 years.

The sequential label number (in brackets next to the sample type) will assist you in crossing through the labels that are not required for the 3 children age groups.
The following labels are **NOT** required for:

7 – 15 years	**4 – 6 years**	**1.5 – 3 years**
E N2 (4)	E N2 (4)	E N2 (4)
LH N3 (9)	LH N2 (8)	LH N2 (8)
LH WB (15)	LH N3 (9)	LH N3 (9)
E1 (16)	F N1 (10)	F N1 (10)
E2 (17)	LH WB (15)	LH WB (15)
LH9 (27)	E1 (16)	E1 (16)
SE3 (30)	E2 (17)	E2 (17)
SE4 (31)	LH5 (23)	LH5 (23)
	LH6 (24)	LH6 (24)
	LH7 (25)	LH7 (25)
	LH8 (26)	LH8 (26)
	LH9 (27)	LH9 (27)
	SE3 (30)	SE3 (30)
	SE4 (31)	SE4 (31)
	F1 (32)	F1 (32)
		U1 (33)
		U2 (34)
		U3 (35)
		U4 (36)
		HNR U1 (37)
		HNR U2 (38)

The top two label sections, i.e. serial number and sample type can be crossed through – the bar code should not be crossed through (see below). Crossing through the serial number and sample type so they become illegible should also be avoided. Labels remaining on the strip include those for Monovettes and micro tubes not needed clearly marked by a diagonal line as shown below. The lab is

instructed to return those with the samples to HNR (see also next section). The other remaining valid labels will be used by the field laboratory to label the microtubes for plasma and serum storage.

15.7.3 Labelling blood tubes

For each respondent you will be given a pre-packed set of blood specimen tubes (Monovettes) and a pre-packed set of empty storage tubes that you **must pass on to the field laboratory** when you deliver the filled Monovette tubes. See chapter 18 'Despatching Blood Samples'.

The plastic bag the Monovettes and empty storage tubes are packed in will show the corresponding age range and on the Monovette packs only, the expiry date of the tube with the shortest expiry date. Please check the date and if the expiry date has passed, use a different pack. The expired Monovette tube set should be returned to the Brentwood office.

It is your responsibility to label the Monovette tubes **only**. We recommend that for child respondents you prepare the phlebotomy visit by crossing out the labels not needed as described above. As there are no spare labels, the Monovette tubes should only be labelled **after the blood is taken**.

The correct label for each tube should be peeled off and the top of the label should be positioned onto the tube first and then wrapped round the tube horizontally, ensuring the label does not crease. If applied correctly even on the smallest tube there is no risk of overlap that would obscure any label information.

Position the pre-printed label on the Monovette tubes so that there is sufficient space left to write on 'NDNS' as a sample identifier and the 'date of birth' of the respondent next to the bar coded label on the tube. Use the waterproof pen provided to write the DoB onto the tubes.

It is very important that the correct labels are used for each respondent. If incorrect serial numbers/labels are used there is a risk of matching the blood results to the wrong respondent and the respondent's GP could be sent the wrong results, possibly leading to unnecessary worry or a problem not being picked up.

Please be aware that 6 labels (No 33 to 38) at the bottom of the label strip are for the 24 hour urine collection.

Please remember to take the label strip to all visits, especially if blood sampling and 24hr urine are being carried out at different visits.

Label strips for respondents that do not consent to either urine or blood sampling or both should be disposed of with your household waste as soon as their non-participation in these procedures has been confirmed. This minimises the risk of mixing up labels for new respondents.

15.8 Protocol for taking the blood sample.

Before taking blood, check that the respondent has understood the purpose of the blood sample, and the protocols for taking it, and read the information leaflets. You will also obtain the necessary consents and follow the protocol outlined below:

- Check one last time if the respondent has a bleeding or clotting disorder, is on anticoagulant drugs or has ever had a fit. If such a problem is identified then do not attempt to obtain a blood sample.

- Follow appropriate protocols if respondent is diabetic (see section 15.2.2).
- Explain the purpose and procedures for taking blood.
- If aged 4+, check not had anything to eat or drink for 8hours. If not fasted, ask to make a new appointment if respondent still willing to provide a fasting blood sample.
- If respondent is aged <16, explain the option of using Ametop (also see section 15.9).
- Obtain necessary written consents (see section 15.6).
- Prepare the phlebotomy items required, for ready accessibility.
- Make sure that the respondent is at ease and seated comfortably or reclining for the phlebotomy procedure and ensure they cannot hurt themselves if they should faint.
- Ask the respondent to roll up their left sleeve and rest their arm on a suitable surface. Ask them to remove their jacket or any thick clothing, if it is difficult to roll up their sleeve.
- The antecubital fossae may then be inspected. It may be necessary to inspect both arms for a suitable choice to be made, and the respondent may have to be repositioned accordingly. Do **not** ask the respondent to clench his/her fist.
- Select a suitable vein and apply the tourniquet around the respondent's arm, using minimal pressure and for the shortest duration of time. Do not leave the tourniquet in place for longer than 2 minutes.
- Ask the respondent to keep his/her arm as still as possible during the procedure.
- Put on your gloves at this point.
- Clean the venepuncture site gently with an alcohol swab. Allow the area to dry completely before the sample is drawn.
- Make sure the Sharps bin is readily available to receive used Multifly or other needles, and take the usual rigorous precautions against needle-stick accidents. Never resheath a used needle.
- Tape the Multifly to the arm with Micropore tape across only half the width of the butterfly section, and with one end folded over, so as to make a non-adhesive flap for easy removal.
- Collect the blood samples according to priority by placing the specimen tubes in the correct order in the sample tray provided.
- You may use the Monovettes in the 'vacuum' mode, by withdrawing the plunger to the 'click'-point. It is a good practice to attach the first Monovette to the Multifly before insertion into the vein: this ensures a 'flash' of blood when the needle enters the vein.
- Check for plaster allergies before applying a plaster. If allergic, use a cotton ball secured with micropore tape.

- Ask the respondent to press afterwards on the bleeding point with their arm slightly raised, which helps reduce bruising.

- Mix all tubes by gentle inversion five times except for the white and brown topped serum tubes (which should not be inverted).

- Record details in CAPI.

15.9 Ametop gel

15.9.1 Use of Ametop gel

All children (aged 15 and younger) who consent to give a blood sample must be offered a local anaesthetic; Ametop gel. Ametop gel cannot be used on open wounds, eczematous skin, or if the respondent has had an allergic reaction to any local or general anaesthetic. This means that you may not take a blood sample from these respondents, unless they consent to giving a sample without using Ametop.

Ametop is a prescription medication and contains amethocaine (the active ingredient), which is applied to the skin. It is important that you ask the question below (also within CAPI) to determine whether the respondent has any known anaesthetic allergies.

> *Has the person giving this blood sample ever had a bad reaction to a local or general anaesthetic bought over the counter at a chemist, or given by a doctor, dentist or in hospital?*

Use a new Ametop tube for each respondent and make sure you remove tubes from the household on completion of phlebotomy. For safety, Ametop must not be left lying around where young children could get at it. Any Ametop tubes you have left at the end of your assignment should be returned to the Brentwood office.

15.9.2 The pros and cons of using Ametop gel

The advantages of Ametop are that it reduces sensation of needle prick, it is easy to apply and it is generally safe.

One disadvantage is that it takes 30 minutes to work, and so may increase anxiety. Ametop gel also has minimal side-effects and occasionally mild local skin reactions are experienced in people known to be allergic to similar drugs. Other possible side effects include reddening of skin (this is the action of the amethocaine & is to be expected) and a slight swelling or itching where the gel has been applied.

None of the local skin side-effects (if they occur) requires treatment. The reddening will disappear by itself over a period of hours. A local allergic reaction may involve itching, but is unlikely to require treatment. In the very rare instance of a blister forming, remove the Ametop immediately.

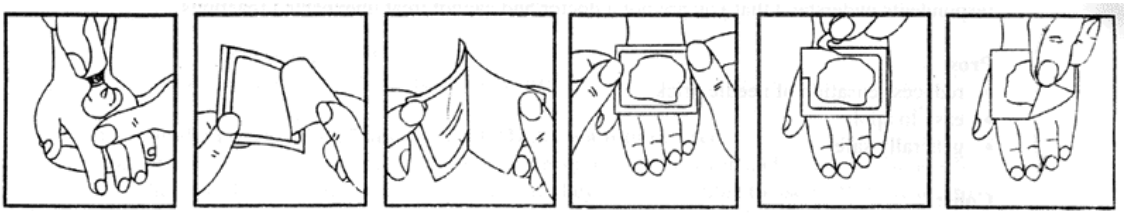
You will need to explain the pros and cons of using Ametop to each respondent and parent, in addition to giving them the leaflet to read. It is important that respondents understand that you are not a doctor and cannot treat unexpected reactions.

15.9.3 Applying Ametop gel

Ametop gel must only be applied to healthy skin; therefore it must not be applied to sore or broken skin (eg. eczema or cuts). Make sure the Ametop gel is kept away from eyes or ears.

If the young person requires Ametop to be applied prior to venepuncture, inspect the antecubital fossae and decide which arm you will use for blood-taking. If both arms are suitable, use the left arm.

Apply Ametop gel over the antecubital fossa. Cover with a Tegaderm dressing (a vapour permeable and self-sticking film dressing) to keep the Ametop in place. See details about how to apply Ametop below. **Please note the illustration shows** Ametop **being used on the hand.** ***National Centre* policy is to only take blood samples from the arm.**



1. Squeeze ¾ of a tube in a mound on the area to anaesthetised. **Do not rub in.**

2. Peel the beige coloured 'centre cut-out' from the dressing.

3. Peel the paper layer marked 3M Tegaderm from the dressing.

4. Apply the adhesive dressing with its paper frame to cover the Ametop. **Do not spread the gel**.

5. Remove the paper frame using the cut mark. Smooth down the edges of the dressing carefully and leave in place for 30 minutes. The time of application can be written on the occlusive dressing.

6. After 30 minutes (max. 60mins), remove the dressing. Wipe off the Ametop. Clean entire area with alcohol and begin procedure.

As you may well be aware, removing the Tegaderm is sometimes painful so take care on hairy arms!

NB. THE CONCEPT OF BLOOD TAKING AND USE OF AMETOP GEL MUST NOT BE RAISED WITH THE RESPONDENT BEFORE THE APPROPRIATE POINT IN THE CAPI SCHEDULE. DO NOT INTRODUCE BLOOD TAKING BEFORE THIS, AS THIS MIGHT RISK AFFECTING OTHER MEASUREMENTS (E.G. BLOOD PRESSURE).

YOU MUST NOT APPLY AMETOP GEL TO ANY RESPONDENT BEFORE YOU ARE PROMPTED TO DO SO IN THE CAPI SCHEDULE.

15.10 Taking blood from children

Unless the NDNS nurse is a trained paediatric phlebotomist, bloods from those aged 10 and younger will be taken by a trained paediatric phlebotomist. NDNS nurses will be taking blood samples themselves from those aged 11 and over. It is important to make the child feel as comfortable and as at ease as possible. Smiling, making eye contact and speaking so that the child can understand easily are ways to facilitate this. Also, ask the child for permission to do something rather than insisting or telling. This can encourage a sense of control in the child and minimises fear.

Precautionary Restraint (A.K.A. Cuddle Restraint)
If the parent/guardian is willing (note this is optional), they can help you to gently restrain the child to reduce any accidents due to pulling away at the pin prick or panicked movements. Ask the child to sit on the parent's lap. The child should be sitting so that their legs are between the parent's legs. The child should have their arm wrapped around the parent's back and vice versa for the parent. This exposes the chosen arm to the nurse while occupying the child's arms and legs.

NOTE: It is important to ask the child to sit on the same side of the parent as the arm identified for venepuncture.

15.11 Scheduling appointments

Due to restrictions on when laboratories can process samples and the fact that the vast majority of respondents will be providing fasting samples, **blood sampling can only take place on Monday-Thursday mornings.**

We appreciate that these restrictions mean you will need to make a second or even third visit to a household to collect blood samples (e.g. you may have to make one evening visit to collect all the measurements except the blood sample then another morning visit to take the blood sample(s)).

In order to minimize the number of visits, if a household contains two respondents you should schedule appointments for when both respondents are available.

When a household contains a respondent aged 10 or younger, you also need to schedule the blood taking appointment to fit in with the availability of your paediatric phlebotomist partner (see section 15.12)

15.12 Liaison with paediatric phlebotomist

Blood from young children, aged 10 or younger, will be taken from someone with recent experience in paediatric phlebotomy. If this is not you, you will be allocated a paediatric phlebotomist partner who will accompany you on visits to take blood from young children.

To make sure that this liaison works effectively, it is important that:
1) The interviewer give you advance notice of households where they have selected a child aged 18 months to 10 years
2) You always log on to the host machine before going to an address to check the age of the respondent.

The earlier you know whether you have a child aged 18 months to 10 years, the better. This means both you and the phlebotomist, as well as the office, can be better prepared to deal with this. As soon as you know you will be visiting an address with a child aged 18 months to 10 years, you should call:

the Blue Team at Brentwood

The team has a list of paediatric phlebotomists who have been recruited and trained for NDNS. They will be able to tell you the name, phone number and address of the best placed phlebotomist.

You should then call the phlebotomists to make them aware that you potentially have an address where there might be some work for them to do. At this initial contact, you should ascertain the phlebotomists general availability during the fieldwork period (e.g. any days when the phlebotomist is on holiday or otherwise engaged). This will help when arranging blood-taking visits.

During the first visit when willingness to give a blood sample is ascertained, you can call the phlebotomist to arrange the follow-up visit whilst you are still in the household. Ideally, you will have the phlebotomist availability in advance and can make an appointment then and there. If this is not possible, you will need to arrange the visit as soon as possible afterwards and confirm details with the household over the phone.

Important points when working with a phlebotomist:

- The NDNS nurse is responsible for providing and taking all equipment, including tubes, labels, and needles to the respondent's address.
- The NDNS nurse is responsible for obtaining written consent and making sure signed consents are obtained in the consent booklet.
- The NDNS nurse is responsible for entering information into the laptop and must follow the usual blood taking block in the CAPI.
- The phlebotomists will be asked to complete and sign a paper version of the venepuncture checklist. NDNS nurses will need to enter this information into the CAPI and should post the paper version to the office.
- The NDNS nurse is responsible for all labelling, despatch and delivery of samples.

In essence – the phlebotomists will take the blood sample only – the NDNS nurse does everything else. This is because you are more experienced and have better training in all these areas.

15.13 Blood sampling token of appreciation

Respondents of all ages will receive £15 in high street vouchers as a thank you for providing a blood sample. Remember this should **not** be presented as 'payment' but as a token of appreciation. Vouchers will be sent out from the office but you will need to complete the **pink** carbonised promissory note, leave the bottom copy with the respondent and send the top (pink) copy back to Brentwood. **Receipt of the promissory note in the office will trigger the vouchers being sent out so please do remember to return each one to Brentwood.**

15.14 Other important points

Please refer to the Nurse Protocols for important information regarding:

- Venepuncture checklist (16.8.1)
- Fainting respondents (section 16.8.2)
- Needle stick injuries (16.8.4)

Comment [c1]: Is there another document that this refers to?

Section 16.8.3 of the Nurse Protocol also provides general information regarding the handling and disposal of needles and other materials. Also note that for NDNS, sharps bins can be filled with needles from several respondents and taken to the local field laboratory for disposal when full. Other contaminated waste generated should be placed in the biohazard labelled mini-grip bag provided and taken to the local field laboratory for disposal.

16 LABELLING & DESPATCH OF BLOOD SAMPLES

Most blood tubes (Sarstedt Monovettes®) will be taken by you to the field laboratories, for the blood to be processed; but some will need to be sent in the post to Addenbrookes Hospital, Cambridge.

It is absolutely crucial that tubes are delivered to the correct destination.

16.1 Despatching blood samples to Addenbrookes

16.1.1 Overview

The type of blood tubes to be posted to Addenbrookes depends on the age of the respondent and is summarised in the table below.

Tube	**No of tubes**	**Goes to**	**Label**
Adults: 16+ years			
2.6mL EDTA blood tube (**red** top) 4.7mL serum blood tube (**brown** top)	1 1	Addenbrookes Addenbrookes	E N1 SE N1
Children: 7-15 years			
2.6mL EDTA blood tube (**red** top) 2.6mL serum blood tube (**brown** top)	1 1	Addenbrookes Addenbrookes	E N1 SE N1
Children: 1.5-6 years			
1.2mL EDTA blood tube (**red** top) 1.1mL serum blood tube (**brown** top)	1 1	Addenbrookes Addenbrookes	E N1 SE N1

It is essential that the tubes are properly labelled as the Addenbrookes pathology laboratory will be receiving blood tubes from many different studies and respondents from around the UK.

16.1.2 Packaging the tubes for posting

The packaging for posting the tubes has to comply with Royal Mail guidelines. The packaging consists of the following:

- *Primary receptacle* – blood-filled Monovette tube
- *Secondary packaging* – Noax tube (recyclable)
- *Rigid outer packaging* – plastic 'video-cassette' box
- Labelled jiffy bag

Each blood-filled Monovette tube must be placed into a Noax tube (screw cap) before placing it into the rigid outer box. Place the rigid outer box and the 3 carbonised copies of the completed Addenbrookes biochemistry despatch note (see next section) into the labelled jiffy bag and post it.

Tubes from respondents from the same household going to Addenbrookes can be posted together. Documentation for both respondents must be included in the packet.

The blood samples must be posted as soon as possible after they were taken, so that they arrive at Addenbrookes within 24 hours. The jiffy bags will fit in a post box. Before posting you must always check that you have not missed the same day collection. Only if it is unlikely that you will find a post box with a same day collection that has not passed yet in an acceptable driving distance can you post the sample in a post-box where collection will take place the next day.

16.1.3 Blood Sample Despatch Notes for Addenbrookes

The Office Consent booklet contains three carbonised copies of the Addenbrookes biochemistry despatch note (Biochemistry Request – 952), **all** of which **must** be enclosed with samples posted to Addenbrookes.

You should clearly and legibly complete the following information in the top section of the **first** copy of the biochemistry despatch note (the bottom section will be completed by the laboratory):

- The respondent's date of birth.
- Whether the respondent is male or female.
- Whether the respondent provided a fasting or non-fasting blood sample.
- The date the sample was taken.
- The time the sample was taken.
- Whether a full or partial sample was obtained for **each** of the two tubes.

You should then affix the following labels onto the three copies of the despatch note:

- **FIRST COPY:** Affix serial number label **AddxB1 (11)** in the specified box.
- **SECOND COPY:** Affix serial number label **AddxB2 (12)** in the specified box.
- **THIRD COPY:** Affix serial number label **AddxB3 (13)** in the specified box.

Please ensure that you complete all necessary information fully as each part is a vital piece of information.

IMPORTANT: Please remember to fill in the carbonised despatch notes contained in the Office Consent booklet – Addenbrookes need all three of these in order to process the samples correctly. If they do not receive all three copies, correctly labelled and completed, they will not process the samples.

When the samples have been posted, you should record details of the samples collected, and the date of posting to Addenbrookes on the "Despatch Note for all Samples" form (DESP OFFICE) which is at the back of the Office Consent booklet.

16.2 Taking blood samples to local field laboratory for immediate processing

16.2.1 Overview

Most blood tubes will be taken to the field laboratories, for the blood to be processed. The number of blood tubes to be taken to the local laboratory depends on the age of the respondent and is summarised in the table below.

Tube	Goes to	Label
Adults: 16+ years		
4.5mL serum (white top)	Field Lab	SE N2
7.5mL Li Hep TM (orange top)	Field Lab	LH N1
7.5mL LiHep TM (orange top)	Field Lab	LH N2
1.2mL Fluoride (yellow top)	Field Lab	F N1
4.5mL Li Hep (orange top)	Field Lab	LH N3
2.6mL EDTA blood tube (red top)	Field Lab	E N2
Children: 7-15 years		
7.5mL Li Hep TM (orange top)	Field Lab	LH N1
2.7mL serum (white top)	Field Lab	SE N2
2.7mL Li Hep (orange top)	Field Lab	LH N2
1.2mL Fluoride (yellow top)	Field Lab	F N1
Children: 1.5 to 6 years		
4.5mL Li Hep (orange top)	Field Lab	LH N1
2.7mL serum (white top)	Field Lab	SE N2

16.2.2 Packaging and delivering the tubes to the field laboratory

The samples must be delivered to the laboratory within **2 hours** of the sample been taken. You must not take a blood sample if you cannot deliver it to the local laboratory within this time.

After the blood samples have been taken and when transporting them to the field laboratory it is important that they are kept in the cool box provided. The samples for the respondent should be put in a plastic bag and placed in the cool box so they stay upright during transportation. If two respondents (from the same or different households) have given blood samples in a morning, their samples can be transported together in the cool box; in this case it is particularly important that the samples are labelled and bagged correctly.

Each respondent's set of samples must be handed over to the designated person at the field laboratory together with the relevant despatch note, FL2 (see next section), the corresponding set of labelled pre-packed empty storage tubes, and remaining labels.

16.2.3 Blood Sample Despatch Notes for field laboratory

You should clearly and legibly complete all parts in section 1 of the Despatch Note. Always complete ALL sections in full as each piece is a vital bit of information (section 2 will be completed by the laboratory).

16.2.4 Liaison with field laboratory

Samples may be delivered to your designated field laboratory on Mondays to Thursdays in the morning. It is very important that you **always notify the field laboratory of sample deliveries in advance**. Delivery times should be discussed with your contact person. As you will usually be taking fasting blood samples in the morning there is minimal risk that you are likely to deliver samples outside the normal opening hours of the laboratory but if this does happen (e.g. you get stuck in

traffic), you must endeavour to contact the field laboratory to let them know. You must also notify the laboratory immediately you know that a scheduled delivery is not going to take place, e.g. because of a broken appointment or the respondent not being able/willing to provide a sample. This notification is a matter of courtesy to save the laboratory preparing the stabilising agents unnecessarily and then waiting for a delivery that is never going to arrive.

Contact details (i.e. name, address and telephone number) of the local laboratory recruited for your area will be given in a separate document, along with any special delivery instructions. Each document contains the name and telephone number of the contact person (including a deputy) at the local laboratory, opening hours of the laboratory, and any helpful information on parking and location.

Any difficulties encountered with the local laboratory during the study should be reported to HNR as soon as possible. It is the responsibility of HNR to resolve any difficulties between local laboratories and study nurses. You will be provided with a named contact person at HNR that can be contacted by phone or e-mail.

Please remember to record details of the samples collected on the “Despatch Note for all Samples” form (DESP OFFICE) which can be found at the back of the Office Consent booklet.

17 24-HOUR URINE SAMPLES

17.1 Introduction

The 24 hour urine component of the NDNS is intended to provide accurate information about the levels of specific nutrients in people's diets. Previous studies have found 24 hour urine collection to be a more accurate method of collecting this information than taking spot samples, as nutrient levels such as sodium and potassium fluctuate in the urine during the day, regardless of dietary sodium.

The 24 hour urine collection will be used to measure nutrients including sodium (a marker of salt intake), potassium (a marker of fruit and vegetable intake), urea and nitrogen (represents a measure of protein intake).

We are **not** testing for drugs or viruses.

Respondents will receive £15 in high street vouchers as a thank you for taking part in the 24 hour urine part of the study.

17.2 Eligibility for 24 hour urine collection

17.2.1 General eligibility

All respondents aged 4 years and over are eligible to provide a 24 hour urine sample, with the exceptions outlined in the Nurse Protocol, section 17.2, and those listed below.

17.2.2 Project specific eligibility

- Children aged 4 and over who are fully potty trained (i.e. do not wear nappies or training nappies during the day or at night) ***are*** eligible
- Respondents who refuse to take PABA (para-aminobenzoic acid) tablets but are willing to carry out the 24 hour urine collection ***are*** eligible
- Respondents who CANNOT take PABA (e.g. those allergic to hair dye, sunscreen or vitamins or those on sulphonamides) but are willing to carry out the 24-hour urine collection without PABA ***are*** eligible

17.3 Overview of 24 hour urine procedures

A 24 hour urine sample will be collected from those aged 4 years and above (except for those who still wear nappies or training nappies during the day or at night).

Respondents will be asked to take three para-aminobenzoic acid (PABA) tablets evenly throughout the waking hours of the day, which enable analysis of the completeness of the urine sample. Please refer to Section 16.4.1 of the Nurse Protocol document for further information about PABA.

You should discuss with the respondent when to collect their 24 hour urine sample. It is anticipated and recommended that children collect urine on non-school days only. Due to practicalities the majority of adults will also collect on non-working days. However, it is important that some samples

are collected on a weekday as our diet differs between weekdays and weekends. Therefore, adult respondents willing to collect on a weekday should be encouraged to do so.

During the period of collection, the respondent will be asked to pass all urine in the plastic jug and then pour it into the large plastic container using the funnel provided. They should start collecting urine to include the second morning void and stop collecting after their first morning void the following day. Respondents will also be provided with a 2.0 litre container for collection outside of the home.

You will then take 4 aliquots of urine from the 24 hour collection and these will be mailed to HNR in Cambridge where they will be frozen for temporary storage prior to analysis.

17.3.1 Further conditions for collection

- It is recommended that children collect on non-school days
- Females will be instructed to collect urine on non-period days

An outline of the 24 hour urine collection protocol and tasks carried out at each visit are listed below:

During the first nurse visit:

- ❑ Assess eligibility for 24 hour urine collection
- ❑ Give respondents the 24 hour urine leaflet and explain procedure in detail.
- ❑ Answer any questions they may have
- ❑ Obtain written consent for the respondent to take PABA.
- ❑ Obtain written consent for lab analysis of the urine collection.
- ❑ Agree a day for the 24 hour collection
- ❑ Arrange an appointment with respondent to return to collect the urine sample and despatch. This should be on the same day the collection is completed or latest the day after the collection.
- ❑ Complete the first part of the 24 hour urine record sheet.
- ❑ Give respondents their equipment.
- ❑ If there are 2 respondents, use yellow coloured sticky dots on equipment and urine record sheet for children so that there is no risk of respondents mixing up their collection equipment
- ❑ Record details in CAPI.

The 24 hour urine sample collection:

- ❑ Respondents collect urine from the second urine pass of the morning onwards.
- ❑ Respondents to take 3 PABA tablets. Please refer to Nurse Protocol Section 16.4.1 for more information about PABA.
- ❑ Respondents pass all urine into the 1 litre plastic jug and then pour into the 5 litre collection container provided using the funnel.
- ❑ Please warn respondents that the 5 litre plastic bottle contains preservative and could cause skin or eye irritations by contact or could cause stomach upset if swallowed so they should not pass urine directly into the 5 litre container.
- ❑ Respondents to use the 2.0 litre container to store urine if the 5 litre bottle is filled to capacity only.
- ❑ Please instruct respondents to store their collection in a cool dry place until you arrive to collect the sample.

During the second nurse visit:

- Explain that you are there to sub-sample their 24 hour urine sample.
- Weigh, mix and collect **four** aliquots of urine. See Nurse Protocol Section 16.5.3, and section 19.4 below for further instructions.
- Label and package samples for despatch [see section 17.7 below]
- Check 24 hour urine record sheet and enter details into CAPI.
- Thank respondents for their time and remind them that their gift vouchers will be posted to them from the office.

Immediately after the visit:

- Send packaged samples and associated documentation to HNR immediately. However, if the second visit takes place on a Saturday, the samples should be posted on Monday morning. Store the samples in a cool dry place between the second visit and postage.

17.4 Sub-sampling

You should always sub-sample from the 5 litre bottle of urine – this is the bottle that contains the boric acid. If the respondent has also collected urine in the 2 litre bottle, you should weigh both bottles separately before mixing together (if possible) to sub sample the urine. You should weigh each bottle twice and record the weights in CAPI and on the despatch sheet. If all the urine in the 2 litre bottle can be transferred into the 5 litre bottle, weigh first and then transfer. Mix the urine before sub-sampling from the 5 litre bottle **only**. If all the urine in the 2 litre bottle **cannot** be transferred into the 5 litre bottle, do not attempt to transfer. Note the weight of the 2 litre bottle but **only** sub-sample from the 5 litre bottle. The 24 hour urine sample despatch note (DESP URINE) in the office consent booklet also guides you through this procedure. Once you have mixed the urine, take **4 sub-samples** and discard the remaining urine and equipment as per instructions provided in your Nurse Protocol.

17.5 Equipment and Consumables

You will be provided with the following equipment for the 24 hour urine collection:

First nurse visit:

- 3 PABA tablets
- 5 litre container
- 2 litre container
- 1 litre plastic jug and resealable bag
- Funnel and resealable bag
- Yellow sticky dots
- Plastic carrier bags
- Safety pin
- Urine record sheet

Second nurse visit:

- Scales
- 4 x 10ml Sarstedt syringe-type urine Monovettes, plus extension straws
- Disposable gloves
- Disposable work mat
- Disposable apron
- Postal container and packing material

- Labels for syringe-type Monovettes
- Despatch sheet (DESP URINE in Consent booklet: Office copy)

17.6 Obtaining written consents for the 24 hour urine collection

Written consents are required for the following:

- Taking PABA tablets to support the 24 hour urine collection
- Laboratory analysis of the 24 hour urine collection
- Storage of the 24 hour urine collection for tests in the future relating to nutrition and health

There are **two** versions of the 24 hour urine consent forms in the consent booklets:

1. CF (A1) is for respondents aged 16+
2. CF (C1) is for respondents aged 4-15 years

The appropriate 24 hour urine consent form must be signed at the visit at which 24 hour urine collection is agreed.

The different sections of the consent forms should be pointed out to the respondent and the form should be given to the respondent to read. After the respondent (parent/guardian) has read the consent form please encourage him/her to ask any questions they may have with regards to the procedure. Once the respondent is content to sign please ask them to initial all those boxes (procedures) they would like to consent to.

You must check that all appropriate boxes are initialled and signatures collected. If respondent is aged 4-15 years, you must make sure that you obtain the signature of their parent or the person who has parental responsibility. Children should be encouraged to provide written assent if they wish (and are able) to do so.

17.7 Labelling the 24 hour urine aliquots

17.7.1 Introduction

All labels are pre-printed for a particular respondent. This means that you will receive sets of labels that will not be used if the respondent does not provide a 24 hour urine sample. These can be disposed of.

On each label there will be:

- the serial number (including the respondent number), followed by the check letter
- a code showing the sample type (see table in section 18.4) and the sequential label number in brackets
- a barcode with unique number (for HNR's use).

The labels will be used on documents and on urine and blood tubes. For each respondent a full set of labels (38) in a pre-specified order will be provided rolled up as a continuous strip. This strip provides all labels needed by the nurse and the field laboratory for processing the urine and blood samples.

CAPI will guide you through which labels are to be used for each respondent, and which should be affixed to which tube or sent onto the laboratory. The protocol is also outlined in the following section.

Note that the full set of labels covers blood as well as 24hr urine samples.

17.7.2 Identifying labels to be used

The 6 labels required for the urine collection are part of the complete label strip provided for urine and blood samples for each respondent. The urine labels are sequentially numbered from 33 to 38 as outlined below:

Label	**Function**
U1 (33)	apply to Urine Monovette
U2 (34)	apply to Urine Monovette
U3 (35)	apply to Urine Monovette
U4 (36)	apply to Urine Monovette
HNR U1 (37)	apply to respondent urine collection sheet
HNR U2 (38)	apply to urine dispatch sheet

You must remember to take the label strip to all visits, especially if blood sampling and 24hr urine are being carried out at different visits.

Label strips for respondents that do not consent to either urine or blood sampling or both should be discarded of with your household waste as soon as their non-participation in these procedures has been confirmed. This minimises the risk of mixing up labels for new respondents.

The correct label for each tube should be peeled off and the top of the label should be positioned onto the tube first and then wrapped round the tube horizontally, ensuring the label does not crease. If applied correctly even on the smallest tube there is no risk of overlap that would obscure any label information.

It is very important that the correct labels are used for each respondent. If incorrect serial numbers/labels are used there is a risk of matching the 24 hour urine results to the wrong respondent**.**

17.7.3 Despatch of the 24-hour urine aliquots

Please ensure that all samples are properly sealed. Each of the four samples will be placed into a recyclable despatch tube that contains an absorber (in case of leakage) and packaged into the postal box provided. The box is then placed in the pre-labelled padded envelope and posted to HNR.

The packaging consists of the following:

- A primary receptacle, i.e. a urine filled Monovette tube
- A secondary packaging, i.e. Noax tube
- A rigid outer packaging, i.e. a plastic box that looks exactly like a video box
- A pre-labelled jiffy bag

Samples must be sub-sampled as soon as possible after the respondent has finished their collection and despatched within 48 hours of the end of the 24-hour collection. The delay may be longer if the second visit takes place on a Saturday, but the samples should be posted on Monday morning. The samples should be stored in a cool dry place between the second visit and postage.

17.8 Scheduling appointments

In order to minimise the number of visits, if a household contains two respondents you should, as far as possible, schedule appointments for when both respondents are available. If the respondent is also providing a blood sample , if possible try and schedule the appointment for 24 hour urine collection and taking blood for the same time.

17.9 Other important points

Section 16 of the Nurse Protocol provides details of the procedures for 24 hour urine collections including:

- General exclusion criteria
- Consent
- Equipment
- PABA blister pack and procedure for taking PABA
- Respondent procedure for collecting the sample
- Nurse procedure for collecting sub-samples

17.10 24 hour urine token of appreciation

Respondents of all ages will receive £15 in high street vouchers as a thank you for taking part in the 24 hour urine part of the survey. Remember this should **not** be presented as 'payment' but as a token of appreciation. Vouchers will be sent out from the office but you will need to complete the **green** carbonised promissory note, leave the bottom copy with the respondent and send the top (green) copy back to Brentwood. **Receipt of the promissory note in the office will trigger the vouchers being sent out so please do remember to return each one to Brentwood.**

18 RETURN OF WORK

18.1 Nurse Record Form

Recording the outcome of your attempts to interview and measure

You should complete sections 5 to 9 of the Nurse Record Form (NRF) to report to the office the outcome of your attempts to interview persons in households at which the interviewer obtained at least one interview.

Question 5 Record all attempts to make contact with the household. Note all personal visits and telephone calls, even if there was no reply.

Question 6 Complete a column for each respondent in the household listed by the interviewer in the grids on page 2, and coded 1 to 3. (Maximum of 2 per household). Your entry here tells the outcome of your attempts to interview these people. The codes in this column are referred to as Outcome Codes.

Enter each person's Respondent Number and first name at the head of the column. Enter them in the order listed on page 2. Then for each person ring one of the codes 800-890 to indicate the outcome of your attempts to interview them.

Some rules:

- Use code 800 if the person was coded 2 or 3 on the grid on page 2. There is nothing for you to do.
- Use code 810 if you went through the whole schedule with the respondent and completed all the relevant questions. This code applies even if the respondent refused any of the measurements.
- If someone breaks an appointment and you never manage to make contact with them again, ring code 850, not code 820.
- A proxy refusal (840) is the situation where someone refuses on behalf of someone else - for example, a husband who says he will not allow his wife to be seen by a nurse. Obviously you should do your best to try and see the person yourself but sometimes this is not possible.
- Codes 860-880 should be used only if the respondent is unavailable for interview for these reasons throughout the whole of your fieldwork period. If they are likely to return, and be fit to be seen, during that time, then try again later.

Question 7: Complete this for each respondent who refused to allow you to interview them (ie those you coded 830-840 at Question 6).

Question 8: Complete this for each respondent coded 850-890 at Question 6.

Question 9: Always enter the number of consent booklets obtained. The office need to know this so they know the number to expect back.

18.2 Returning work to the office

If you are measuring both respondents in a household at one time, post the NRF and the Office Consent Forms back to the office the same day as you take the blood samples to the local laboratory (or in time the following day to catch that day's post). Transmit the nurse schedules on the same day as you post the paper materials.

If you do need to make more than one visit to the household and there is a gap between visits, keep all the work to be returned together for that household. But post it back immediately you have completed your task there. Referral back to GPs and respondents, in the event of any serious abnormalities, can be seriously delayed if work is not returned in time.

Before returning work, check that you have all the documents you should have and that they are properly serial numbered and so on. Check that they match with your NRF entries. You should return an Office Consent Booklet for each person with an Outcome Code of 810.

Send the NRF to the office when you have completed everything you have to do at a household.

- **Please send ALL office consent booklets back to the office by recorded delivery.** It is essential to send them back by recorded delivery – it is very important that we keep such confidential information safe. In addition, it would be very disappointing not to be able to use blood samples that you have worked so hard to get, just because we don't receive the consent booklet.
- **Do not entrust other people to post your envelopes - always post them yourself.**

CAPI questionnaire data will be transferred back to the office via the modem. The computer will decide what to transmit - you do not need to tell it which addresses to take and which to leave. Remember you still need to return the paper documents.

At the end of your assignment, check that you have accounted for all the serial numbers on the Nurse Sample Sheet (NSS). Keep this NSS. It will help sort out queries, should there be any, about work done by you.

APPENDIX A SUMMARY OF NURSE MEASUREMENTS & SAMPLES

Measure	What the measurement is testing	Consent forms	Exclusion criteria	Eligibility criteria	Equipment
Infant length	Measure of infant height	None	None	Infants aged 6 weeks and under 2 years	Rollameter baby measure mat Frankfort place card Kitchen roll
Blood pressure	High blood pressure risk factor for cardiovascular disease	Blood pressure to GP	No pregnant women	Aged 4 and over	OMRON HEM blood pressure monitor Child/small adult cuff (17-22cm) Standard adult cuff (22-32) Large adult cuff (32-42cm) AC adapter
Waist & hip	Measure of distribution of body fat. Important indicator of CVD risk	None	• If respondent is chair bound • Has a colostomy/ileostomy • If respondent is pregnant	Aged 11 and over	Insertion tape (with metal buckle at one end if used)
Fasting Blood sample	Total cholesterol HDL cholesterol Glycated haemoglobin	Blood samples to be taken, test results sent to GP, to store blood and for future analysis	• Clotting or bleeding disorder • Taking anticoagulant drugs • If ever had a fit • Not willing to give written consent • Aged 4 and over, not diabetic and not willing to fast.	Aged 4 and over	Blood collection materials See Nurse Protocols Manual and CPG

Non-Fasting Blood sample	Total cholesterol HDL cholesterol Glycated haemoglobin	Blood samples to be taken, test results sent to GP, to store blood and for future analysis	• Clotting or bleeding disorder • Taking anticoagulant drugs • If ever had a fit • Not willing to give written consent	Aged 1.5-3	Blood collection materials.

24-hour urine sample		Urine samples to be taken, test results sent to GP, to store blood and for future analysis	• Not out of nappies (aged 4-6) • Not willing to give written consent for lab analyses.	Aged 4 and over	24hour urine collection materials.

APPENDIX B NURSE DOCUMENTS & EQUIPMENT

Name of Document	Year 1 colour	Use
Police letter	NDNS headed paper	A letter about the survey which should be passed to the local police station to inform them that the survey is taking place. The interviewer does this, and sends you a copy.
Sample cover sheet	White	The list of addresses in a nurses sample point.
Nurse Record Form (NRF)	Light brown	Nurse Record Form for the nurse to record details of visits made to an address and the outcome of the visits.
No Nurse Visit Sheet (NNV)	Light orange	No Nurse Visit sheet. For interviewers to record information about households where respondents have refused a nurse visit.
Interim appointment form	Pale yellow	This should be completed by the nurse when details are given about a respondent over the telephone.
Broken appointment card	Pale blue	Used for missed appointments – can write message and time of next visit.
Appointment card (for 2nd or 3rd visit)	White	Used for noting down the date and time of the 2nd and/or 3rd nurse visits.
Measurement record card (MRC) – spares	White	Interviewers will usually have started a MRC with a respondent (height and weight measurements) but you will get spare MRCs, just in case respondents have lost their original ones.
Coding prescribed medicines booklet	Pale orange	Used for the coding of prescribed medicines. You will be asked to enter a drug code.
Incident report sheet	White	To be filled in should any serious incident occur during a nurse visit.
Laminated infant Frankfort plane card	Pale green	For use when taking an infant length measurement.

Name of Document	Year 1 colour	Use
Stage 2 leaflet (Adult)	White	Interviewers will leave a copy of the stage 2 leaflet with respondents. Provides information about the nurse visit such as what measurements will be taken and option to send results to GPs. Nurses will ensure that respondents have a copy of the leaflet and will explain in more detail.
Stage 2 leaflet (Child & young person)	White	Interviewers will leave a copy of the stage 2 leaflet with respondents. Provides information about the nurse visit such as what measurements will be taken and option to send results to GPs. Nurses will ensure that respondents have a copy of the leaflet and will explain in more detail.
Stage 2 leaflet (For parents of child & young person)	White	Interviewers will leave a copy of the stage 2 leaflet with parents of younger respondents. Provides information about blood sampling from children. Nurses will ensure that respondents have a copy of the leaflet and will explain in more detail.
Stage 2 information & consents for children & young people	White	Provides information for children about the nurse measurements in simplified terms. Should be used in conjunction with the consent booklets (below).
Consent booklet (respondent copy)	Pink	Before blood samples are taken and 24 hour urine is collected - nurses must obtain written consent in the respondent copy of the consent booklet. The booklet must be left with the respondent.
Consent booklet (office copy)	Cream	Before blood samples are taken and 24 hour urine is collected - nurses must obtain written consent in the office copy of the consent booklet. The booklet includes despatch notes for the labs and office. The booklet must be returned to the blue team.
Ametop gel leaflet	Grey	For respondents under the age of 16.
Token of appreciation (TOA) promissory note (£15)	Pink	For all respondents who provide a blood sample – remember to return the top (**pink**) copy to Brentwood!
24 hour urine leaflet (adult)	White	Provides information about collection of 24 hour urine – use this to explain the protocol and reasons for doing it.
24 hour urine leaflet (young person)	White	Provides information about collection of 24 hour urine – use this to explain the protocol and reasons for doing it.
24 hour urine leaflet (child)	White	Provides information about collection of 24 hour urine – use this to explain the protocol and reasons for doing it.
PABA information sheet	White	Provides information about PABA tablets – use this to explain the protocol and reasons for taking them.
24 hour urine respondent collection sheet	Pale blue	Respondents need to complete this as they are collecting their 24 hour urine sample. Remember to check this when you go back to sub-sample and to send it to HNR with the 4 samples!

Token of appreciation (TOA) promissory note (£15)	Green	For all respondents who take part in the 24 hour urine part of the study – remember to return the top (**green**) copy to Brentwood!

Most of the equipment is described in more detail in the relevant section of the Nurse Protocols Manual, but there is a list of equipment used on NDNS on the following page.

NURSE EQUIPMENT
Pilot bag
British National Formulary (BNF 54), September 2007 version
OMRON HEM-907

Blood collection materials: Monovettes for blood specimen collection:
 	
• Adult bag of 8 tubes (respondents aged 16+)
• Child [1] bag of 6 tubes (respondents age 7-15)
• Child [2] bag of 4 tubes (respondents aged 18 months – 6 years)
  • Tourniquet
  • Hand wash disinfectant
  • Alcohol swabs/cotton wool balls or gauze swabs/plasters
  • Micropore tape
  • Adhesive dressing
  • Ametop gel & tegaderm dressing (See section 15.9)
  • Disposable gloves
  • Sarstedt multifly needles: 21G with 60mm or 200mm tube length and 23G with 60mm tube length
  • Sarstedt fixed needle: 21G and 22G
  • Milton disinfectant
  • Scissors
  • Pen (permanent marker)
  • Biohazard sharps box
• Biohazard labelled mini-grip bag

24-hour collection materials: • 3 PABA tablets • 5 litre container • 2.0 litre container • 1 litre plastic jug and resealable bag • Funnel and resealable bag • Yellow sticky dots • Plastic carrier bags • Safety pin • Urine record sheet • Scales • 4 x 10ml Sarstedt syringe-type urine Monovettes • Disposable gloves • Disposable work mat • Disposable apron • Postal container and packing material • Labels for syringe-type Monovettes
Rollameter baby measure mat & frankfort plane card
Mid-Upper Arm Circumference Tape
Demispan tape
Waist and hip tape

APPENDIX C BLOOD ANALYTES

The list below shows the analytes that the blood samples will be analyses for.

Analyte	What it measures
Total, LDL and HDL cholesterol (fasting)	Raised total cholesterol and LDL cholesterol levels are associated with an increased risk of cardiovascular disease, while HDL cholesterol has a protective role.
Triglycerides (fasting)	Together with total and HDL cholesterol, triglycerides provide a lipid (fat) profile which can give information on the risk of cardiovascular disease.
Glucose (fasting)	A fasting blood glucose level is a marker of diabetes risk.
Glycated Haemoglobin	Glycated haemoglobin is a measure of the respondent's glycaemic status. High levels are indicative of diabetes.
Haemoglobin, ferritin, and transferrin receptors	Haemoglobin, ferritin, and fransferrin receptors are measures of iron status. Frequently, an inadequate iron supply can imply a more general nutritional problem.
C-reactive protein	The level of C-reactive protein in the blood gives information on inflammatory activity in the body, and it is also associated with risk of heart disease.
Plasma Creatinine	Creatinine is a waste product of protein metabolism and is used in the assessment of kidney function. An abnormally high level of creatinine is seen in individuals with kidney insufficiency and failure.
White blood cells	White blood cells are made by bone marrow and help the body fight infection and other diseases. There are many different types of white blood cells all performing different functions.
Homocysteine	Elevated levels of homocysteine have been associated with certain forms of heart disease. In folate or vitamin B12 deficiency homocysteine accumulates in the serum, and concentrations increase.
Folic acid (folate)	Folic acid is a B vitamin. It is used in our bodies to make new cells and helps prevent birth defects of the brain or spine.
Vitamin B12 (cyanocobalamin)	Vitamin B12 is required to make new cells as well as for normal blood formation and function. It is also needed for the normal structure and function of nerves. Dietary intake is exclusively from animal sources, e.g. eggs, milk and meat, and fortified foods.
Vitamin B1 (Thiamin)	Vitamin B1 is required for energy production and carbohydrate metabolism. It is also involved in the normal function of the nervous system and the heart.
Vitamin B2 (Riboflavin)	Vitamin B2 is needed for the release of energy from fats, carbohydrates and protein and the production of red blood cells. It is also needed for the normal structure and function of mucous membranes and skin.
Vitamin B6 (Pyridoxine)	Vitamin B6 is essential for the metabolism of protein. It is also involved in iron metabolism and transport.
Vitamin A and carotenoids	Vitamin A is essential to the normal structure and function of the skin and mucous membranes (*e.g.* lining the digestive system and lungs). It is also required for cell differentiation and therefore for normal growth and development, and for normal vision and for the immune system. Some carotenoids have provitamin A activity. Others don't but most carotenoids act as antioxidants to protect cells against oxidative damage.
Vitamin C	Vitamin C is required for normal structure and function of skin, cartilage and bone as it is involved in the production of collagen - the protein in connective tissue. It is therefore involved in the healing process. It is also involved in the normal structure and function of blood vessels and neurological function. Vitamin C also contributes to the absorption of iron from some food sources, in particular plant foods.

Vitamin D	Vitamin D is formed by the action of ultra violet rays (sun shine) on the skin and this is the most important source for the majority of people as few foods contain significant amounts of vitamin D, e.g. oily fish, eggs and meat. Vitamin D is converted into another (active) form in the liver and then undergoes further changes in the kidney. In this form it works as a hormone in controlling the amount of calcium absorbed by the intestine. It is also essential for the absorption of phosphorus and for normal bone mineralization and structure. Vitamin D is also involved in the process of cell division in many other body tissues.
Vitamin E	Vitamin E is a group of compounds called tocopherols, of which alpha tocopherol is the most active. It acts as an antioxidant and is required to protect cells against oxidative damage by free radicals, for example oxidation of the lipids in the cell membranes.
Minerals Se and Zn	Selenium is a component of some of the enzymes which protect the body against damage due to oxidation (free radical mediated damage). It is also necessary for the use of iodine in thyroid hormone production and for immune system function. Zinc is present in many enzymes and is essential for cell division and, therefore, for growth and tissue repair. It is also necessary for normal reproductive development. Zinc is also required for the functioning of the immune system and in the structure and function of the skin and, therefore, in wound healing.

P2709
Nurse
Measurements

MID-UPPER ARM CIRCUMFERENCE (Ages 1.5-15) PROTOCOL

1. The purpose

The mid upper arm circumference is a key indicator of the nutritional status of children, being reduced substantially in the undernourished and being substantially increased in children who are overweight.

2. Eligibility

MUACInt-ArmRes
All children aged 1.5 to 15 are eligible for this measurement. It is very important that the parent is present during this measurement as you will be asking the child to bare his/her arm.

3. Equipment

You will be provided with a short tape. One end of this tape is broad and on it you will see the words "READ HERE", with a small arrow. This is the start of the tape. You will first use this tape to measure the length of the arm and then, having found the mid point of the arm, you will measure the circumference of the arm.

4. Procedure

It is essential that you follow this protocol precisely so that all nurses take this measurement in an identical way.

The child must have a bare arm and shoulder for this measurement. When you make your appointment, ask the child to wear a sleeveless garment for your visit. Explain to the child and parent the importance of the accuracy of the measurement and that clothing can substantially affect the reading. If the child is wearing a sleeved garment ask her/him to slip their arm out of the garment or to change into a suitable garment.

Where possible, the left arm should always be used. If the left arm cannot be used, e.g. because it is in plaster, then carry out the measurement on the right arm and record that you have done so on the schedule at the question called *CUpMeas*.

Measuring the length of the respondent's upper arm:

1. The respondent should be standing with their left arm across their body and held at a right angle at the elbow.
2. Using the skin marker pen, mark the process of the acromium; this is the bony tip of the shoulder.
3. Mark the process of the olecranon of the child, this is the bony tip of the elbow.
4. Using the paper tape, measure the distance between the two points marked. Divide this measurement in half. This will be the mid point of the upper arm. Mark this using the skin marker pen.

Measuring the respondent's arm circumference:

5. Now let the arm hang loosely by the side, just away from the body. Thread the tape through and slip it up the child's arm to the mid-point you have marked. The tape should be centred on the mid-point mark i.e. it should lie on top of the mark. Check that the tape is passing horizontally about the arm (not sloping) and that it is in continuous contact with the skin. It should not be loose, but neither should it be puckering the skin. Read off the measurement where the "READ HERE" arrow appears on the tape.
6. Enter the measurement on the nurse schedule in centimetres and millimetres, eg 20.3cm. Should the measurement lie between two millimetres, then round it to the nearest even millimetre. For example if the measurement is half way between 20.3 and 20.4 round up to 20.4. If the measurement is between 20.8 and 20.9 round down to 20.8.
7. Record the measurement to the nearest even millimetre. *Always record the response to one decimal point (eg 15.4). The computer will not allow you to enter a response without a decimal point, so even if the measurement comes to, say, exactly 16cm, you must enter '16.0'.* If you do enter a measurement ending in '.0', the computer will ask you to confirm that you meant to do so.
8. Repeat <u>all</u> the above procedure (points 1 to 6) to obtain a second measurement. Explain that this is to improve accuracy. **DO NOT** re-measure the circumference using the original marks - remark the positions.
9. If your second measurement differs from the first by 1.5cm or more, the computer will give you an error message, and instruct you to either amend one of your previous responses, or to take a third measurement.
10. Indicate on the nurse schedule the position of the child when the measurement was taken. Also give reasons why if it was not possible to take a measurement or if only one measurement was obtained.
11. Code each measurement's reliability. 'Unreliable' does not refer to any measurement errors that you may have made but rather to bulky clothes being worn or the child fidgeting and moving too much.
12. *Amend a previous response if:* you have made a mistake when entering the measurement, eg entered '15.2' instead of '25.2'.
13. *Take a third measurement if:* there is another reason for the measurements being different. If in doubt, take a third measurement rather than over-writing one of the previous two. The computer will automatically work out which two to use.
14. Offer to write the measurements onto the child's MRC. If the parent/child would like the measurement in inches, use the conversion chart which is in the back of the drug coding booklet.
15. The computer will display the two measurements on screen for you to copy onto the MRC. If you took three measurements, it will only display the first two.

INFANT LENGTH MEASUREMENT PROTOCOL

Having this measurement for those aged under 2 means that the growth of infants can be monitored. The interviewer measures all respondents' weight, but only the height of those aged 2 and over. Because special equipment is required for measuring supine infant length, the nurse does this measurement.

1. Eligibility

This measurement is for infants aged between 18 months and 2 years. This is based on age at the original interview.

2. Equipment

Rollameter Baby Measure Mat
Frankfort Plane Card
Kitchen roll

3. Procedure

Infants (children under the age of 2) should be measured lying down (supinely). Two people are required for the task, yourself and the child's parent.

1. Ask the parent to remove any bulky clothing or shoes that the infant is wearing. It is not necessary for them to remove the infant's nappy.

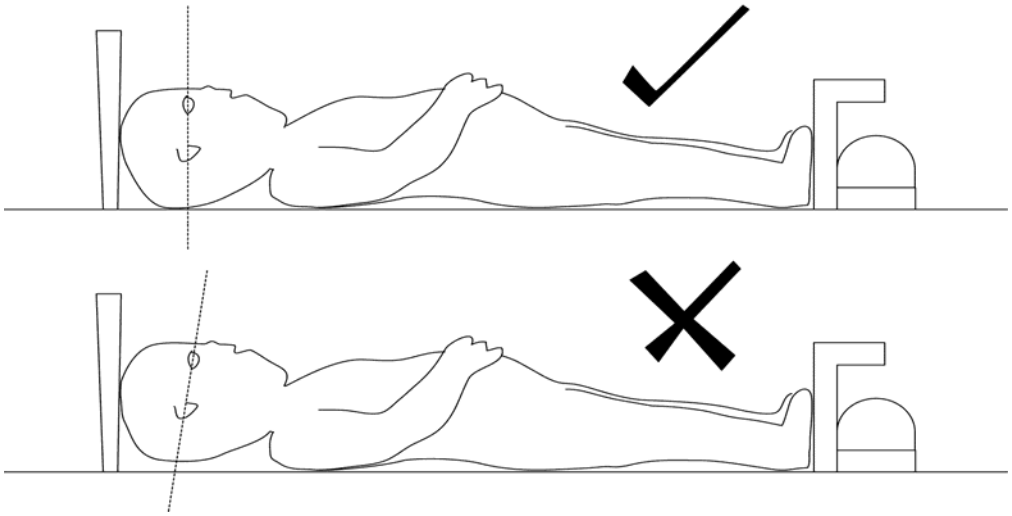
2. Unroll the Rollameter and lay it flat on any suitable flat, firm surface (e.g. table, floor). It is essential that the Rollameter is fully unrolled and as flat as possible, therefore doing the measurement on a deep pile carpet or rug would not be appropriate. Lay one layer of kitchen roll on the mat (just in case there are any accidents!!)

   If taking the measurement on a table, take extra care and ensure that somebody is with the infant at all times to prevent them rolling/falling off the table.

3. Place the child on the foam bed with his/her head touching the headpiece on which the name Rollameter is printed.

4. Move the child's head so that Frankfort Plane is in a position at right angles to the floor/table (see diagram below). Ask the parent to hold the child in this position and make sure their head is in contact with the headpiece.

INFANT FRANKFORT PLANE CARD



5. Straighten the child's legs by holding the legs by the ankles with one hand and applying a gentle downward pressure.

6. With your free hand, move the footrest on which the measuring tape is mounted to touch the child's heels by depressing the **red button** on the tape measure.

7. The measurement is read from the red cursor in the tape window. The measurement is recorded in centimetres and millimetres to the nearest millimetre. If the measurement lies between two millimetres then you should round to the nearest even millimetre. For example, if the measurement is halfway between 68.3 and 68.4, then round up to 68.4. If the measurement is halfway between 68.8 and 68.9 then round down to 68.8.

4. CAPI entry and Feedback

Record the infant's length on the Measurement Record Card (MRC) in the space provided. If necessary, use the chart on the back of the drug-coding booklet to convert the measurement into inches (NB the conversion chart only goes down to 51cm).

If the measurement is refused or not obtained for other reasons code this at *LghtInt* and code the reason why at *NoAttL.*

If you attempt the measurement but it is not obtained code 999.9 at *Length* and enter the reason *YNoLgth.*

WAIST AND HIP CIRCUMFERENCES (AGED 11+) PROTOCOL

1. Purpose

There has been increasing interest in the distribution of body fat as an important indicator of increased risk of cardiovascular disease. The waist-to-hip ratio is a measure of distribution of body fat (both subcutaneous and intra-abdominal). Analyses suggest that this ratio is a predictor of health risk like the body mass index (weight relative to height).

2. Equipment

Insertion tape calibrated in mm (with a metal buckle at one end – if used).

The tape is passed around the circumference and the end of the tape is inserted through the metal buckle at the other end of the tape.

3. Eligibility

Waist and hip measurements will only be carried out on respondents **aged 11 and over.** The respondent is ineligible for the waist and hip measurement if:

a. Chairbound
b. Has a colostomy/ileostomy
c. Pregnant

If (a) and/or (b) apply, record this on the computer (question WHPNABM). If there are any other reasons why the measurement was not taken, record this on the computer and type in the reason.

4. Preparing the respondent

The interviewer will have asked the respondent to wear light clothing for your visit. Explain to the respondent the importance of this measurement and that clothing can substantially affect the reading.

If possible, without embarrassing you or the respondent, ensure that the following items of clothing are removed:

all outer layers of clothing, such as jackets, heavy or baggy jumpers, cardigans and waistcoats
shoes with heels
tight garments intended to alter the shape of the body, such as corsets, lycra body suits and support tights

If the respondent is wearing a belt, ask them if it would be possible to remove it or loosen it for the measurement.

Pockets should be emptied.

Some respondents may be wearing religious or other symbols which they cannot remove and which may affect the measurement. Do not embarrass or offend the respondent by asking them to remove such things.

If the respondent is not willing to remove bulky outer garments or tight garments and you are of the opinion that this will significantly affect the measurement, record this on the Schedule at questions WJRel and/or HJRel. Some respondents may be wearing articles of clothing which cannot be removed and will affect the measurement (e.g. saris) – this should also be recorded.

If possible, ask the respondent to empty their bladder before taking the measurement.

5. Using the insertion tape

All measurements should be taken to the nearest millimetre. If the length lies half-way between two millimetres, then round to the nearest even millimetre. For example, if the measurement is halfway between 68.3 and 68.4, round up to 68.4. And if the measurement is halfway between 68.8 and 68.9, round down to 68.8. Please note that you must enter the measurement to one decimal place - do not round it to the nearest centimetre. For example, enter '78.2', not just '78'. If you do not enter a decimal point, the computer will give you a warning. If the measurement is exactly, say, 78cm, then all you need to do is suppress the warning and it will automatically fill in the '.0' for you. Otherwise, you must go back and amend your answer. As a further check, the computer will also ask you to confirm that a measurement ending in '.0' is correct.

Ensure the respondent is standing erect in a relaxed manner and breathing normally. Weight should be evenly balanced on both feet and the feet should be about 25-30cm (1 foot) apart. The arms should be hanging loosely at their sides.

If possible, kneel or sit on a chair to the side of the respondent.

Pass the tape around the body of the respondent and insert the plain end of the tape through the metal ring at the other end of the tape.

To check the tape is horizontal you have to position the tape on the right flank and peer round the participant's back from his/her left flank to check that it is level. This will be easier if you are kneeling or sitting on a chair to the side of the respondent.

Hold the buckle flat against the body and flatten the end of the tape to read the measurement from the outer edge of the buckle. Do not pull the tape towards you, as this will lift away from the respondent's body, affecting the measurement.

6. Measuring waist circumference

The waist is defined as the point midway between the iliac crest and the costal margin (lower rib). To locate the levels of the costal margin and the iliac crest use the fingers of the right hand held straight and pointing in front of the participant to slide upward over the iliac crest. Men's waists tend to be above the top of their trousers whereas women's waists are often under the waistband of their trousers or skirts.

Do not try to avoid the effects of waistbands by measuring the circumference at a different position or by lifting or lowering clothing items. For example, if the respondent has a waistband at the correct level of the waist (midway between the lower rib margin and the iliac crest) measure the waist circumference over the waistband.

Ensure the tape is horizontal. Ask the participant to breathe out gently and to look straight ahead (to prevent the respondent from contracting their muscles or holding their breath). Take the measurement at the end of a normal expiration. Measure to the nearest millimetre and record this on the schedule.

Repeat this measurement again.

If you are of the opinion that clothing, posture or any other factor is significantly affecting the waist measurement, record this on the schedule.

7. Measuring hip circumference

The hip circumference is defined as being the widest circumference over the buttocks and below the iliac crest. To obtain an accurate measurement you should measure the circumference at several positions and record the widest circumference.

Check the tape is horizontal and the respondent is not contracting the gluteal muscles. Pull the tape, allowing it to maintain its position but not to cause indentation. Record the measurement on the schedule to the nearest millimetre, e.g. 95.3. If the length lies half-way between two millimetres, then round to the nearest even millimetre.

If clothing is significantly affecting the measurement, record this on the schedule.

Repeat this measurement again.

8. General points

The tape should be tight enough so that it doesn't slip but not tight enough to indent clothing. If clothing is baggy, it should be folded before the measure is taken.

If the respondent is large, ask him/her to pass the tape around rather than having to "hug" them. Remember though to check that the tape is correctly placed for the measurement being taken and that the tape is horizontal all the way around.

If your second waist or hip measurement differs by 3cm or more from the first, the computer will give you a warning. If you have made a mistake when entering the figures (e.g. typed 78.2 instead of 68.2), you should type over the mistake. If it was not a mistake, you should suppress the warning and take a third measurement.

If you have problems palpating the rib, ask the respondent to breathe in very deeply. Locate the rib and as the respondent breathes out, follow the rib as it moves down with your finger. If your respondent has a bow at the back of her skirt, this should be untied as it may add a substantial amount to the waist circumference.

Female respondents wearing jeans may present a problem if the waistband of the jeans is on the waist at the back but dips down at the front. It is essential that the waist measurement is taken midway between the iliac crest and the lower rib and that the tape is horizontal. Therefore in this circumstance the waist measurement would be taken on the waist band at the back and off the waist band at the front. Only if the waistband is over the waist all the way around can the measurement be taken on the waistband. If there are belt loops, the tape should be threaded through these so they don't add to the measurement.

9. Recording problems

We only want to record problems that will affect the measurement by more than would be expected when measuring over light clothing. As a rough guide only record a problem if you feel it affected the measurements by more than 0.5cm. We particularly want to know if waist and hip are affected differently.

At *WJRel* and *HJRel*, record how reliable the waist and hip measures are, and whether any problems that were experienced were likely to increase or decrease the measurement. This information is important for analysis of the results. As a general rule, if you believe that the measurements you took are 0.5cm more or less than the true measurement because of problems you encountered (e.g.. clothing the respondent was wearing), this should be counted as unreliable.

10. Respondent feedback

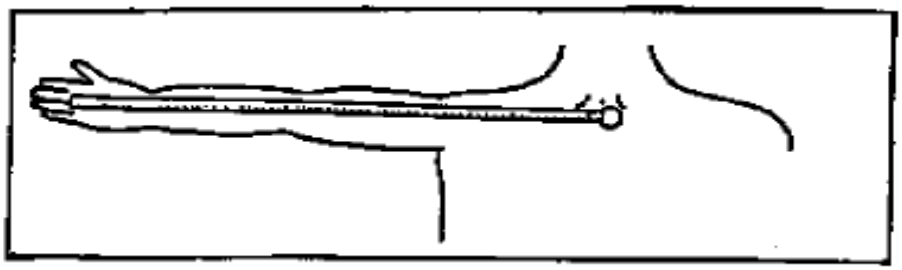
Offer to write the measurements on the Measurement Record Card.

The measurements will be given in inches as well as centimetres by the computer. You can record the measurements on the MRC using centimetres, inches or both.

MEASUREMENT OF DEMISPAN (EVERYONE AGED 65+ & THOSE AGED 16-64 WITH NO VALID HEIGHT MEASUREMENT) PROTOCOL

1. Purpose

When the interviewer visited the respondent s/he attempted to measure the respondent's height and weight. However, measuring height can be quite difficult if the respondent cannot stand straight or is unsteady on their feet. This can occur with some elderly people, and with people who have particular disabilities. Additionally, height decreases with age. This decrease varies from person to person and may be considerable. It is becoming increasingly important to have information about the health of older adults. Therefore an alternative



measure of skeletal size, the demi-span, was developed which can be measured easily and does not cause unnecessary discomfort or distress to older adults.

The demi-span measurement is the distance between the sternal notch and the finger roots with arm out-stretched laterally. Two readings are taken. Explain to the respondent that this is to improve accuracy.

2. Eligibility

All respondents aged 65 and over, and respondents aged 19-64 *who have no valid height measurement*, are eligible for the demi-span measurement. Respondents aged 65 and over who cannot straighten either arm, should not have this measurement taken.

Record any reasons why demi-span measurement was refused, not attempted or only one was obtained.

3. Equipment

A thin retractable demi-span tape calibrated in cm and mm and a skin marker pencil. A hook is attached to the tape and this is anchored between the middle and ring fingers at the finger roots. The tape is then extended horizontally to the sternal notch. Note that the tape is easily damaged if it is bent.

4. Preparing the respondent

The measurement is made on the right arm unless this arm cannot be fully stretched in which case the left arm may be used.

SpnM -- Record which arm was used and whether the respondent was standing, or sitting. Although the measurement requires minimal undressing, certain items that might distort the measurement will need to be removed. These include:

Ties

Jackets, jumpers and other thick garments
Jewellery items such as chunky necklaces/bracelets
Shoulder pads
High heeled shoes

Shirts should be unbuttoned at the neck. If the respondent does not wish to remove any item that you think might affect the measurement, you should record that the measurement was not reliable (code 2) when prompted by the computer.

PROCEDURE

1. Locate a wall where there is room for the respondent to stretch his/her arm. They should stand with their back to the wall but not support themselves on it. Ask the respondent to stand about 3 inches (7cm) away from it.

2. Ask the respondent to stand with weight evenly distributed on both feet, head facing forward.

3. Ask the respondent to raise their right arm until it is horizontal. The right wrist should be in neutral rotation and neutral flexion. Rest your left arm against the wall allowing the respondent's right wrist to rest on your left wrist.

4. When the respondent is standing in the correct position **mark the skin at the centre of the sternal notch** using the skin marker pencil. (Explain to the respondent that this mark will wash off afterwards – the alcohol gel spray can be used). It is important to mark the sternal notch while the respondent is standing in the correct position.

   If the sternal notch is obscured by clothing or jewellery, use a piece of micropore tape on the clothing or jewellery. If the respondent will not allow use of either the marker pen or the tape, proceed with the measurement but record the measurement as unreliable and explain why in a notepad.

5. Ask the respondent to relax while you get the demi-span tape.

6. Place the hook between the middle and ring fingers so that the tape runs smoothly along the arm.

7. Ask the respondent to raise their arm. Check they are in the correct position, the arm horizontal, the wrist in neutral flexion and rotation.

7. Extend the tape to the sternal notch. If no mark was made, feel the correct position and extend the tape to this position.

8. When ready to record the measurement ask the respondent to **stretch** his/her arm. Check that: -
   - **the respondent is in the right position;**
   - **there is no extension or flexion at the wrist or at the shoulders;**
   - **the hook has not slipped forward and the zero remains anchored at the finger roots;**
   - **the respondent is not leaning against the wall or bending at the waist.**

10. Record the measurement in cms and to the nearest mm when prompted by the computer. If the length lies half-way between two millimetres, then round to the nearest **even** millimetre. For example, if the measurement is halfway between 68.3 and 68.4, round up to 68.4. And if the measurement is halfway between 68.8 and 68.9, round down to 68.8. Always record the response to one decimal point (e.g. 55.4). The

computer will not allow you to enter a response without a decimal point, so even if the measurement comes to exactly 56cm, you must enter 56.0. If you do enter a measurement ending in 0, the computer will ask you to confirm this.

11. Ask the respondent to relax and loosen up the right arm by shaking it.

12. Repeat the measurement from steps 4-11. Explain to the respondent that this is to improve accuracy. You must go back to step 4 and relocate and mark the sternal notch before you take your second reading. If your second measurement differs from the first by 3cm or more, the computer will give you an error message, and instruct you to either amend one of your previous responses, or to take a third measurement. **Amend a previous response if** you have made a mistake when entering the measurement, e.g. entered 65.2 instead of 75.2. **Take a third measurement if** there is another reason for the measurements being different. If in doubt, take a third measurement rather than over-writing one of the previous two. The computer will automatically work out which two to use.

13. Offer to write the measurements onto the respondent's Measurement Record Card. If the respondent would like the measurement in inches, there is a conversion chart on the back of your drug coding booklet.

5. Using the tape

The tape is fairly fragile. It can be easily damaged and will dent or snap, if bent or pressed too firmly against the respondent's skin. Also the ring connecting the hook to the tape is a relatively weak point. Avoid putting more strain on this ring than necessary to make the measurements. When extending the tape, hold the tape case rather than the tape itself as this puts less strain on the hook and tape. When hooking the tape to the sternal notch, do not press into the sternal notch so much that the tape kinks.

6. Seated measurements

If the respondent is unable to stand in the correct position, or finds it difficult to stand steadily, ask them to sit for the measurement. Use an upright chair and position it close to a wall. Still try to support the arm if possible. You may need to sit or kneel to take the reading. If the respondent is much taller than you, take the measurement with the respondent sitting. If the respondent's arm is much longer than yours, support the arm close to the elbow rather than wrist level. Your arm must not be between the elbow and shoulder, as this will not provide sufficient support. Record at *SpnM* how the measurement was taken (i.e. with respondent standing, sitting, etc.)

BLOOD PRESSURE PROTOCOL

1. Blood Pressure (Aged 4+)

High blood pressure is an important risk factor for cardiovascular disease. It is important that we look at the blood pressure of everyone in the survey using a standard method so we can see the distribution of blood pressure across the population. This is vital for monitoring change over time, and monitoring progress towards lower blood pressure targets set in the Health of the Nation.

Timing- Blood pressure can be higher than normal immediately after eating, smoking, drinking alcohol or taking vigorous exercise. This is why respondents are asked to avoid doing these for 30 minutes before you arrive. As already suggested, if you can juggle respondents within a household around to avoid having to break this "half-hour" rule, do so. But sometimes this will not be possible and you will have to take their blood pressure within this time period. In which case enter all the codes that apply at *ConSubX.*

2. Eligibility

The only people not eligible for blood pressure measurement are those who are pregnant (who will have been screened out anyway) or aged less than 4 years old.

3. Protocol For Blood Pressure Recording: Omron Hem-907

This section describes the protocol for measuring blood pressure using the Omron HEM 907. More detailed information may be obtained from the instructions booklet inside the box. If you have any further questions or problems then please contact Dr Jenny Mindell on 020 7679 1269.

Equipment
Omron HEM 907 blood pressure monitor
Child/ small adult cuff (17-22 cm)
Standard adult cuff (22-32 cm)
Large adult cuff (32-42 cm)
AC adapter

The Omron HEM-907 blood pressure monitor is an automated machine. It is designed to measure systolic blood pressure, diastolic blood pressure and pulse rate automatically at pre-selected time intervals. On this study three readings are collected at one-minute intervals.

The Omron 907 is equipped with a rechargeable battery, which is usable for approximately 300 measurements when fully charged. To recharge the battery, connect the monitor to the mains. A battery symbol will appear in the CHARGING display when the battery is charging. When ready to use the symbol will disappear. A dark battery symbol in the BATTERY display indicates that the battery is charged and the machine is usable. The battery can be charged in approx. 12 hours. When the battery symbol in the BATTERY display starts to flash there are 20-30 measurements left, you need to charge the battery soon. When a light battery symbol appears in the BATTERY display the battery needs to be put on charge immediately. The Omron 907 is **NOT** designed to work off the mains adaptor; it should be run off the battery power pack. The mains adaptor should ONLY be used to charge the battery pack.
PLEASE REMEMBER TO CHARGE THE BATTERY !!

The picture on page 43 shows the main features of the Omron HEM-907.

4. Preparing the respondent

The respondent should not have eaten, smoked, drunk alcohol or taken vigorous exercise in the 30 minutes preceding the blood pressure measurement as blood pressure can be higher than normal immediately after any of these activities. As already suggested, if you can juggle respondents within a household around to avoid having to break this "half-hour" rule, do so. But sometimes this will not be possible and you will have to take their blood pressure within this time period. In which case enter all the codes that apply.

Ask the respondent to remove outer garments (e.g. jumper, cardigan, jacket) and expose the right upper arm. The sleeve should be rolled or slid up to allow sufficient room to place the cuff. If the sleeve constricts the arm, restricting the circulation of blood, ask the respondent if they would mind taking their arm out of the sleeve for the measurement.

5. Selecting the correct cuff

Adults aged 16 and over: Do **not** measure the upper arm circumference. Instead, choose the correct cuff size based on the acceptable range which is marked on the inside of the cuff. You will note that there is some overlap between the cuffs. If the respondent falls within this overlap range then use the **standard** cuff where possible.

Children aged 4 to 15: It is important to select the correct cuff size. The appropriate cuff is the largest cuff which fits between the axilla (underarm) and the antecubital fossa (front of elbow) without obscuring the brachial pulse and so that the index line is within the range marked on the inside of the cuff. You will be provided with a child's cuff as well as the other adult cuffs. Many children will not need the children's cuff and instead will require an adult cuff. You should choose the cuff that is appropriate to the circumference of the arm.

Adults and Children: The appropriate cuff should be connected via the grey air tube to right end side of the monitor.

6. Procedure

Wrap the correct sized cuff round the upper **right** arm and check that the index line falls within the range lines. Use the left arm only if it is impossible to use the right. If the left arm is used, record this on the schedule. Locate the brachial pulse just medial to the biceps tendon and position the arrow on the cuff over the brachial artery. The lower edge should be about 1-2 cm above the cubital fossa (elbow crease).

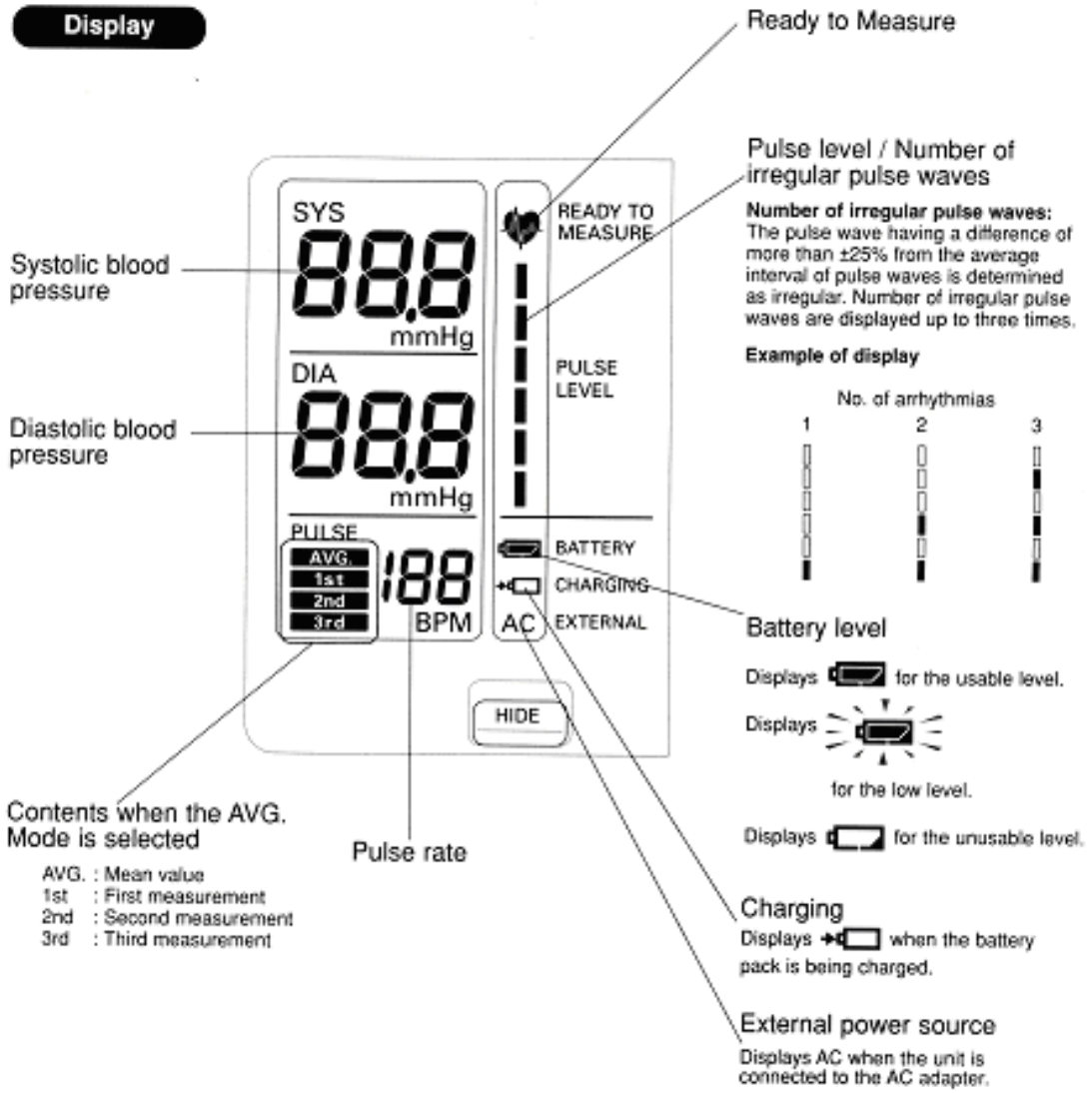
Do not put the cuff on too tightly as bruising may occur on inflation. Ideally, it should be possible to insert two fingers between cuff and arm. However, the cuff should not be applied too loosely, as this will result in an inaccurate measurement.

The respondent should be sitting in a comfortable chair with a suitable support so that the right arm will be resting at a level to bring the antecubital fossa (elbow) to approximately heart level. They should be seated in a comfortable position with cuff applied, legs uncrossed and feet flat on the floor.

Explain that before the blood pressure measurement we need them to sit quietly for five minutes to rest. They should not smoke, eat or drink during this time. Explain that during the measurement the cuff will inflate three times and they will feel some pressure on their arm during the procedure.

It is important that children as well as adults rest for five minutes before the measurement is taken. However, making children sit still for five minutes can be unrealistic. They may move around a little, but they should not be running or taking vigorous exercise. As with adults, they should not eat or drink during this time.

After five minutes explain you are starting the measurement. Ask the respondent to relax and not to speak until the measurement is completed as this may affect their reading.



7. How to operate the monitor

See Picture of Omron HEM-907 monitor above.

1. Switch the monitor on by pushing the **ON/OFF** button. Wait for the **READY TO MEASURE** symbol to light, indicating the machine is ready to start the measurement (approx 2 sec).

2. Check that the **MODE** Selector is set to **AVG** and the **P-SET** (pressure setting) Volume is set to **AUTO**.

3. Press the **START** button to start the measurement. The cuff will now start to inflate and take the first measurement. When the first measurement is complete the LCD displays show systolic pressure, diastolic pressure, and pulse rate. Record the readings on the interview schedule.

4. Blood pressure will then be recorded at one-minute intervals thereafter. After each interval record the reading from the LCD displays on the interview schedule.

5. After the three measurements are complete press the **ON/OFF** button to turn off the power and remove the cuff.

If there are any problems during the blood pressure measurements or the measurement is disturbed for any reason, press the **STOP** button and start the procedure again. If the respondent has to get up to do something, then ask them to sit and rest for five minutes again.

8. Error readings

They appear on the LCD display:

Er1, Er2. Check that the tube connecting the cuff to the monitor is properly inserted and it is not bent. Check that the cuff is properly wrapped around the arm. Repeat the measurement.

Er3. Check that the tube connecting the cuff to the monitor is not bent. Repeat the measurement.

Er4. This could be because of a motion artefact. Ask the respondent to sit as still as possible and take the measurement again. If you still get another Er4 error reading, it could be because the respondent has a very high blood pressure. Set the P-SET Volume to 260 and repeat the measurement.

Er5, Er6. Check that the cuff is properly wrapped around the arm. Repeat the measurement.

If any of these errors readings persist, record that it wasn't possible to get a reading and explain to the respondent that this sometimes happens. Then contact Brentwood and inform them that there is a problem with the monitor.

Er7, Er8. Check that the respondent does not move, ask the respondent to sit as still as possible and take the measurement again. If you still get an error reading the pulse may be irregular. Do NOT palpate the pulse. Record that it wasn't possible to get a reading and explain to the respondent that this sometimes happens.

Er9. Technical fault. Contact Brentwood immediately and inform them that there is a problem with the monitor.

CAPI:
Readings - Record the blood pressure readings in the order shown on the screen. Double check each entry as you make it to ensure you have correctly entered the reading. If you have got to this point and then become aware that you are not going to be able to get a reading after all, you should enter '996' then press <End>. This will automatically enter '999' in each box, to save you having to type it in 12 times. Blood pressure readings given by the Omron are systolic blood pressure, diastolic blood pressure and pulse: the Omron does not give MAP.

NAttBP - If you failed to get a reading, or you only managed to obtain one or two readings, enter a code to show what the problem was. If necessary, write in full details at *OthNBP*.

9. Feedback to respondents

Offer the respondent his/her blood pressure readings. If (s)he would like them, enter them on the Measurement Record Card (MRC). If an adult respondent has a raised blood pressure you must give her/him advice based on the result. This will be calculated by the computer and will appear on the screen for you to read out exactly as written. Write any advice given onto the MRC. The interviewer should have given them a MRC with the height and weight recorded on it. If the respondent has lost it, or claims never to have had one, make out a new one, ensuring the name is on the front of the card.

It is not the purpose of this survey to provide respondents with medical advice. Nevertheless, many respondents will ask you what their blood pressure readings mean. Make sure you are very familiar with the guidance below. We wish it to be strictly followed. It is very important that as little anxiety as possible is caused but at the same time we have a duty to advise people to see their GPs if blood pressure is raised.

a) Child respondents (age 4 to 15)

We do **not** wish you to comment on the child's blood pressure readings to the parents. If they seek comment, reiterate what you have already said about not being able to interpret a single blood pressure measurement without checking to see whether it is normal for the child's age and height. Reassure them that if it is found to be abnormal, the Survey Doctor will get in touch with them or their child's GP, if they give permission for the results to be sent to their child's GP, and advise them as to what steps they should take. This rule applies for **all** readings you obtain.

b) Adult respondents (aged 16+)

In answering queries about an adults blood pressure it is very IMPORTANT to remember that it is **not** the purpose of the survey to provide respondents with medical advice, nor are you in a position to do so as you do not have the respondent's full medical history. But you will need to say something. What you say in each situation has been agreed with the survey doctor. The computer screen will tell you what to say in each situation. It is very important that **you make all the points relevant to the particular situation and that you do not provide a more detailed interpretation as this could be misleading**. Read the information below very carefully and make sure you always follow these guidelines. This information will be based on the highest systolic and highest diastolic reading from the last two readings. This will usually, but not always, be from the same reading. For example, occasionally it may be the systolic from the second reading and the diastolic from the third reading.

Definitions of raised blood pressure differ slightly. We are using the ones given below for this survey. They are the same as those used in the Health Survey for England. It is important that you adhere to these definitions, so that all respondents are treated in an identical manner. These are shown below.

ADULTS ONLY

SURVEY DEFINITION OF BLOOD PRESSURE RATINGS

For men and women aged 16+

Rating	Systolic		Diastolic
Normal	<140	and	<85
Mildly raised	140 - 159	or	85 – 99
Raised	160 - 179	or	100 – 114
Considerably raised	180 or more	or	115 or more

Points to make to a respondent about their blood pressure (given on screen):

Normal:

'Your blood pressure is normal'

Mildly raised:

'Your blood pressure is a bit high today.'

'Blood pressure can vary from day to day and throughout the day so that one high reading does not necessarily mean that you suffer from high blood pressure.'

'You are advised to visit your GP within 2 months to have a further blood pressure reading to see whether this is a once-off finding or not.'

Raised:

'Your blood pressure is a bit high today.'

'Blood pressure can vary from day to day and throughout the day so that one high reading does not necessarily mean that you suffer from high blood pressure.'

'You are advised to visit your GP within 2 weeks to have a further blood pressure reading to see whether this is a once-off finding or not.'

Considerably raised:

'Your blood pressure is high today.'

'Blood pressure can vary from day to day and throughout the day so that one high reading does not necessarily mean that you suffer from high blood pressure.'

'You are strongly advised to visit your GP within 5 days to have a further blood pressure reading to see whether this is a once-off finding or not.'

Note: If the respondent is elderly and has considerably raised blood pressure, amend your advice so that they are advised to contact their GP within the next week or so about this reading. This is because in many cases the GP will be well aware of their high blood pressure and we do not want to worry the respondent unduly. It is however important that they do contact their GP about the reading within 7 to 10 days. In the meantime, we will have informed the GP of their result (providing the respondent has given their permission).

10. Action to be taken by the nurse after the visit

If you need to contact the Survey Doctor, do not do this from the respondent's home - you will cause unnecessary distress.

a) Children

No further action is required after taking blood pressure readings on children. All high readings are viewed routinely by the Survey Doctor. However, in the rare event that you encounter a child with a very high blood pressure, i.e. systolic 160 or above or diastolic 100 or above please call the Survey Doctor.

b) Adults

The chart on the next page summarises what action you should take as a result of the knowledge you have gained from taking an adult's blood pressure readings. For this purpose you should only take into account **the last two of the three readings** you take. We do not want you to use the first reading as it is prone to error for the reason stated above.

BLOOD PRESSURE	ACTION
Normal/mildly raised/raised BP *2nd or 3rd reading:* Systolic less than 180 mmHg **and** Diastolic less than 115 mmHg	No further action necessary If you feel that the circumstances demand further action, inform the Survey Doctor who will then inform the respondent's GP urgently if she deems it necessary.**
Considerably raised BP *2nd or 3rd reading:* Systolic at or greater than 180 mmHg **or** Diastolic at or greater than 115 mmHg	Contact the Survey Doctor at the earliest opportunity and she will inform the respondent's GP.** If the respondent has any symptoms of a hypertensive crisis* call an ambulance immediately. The Survey Doctor must be informed at a later stage.

* A hypertensive crisis is an extremely rare complication of high blood pressure. Its signs and symptoms include diastolic bp > 135 mmHg, headache, confusion, sleepiness, stupor, visual loss, seizures, coma, cardiac failure, oliguria, nausea & vomiting.

** You must still contact the Survey Doctor even if respondents tell you that their GP knows about their raised BP.

All high or unusual readings will be looked at by the Survey Doctor when they reach the office. If the reading is high, then the Survey Doctor will contact the respondent directly.

In all instances, follow the protocol.

11. Survey Doctor contact details

The Survey Doctor is available during working hours. Out of office hours, the survey doctor has a mobile phone (on which you can leave a message, if necessary), The phone is not switched on all the time but they will usually check for messages and call back within a couple of hours. You are likely to need to speak to a doctor more urgently than that only in circumstances in which you should be calling an ambulance.

If you need to leave a message, leave the following details:

- Your name
- Contact telephone number
- The survey
- Briefly, the type of problem
- If you want the Survey Doctor to ring you back at a specific time etc, leave those details as well.

Do not hesitate to contact the Survey Doctor whenever you feel you need advice about what to do after seeing a respondent. If you need to speak with the Survey Doctor in the evening please try to do so before 10 pm.

National Diet and Nutrition Survey
(P2709)

National Centre for Social Research

Editor's Code Book

May 2008

More information about the coding?

These instructions contain information about the coding task. However, if you need further information or clarification, please contact research or the Blue Team:

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1. Introduction

This document details the editing to be applied to CAPI questionnaires on National Diet and Nutrition Survey. Problems should be referred to the research team.

General Points:

1. A FACTSHEET is provided to aid editing of the CAPI questionnaires. It contains household information and information for each individual session. The majority of questions which need to be coded are printed on the FACTSHEET. Coding decisions should be recorded alongside the appropriate questions or at the end of the FACTSHEET, if the question has not been printed.

2. All soft checks that were triggered by the interviewer and which have not been resolved will trigger again in the edit program. Where appropriate these should be investigated. If no editing action can be taken to resolve these checks, they should be cancelled by the editor.

3. "Other" answers in CAPI will be backcoded to the original question where possible. Other answers can be transferred electronically and so don't require listing.

4. Some questions where editing is required were asked of both Respondent 1 (adult) and Respondent 2 (child). Where this occurs, these instructions will indicate whether the CAPI page number refers to the questionnaire for Respondent 1 (R1) or the questionnaire for Respondent 2 (R2).

5. For your information, the primary grouping for this study is the Catering Unit (CU). It is "a group of people who eat food that is bought and prepared for them (largely) as a group". In addition, the Main Food Provider (MFP) is interviewed in order to obtain CU-level information. The MFP is "the person in the Catering Unit with the main responsibility for shopping and preparing food".

Where problems arise that do not appear in these editing instructions, please contact the research team for advice.

2. Factsheet Definition for CAPI editing

The tables below show the variables that will appear on the factsheet for editing. Variables which are just a simple backcode into a previous variable are not shaded but the code frames are provided in these instructions. Variables for which there is more detail in these instructions about how to code, are shaded.

Household Qure

XNatOth	Back code into NatIDG	National identity	Page 8
EthOth	Back code into EthGrp	Ethnic group	Page 9
soc2000	Code as standard	Occupational coding	
sic2003	Code as standard	Industry type coding	

Indiv Qure – CAPI 1

NbotL7	Code to L7NCodEq	Brand of bottled lager (7 days)	Page 13
SbotL7	Code to L7SCodEq	Brand of bottled lager (7 days)	Page 13
OthL7TA,B,C		Other alcoholic drinks (7 days)	Page 12
HealT	Code to LimLi	Limiting long standing illness	Page 10
CutMatt	Code to CutIll	Restrictive illness or injury	Page 11

Indiv Qure – Measures

OhiNRel	Back code into HiNRel	Unreliable height measurement	Page 15
NoHitCO	Back code into NoHtBC	Reasons for refusing height	Page 15
NoWatCO	Back code into NoWtBC	Reasons for refusing weight	Page 15

Nurse Qure

MedBi		Drug coding	Page 16
OthNLth	Back code to NoAttL	Reason for no infant length measurement	Page 24
OthWH	Back code to WHPNABM	Other reasons for not attempting waist-hip measurements	Page 24
OthNBP	Back code to NAttBPD	Other reason not obtained blood pressure	Page 24
OthDifBP	Back code to DifBPC	Other reason difficulty obtaining BP	Page 24
OthRefC	Back code to GPRefC	Other reasons refusing to allow BP measurements to be sent to GP	Page 24
OthAttM	Back code to NotAttM	Other reason why no demi-span measured	Page 25
OthRefBS	Back code to RefBSC	Other reasons for refusing blood sample	Page 25
OthSam	Back code to SenSac	Other reasons for not wanting blood sample results sent to GP	Page 25
OthBDif	Back code to SamDifC	Other problems taking blood sample	Page 25
OthNoBSM	Back code to NoBSM	Other reasons why blood sample not taken	Page 25

3. Additional CAPI edits

3.1 Proxy interviews

Aged 2-10	Proxy interviews are allowed for children aged 2-10. See height/weight measurements section for more details of edits for **NoHtBC** and **NoWtBC**.
Aged 18mths to 2 years	Proxy interviews are carried out for infants aged 18 months – 2 years. See length/weight measurements section for more details of edits for **NoAttL** and **NoWtBC**.

3.2 Age/Date of birth

Children aged less than one year are recorded as '0'.

If Age/Date of birth missing in household grid, check whether it was collected in the nurse visit. Add DoB and age at Individual Questionnaire Interview Date to the Household Grid if available from Nurse Schedule.

Date of birth in nurse visit should be checked against the consent booklet and any discrepancies resolved.

All "age" nurse checks will be flagged in the edit if they do not make sense according to the respondent's date of birth as at the interview. Any discrepancies will need to be resolved. Send a list of all cases where this happens to the researchers, please note age and 'consent status' of other individuals in the household. A decision will be taken by the researcher on a case by case basis.

3.3 National identity

XNatOth Other national identity. To be coded back to **NatIDG.**

Inspect answer at XNatOth and if Cornish, back code to English (code 1 in the code frame below). Do not back code any other answers.

1 English
2 Scottish
3 Welsh
4 Irish
5 British

If the case is from a NI point then code back to **NatIDN.**

For Northern Ireland batches the code frame will include the following extra codes (these will appear on route for NI points only)

1 British
2 Irish
3 Ulster
4 Northern Irish
5 English
6 Scottish
7 Welsh

3.4 Other ethnic groups

EthOth Other ethnic group. To be coded back to **EthGrp**, following rules listed below.

1. White-British
Include English, Scottish, Welsh, Northern Irish and Cornish.

2. Any other white background
Include Southern Irish, Irish, Irish traveller, Gypsy/Romany, Cypriot, Former USSR, Baltic States, Former Yugoslavia, Other European, White South African, American, Australian, New Zealander, Mixed White

3. Mixed – White and Black Caribbean

4. Mixed – White and Black African

5. Mixed – White and Asian

6. Any other mixed background

7. Asian or Asian British - Indian
Include Punjabi

8. Asian and Asian British – Pakistani
Include Kashmiri

9. Asian and Asian British – Bangladeshi

10. Any other Asian/Asian British background
Include East African Asian, Sri Lankan, Tamil, Sinhalese, Caribbean Asian, Nepalese, Mixed Asian (i.e. mixture of descriptions in the Asian section).
Code Chinese as 14 (see below).

11. Black of Black British – Caribbean
Include Caribbean and West Indian islands (and also Guyana).
Do not include Puerto Rican, Dominican and Cuban, which are Latin American

12. Black of Black British – African
Include Nigerian, Somali, Kenyan, Black South African, Other Black African countries

13. Any other Black/Black British background
Include Black American, Mixed Black

14. Chinese
Include Hong Kong

15. Any other
The following ethnic groups **SHOULD NOT** be coded back to the categories above but should remain as "other": Japanese, Vietnamese, Filipino, Malaysian, Aborigine, Afghani, Burmese, Fijian, Inuit, Maori, Native American Indian, Thai, Tongan, Samoan, Arab, Iranian, Israeli, Jewish, Kurdish, Latin American (Cuban, Puerto Rican, Dominican, Hispanic), South American (incl. Central American), Moroccan, Other North African, Iraqi, Lebanese, Yemeni, Other Middle Eastern, Mauritian, Seychellois, Maldivian, St Helena.

3.5 Long standing illnesses

HealT Long-standing illness, disability or infirmity. To be coded into new variable **LimLi**.

Respondents who specify that they have an illness that has troubled them over a period of time are asked to record the illness in HealT. Their response should be coded using the codeframe in section 5. If there are more than one separate illnesses listed in HealT, code first mentioned illness.

Rules for coding long-standing illness

Code 41 Unclassifiable (no other codable complaint)

Exclusive code - this should only be used when the whole response is too vague to be coded into one of codes 01-40. This includes unspecific conditions like old age, war wounds etc (see codeframe for examples).

Code 42 Complaint no longer present

Exclusive code - again it should be used only when the response given is **only** about a condition that no longer affects the respondent.

Illnesses which cannot be coded using the Longstanding Illness Codeframe or the ICD need to be sent to the Research team in London. Code 98 here for now, which will tell us that this is being investigated.

3.6 Restrictive illness or injury

CutMatt Illness or injury over the past 2 weeks. To be coded into new variable **CutIll**.

Respondents are asked if they have had an illness or injury over the past 2 weeks that has caused them to cut down on any activities that they usually do around the house. Their response should be coded using the codeframe in section 5. If there are more than one separate illness or injury listed in CutMatt, code first mentioned illness

Code 41 Unclassifiable (no other codable complaint)

Exclusive code - this should only be used when the whole response is too vague to be coded into one of codes 01-40. This includes unspecific conditions like old age, war wounds etc (see codeframe for examples).

Code 42 Complaint no longer present

Exclusive code - again it should be used only when the response given is **only** about a condition that no longer affects the respondent.

Illnesses which cannot be coded using the Longstanding Illness Codeframe or the ICD need to be sent to the Research team in London. Code 98 here for now, which will tell us that this is being investigated.

3.7 Other alcoholic drinks

OthL7TA/OthL7TB/ OthL7TC Other alcoholic drinks need to be coded into specific alcohol types

Exclude all low/non-alcoholic drinks. Home made drinks should be coded into the appropriate category.

Normal beer (NBrL7):
Include: Export, Heavy, Black & Tan, Barley Wine, Diabetic Beer, Home Brew Lager, Lager and Lime, Home Brew Beer, Gold Label, Pomagne, Stout, Scrumpy
Exclude: Ginger Beer. Non alcoholic lagers - Barbican, Kaliber, Bottles/cans of shandy. Beer with >6% alcohol by volume (code as 'strong'). Angostura Bitter (code as spirits)

Strong beer (SBrL7):
Include: Diamond White/Blush/Zest, K, Special Brew Lager, Tennents Super
Exclude: Beer etc with less than 6% alcohol by volume (code as 'normal strength'). Angostura Bitter (code as spirits).

Spirits (SpirL7):
Include: Angostura Bitter, Cocktails, Egg Flip, Snowball, Bacardi, Bailey's, Pernod, Sloe Gin, Pimms, Bourbon, Whisky Mac, Schnapps, Liqueurs, Bluemoon, Vodka, Rum, Southern Comfort, Grappa, Tia Maria, Ouzo/Aniseed, Strega, Cherry Brandy, Arak, Irish Velvet, Brandy, 150 proof Moonshine, Gaelic Coffee, Advocaat, Tequila, Armagnac, Clan Dew, Campari, Malibu, Taboo, Pochene (Irish Moonshine), Jello shots/shooters, Vodka Jelly.

Sherry (ShryL7):
Include: Vermouth, Port, Cinzano, Dubonnet, Bianco, Rocardo, Noilly Prat, Stones Ginger Wine, Home made Sherry, Tonic wine, Sanatogen, Scotsmac and similar British wines fortified with spirits, Port and Lemon, Madeira.

Wine (WineL7):
Include: Punch, Mead, Moussec, Concorde, Champagne, Babycham, Saki, Cherry B, Calypso Orange Perry, Home made wine, Thunder bird.
Exclude: Non alcoholic wines such as Eisberg

Alcopops/pre mixed alcoholic drinks (PopsL7):
Include: Bacardi Breezer, Metz, Smirnoff Ice, Archers Aqua, Baileys Glide, Red Square, Vodka Reef, Shotts, Tvx, VK Vodka kick, Vodkat Classic, WKD ('Wicked'), Alcoholic Irn Bru, Thickhead, Woody's, any mention of 'alcoholic lemonade, cola, orangeade, cream soda' etc

Coding "other" alcoholic drinks variables:
All "other" alcoholic drinks should be recoded back into one of the six drink categories noted above (**OthL7TA**, **OthL7TB**, **OthL7TC** to question **DrnkType**).

If the appropriate drinks category is **not already** coded, then information on amount should be edited into that category's variables and data in the "other drinks" category deleted.

If the category of the "other" alcoholic drink is the same as already coded, then the **amounts** drunk should be added together.

After recoding "other" alcoholic drinks, you should remove "other" alcoholic drink types at **DrnkType** and the variables **OthL7TA**, **OthL7TB**, and **OthL7TC** should longer appear on route. Details of coding decisions should be recorded on the FACTSHEET.
Responses recorded at variables **OthL7QA**, **OthL7QB** and **OthL7QC** should be recoded to the relevant variables: **NBrL7**, **NBrL7Q[1-4], SBrL7, SBrL7Q[1-4], SpirL7, ShryL7, WineL7, PopsL7, PopsL7Q[1-2]**.

3.8 Coding of beer bottle sizes

NBotL7 / SBotL7 The brand of beer/lager/stout/cider drunk in bottles (**NBotL7** and **SBotL7**) need to be coded into **L7NcodEq** and **L7ScodEq**.

If respondents drink beer, lager, stout or cider in bottles they are asked to specify the make of drink in **NBotL7** and **SBotL7**. These need to be coded into **L7NcodEq** and **L7ScodEq** using the bottled lager/cider/beer codeframe and conversion table on the next page.

Bottled beers for which an amount cannot be identified should be coded to 0.00 of a pint, so that these brands can be listed electronically. The exceptions to this are

- 'French beer' which should be coded 0.44 (250ml)
- Interviewer has indicated that the bottle is "large" code to 0.77 of a pint (440ml)
- If no brand name given, or no usual type code to 0.58 of a pint (330ml)
- Where two or more bottle sizes are shown in the codeframe, code as 0.58 unless bottle size is specifically stated (either as small or large, or in ml)
- Where more than one type of bottle is drunk, code to the volume of the first mentioned bottle.

3.9 Bottled lager/cider/beer codeframe

Abbot Ale	0.58	Kronenbourg (1664)	0.44 or 0.58
Amstel	0.58	Newcastle Brown Ale	0.97
Asahi	0.58	Olde English	0.88
Banks (Mild only)	0.97	Labatts	0.58
Banks Old Ale (nips)	0.32	Labatt's Ice	0.58
Bass (pint bottle)	1.00	Leffe	0.58 or 0.77
Becks	0.48 or 0.58	London Pride	0.97
Bishops Finger	0.88	Lowenbrau	0.58
Black Sheep Ale	0.88	Mackeson	0.88
Boddingtons (Export draught only)	0.58	Marston's Pedigree	0.88
Bombardier	0.88	McEwans 80 or 90 shilling	0.97
Brahma	0.58	Merrydowns	0.58
Brandenburg	0.58	Michelob	0.58
Budvar	0.88	Miller (Draught not Pils)	0.58
Budweiser/ Bud Ice	0.58	Molson	0.58
Bulmers/Magners	0.88 or 1.00	Murphys	0.88
Carling	0.48	Old Speckled Hen	0.88
Carlsberg	0.58	Oranjeboom	0.58
Castle	0.58	Peroni lager (Nastro Azzuri)	0.58
Cobra	0.58	Pils (unspecified)	0.58
Coors	0.58	Pivovar Czech Lager	0.88
Corona	0.58	Red Rock	0.58
Crest Lager (Export)	0.44	Red Stripe	0.58
Diamond (Blush, White or Zest)	0.48	Rolling Rock	0.58
Dragon (Stout)	0.50	Royal Dutch	0.58
Elephant (Lager)	0.48 or 0.58	Ruddles	0.58
ESB (Fuller's ESB)	0.88	Sam Smiths (Old Brewery Strong Ale)	0.97
Export 33	0.44	San Miguel	0.58
Foster's (Unspecified)	0.77	Scrumpy Jack	0.58
Foster's Export	0.77	Singha beer	0.58
Foster's Ice	0.58	Skol	0.58
Grolsch	0.58 or 0.77	Sol	0.58
Guinness Extra Stout	0.58	Spitfire	0.88
Guinness Original	0.58 or 0.88	Stella Artois (dry or regular)	0.44, 0.48 or 0.58
Heineken (Export)	0.58	Stinger	0.58
Hoegaarden (bier blonde)	0.58	Strongbow (Blackthorn)	0.48 or 0.58
Holsten Pils (bottle)	0.58	Thatchers cider	0.88
Home made	0.58	Theakstons	0.97
Ice Dragon	0.48	Tiger beer	0.58
John Smiths	0.77	Tsingtao	0.58
K. Cider	0.48	Vault	0.58
Kanterbrau	0.58	Victoria Bitter	0.58
Kingfisher	0.58	Wadworth Export	0.88
Kirin	0.58 or 0.88	Woodpecker	0.48

Conversion Table

mls	pints	mls	pints	mls	pints
180	0.32	330	0.58	750	1.32
200	0.35	440	0.77	1000 (1 litre)	1.76
250	0.44	500	0.88	1500 (1.5 litres)	2.64
275	0.48	550	0.97	2000 (2 litres)	3.52
284	0.50	568	1.00	3000 (3 litres)	5.28

3.10 Height, weight and infant length

If you get an Interviewer Check (Active Signal) at variable **Height1, Height2** or **Height3** and the decimal is .0 (e.g. 15.0), suppress this warning to continue moving through the Edit.

OHiNRel	Other reason for unreliable height measurement. To be coded back to **HiNRel**.
NoHitCO	Other reason for not obtaining height measurement. To be coded back at **NoHtBC**.
NoWatCO	Other reason for not obtaining weight measurement. To be coded back at **NoWtBC**.
OthNLth	Other reason for not obtaining length measurement. To be coded back at **NoAttL**.

Checks for height/length and weight in the edit program reject extremely unusual heights and weights as a safeguard against very unlikely results. Contact research staff if the height or weight check is activated.

For children aged 4-12 who are away from home during field period an interview will have been attempted with his/her parents. Variables **NoHtBC/NoWtBC** should be coded 1 - "Child away from home during the field period". Editors should check that where notes indicate that a child is absent during the field period that code 1 has been used in the above variables.

****Note** that code 1 can only be used if the child is known to be away from home for the whole of the fieldwork period. It should not be used for those cases where a child is not available at the time measurements are conducted (eg child got bored and went outside to play). These should be left as “Other”. If child is “ill”, recode to Code 8 ‘ill or in pain’.

Veiled refusals at **NoHitCO/NoWatCO** (where respondent has not given a reason for not having height/weight taken but has effectively terminated the interview: eg ‘too busy’, ‘had to go out’, ‘not convenient’ etc.) should be recoded to Code 2 ‘Height/Weight refused’ at **RespHts**/**Respwts**, and the reason for refusal coded at **ResNHi**/**ResNWt**.

3.11 Drug Coding

MEDBI

All drugs are to be coded to the six digit BNF using the Coding Prescribed Medicine booklet or the BNF (Number 54 – Sept 2007). The nurse should have completed this during her visit, but some drugs may have been hard to find. In these cases the nurse will have coded 999999. Coders should attempt to solve these queries but if drug is not found, send the query to the Research team in London. If no decision can be made after querying with the researchers use code 999996.

Any drugs coded 14.**.** or 15.**.** by the nurse should fail the first edit for manual checking. The only possible codes under 14 are 14.04.00 and 14.05.00; these are uncommon. Check that they are correctly used. It is unlikely that anything is prescribed under 15 but just possible. Note that there are a number of fairly common drugs listed in this section which are also listed under other sections. They are almost certainly being used for the purposes for which they are listed in other sections and should be recoded unless the nurse has indicated as anaesthetic use. For example, Diazepam is prescribed as a sleeping drug (04.01.02) but it is also used as an anaesthetic. Unless the nurse has recorded this as being used as an anaesthetic, recode to 04.01.02. If in doubt, query with researchers.

Drugs which cannot be coded using the BNF need to be sent to the Research team in London

4. Self Completion Booklets

The majority of edit checks are specified on the marked up booklets. Variables which need a more complex method of checking are detailed in this section.

4.1 Cigarette Smoking

In the Young Adults Booklet the variables for the number of cigarettes smoked a day are **DDlySmok** (Q6) and **DWkndSmo** (Q7).

If range given, take midpoint

Hand rolled cigarettes: 1 oz tobacco = 40 cigarettes
12.5 grams tobacco = 18 cigarettes
25 grams tobacco = 36 cigarettes

Only convert ounces to cigarettes if the respondent has not given the number of cigarettes smoked.

4.2 Other alcoholic drinks

In both the 13-15s booklet and the Young Adults Booklet there are other alcoholic drinks listed for drinking in the last week. All other alcoholic drinks should be recoded to the listed drinks as detailed in section 3.7

5. Longstanding illness codeframe

01 Cancer (neoplasm) including lumps, masses, tumours and growths and benign (non-malignant) lumps and cysts

Acoustic neuroma
After effect of cancer (nes)
All tumours, growths, masses, lumps and cysts whether malignant or benign eg. tumour on brain, growth in bowel, growth on spinal cord, lump in breast
Cancers sited in any part of the body or system eg. Lung, breast, stomach
Colostomy caused by cancer
Cyst on eye, cyst in kidney.
General arthroma
Hereditary cancer
Hodgkin's disease
Hysterectomy for cancer of womb
Inch. leukaemia (cancer of the blood)
Lymphoma
Mastectomy (nes)
Neurofibromatosis
Part of intestines removed (cancer)
Pituitary gland removed (cancer)
Rodent ulcers
Sarcomas, carcinomas
Skin cancer, bone cancer
Wilms tumour

Endocrine/nutritional/metabolic diseases

02 Diabetes

Incl. Hyperglycaemia

03 Other endocrine/metabolic

Addison's disease
Beckwith - Wiedemann syndrome
Coeliac disease
Cushing's syndrome
Cystic fibrosis
Gilbert's syndrome
Hormone deficiency, deficiency of growth hormone, dwarfism
Hypercalcemia
Hypopotassaemia, lack of potassium
Malacia
Myxoedema (nes)
Obesity/overweight
Phenylketonuria
Rickets
Too much cholesterol in blood
Underactive/overactive thyroid, goitre
Water/fluid retention
Wilson's disease

Thyroid trouble and tiredness - code 03 only
Overactive thyroid and swelling in neck - code 03 only.

Mental, behavioural and personality disorders

04 Mental illness/anxiety/depression/nerves (nes)

Alcoholism, recovered not cured alcoholic
Angelman Syndrome
Anorexia nervosa
Anxiety, panic attacks
Asperger Syndrome
Autism/Autistic
Bipolar Affective Disorder
Catalepsy
Concussion syndrome
Depression
Drug addict
Dyslexia
Hyperactive child.
Nerves (nes)
Nervous breakdown, neurasthenia, nervous trouble
Phobias
Schizophrenia, manic depressive
Senile dementia, forgetfulness, gets confused
Speech impediment, stammer
Stress

Alzheimer's disease, degenerative brain disease = code 08

05 Mental handicap

Incl. Down's syndrome, Mongol
Mentally retarded, subnormal

Nervous system (central and peripheral including brain) - Not mental illness

06 Epilepsy/fits/convulsions
Grand mal
Petit mal
Jacksonian fit
Lennox-Gastaut syndrome
blackouts
febrile convulsions
fit (nes)

07 Migraine/headaches

08 Other problems of nervous system
Abscess on brain
Alzheimer's disease
Bell's palsy
Brain damage resulting from infection (eg. meningitis, encephalitis) or injury
Carpal tunnel syndrome
Cerebral palsy (spastic)
Degenerative brain disease
Fibromyalgia
Friedreich's Ataxia
Guillain-Barre syndrome
Huntington's chorea
Hydrocephalus, microcephaly, fluid on brain
Injury to spine resulting in paralysis
Metachromatic leucodystrophy
Motor neurone disease
Multiple Sclerosis (MS), disseminated sclerosis
Muscular dystrophy
Myalgic encephalomyelitis (ME)
Myasthenia gravis
Myotonic dystrophy
Neuralgia, neuritis
Numbness/loss of feeling in fingers, hand, leg etc
Paraplegia (paralysis of lower limbs)
Parkinson's disease (paralysis agitans)
Partially paralysed (nes)
Physically handicapped - spasticity of all limbs
Pins and needles in arm
Post viral syndrome (ME)
Removal of nerve in arm
Restless legs
Sciatica
Shingles
Spina bifida
Syringomyelia
Trapped nerve
Trigeminal neuralgia
Teraplegia

Eye complaints

09 Cataract/poor eye sight/blindness
Incl. operation for cataracts, now need glasses
Bad eyesight, restricted vision, partially sighted
Bad eyesight/nearly blind because of cataracts
Blind in one eye, loss of one eye
Blindness caused by diabetes
Blurred vision
Detached/scarred retina
Hardening of lens
Lens implants in both eyes
Short sighted, long sighted, myopia
Trouble with eyes (nes), eyes not good (nes)
Tunnel vision

10 Other eye complaints
Astigmatism
Buphthalmos
Colour blind
Double vision
Dry eye syndrome, trouble with tear ducts, watery eyes
Eye infection, conjunctivitis
Eyes are light sensitive
Floater in eye
Glaucoma
Haemorrhage behind eye
Injury to eye
Iritis
Keratoconus
Night blindness
Retinitis pigmentosa
Scarred cornea, corneal ulcers
Squint, lazy eye
Sty on eye

Ear complaints

11 Poor hearing/deafness
Conductive/nerve/noise induced deafness
Deaf mute/deaf and dumb
Heard of hearing, slightly deaf
Otosclerosis
Poor hearing after mastoid operation

12 Tinnitus/noises in the ear
Incl. pulsing in the ear

13 Meniere's disease/ear complaints causing balance problems
Labryrinthitis,
loss of balance - inner ear
Vertigo

14 Other ear complaints
Incl. otitis media - glue ear
Disorders of Eustachian tube
Perforated ear drum (nes)
Middle/inner ear problems
Mastoiditis
Ear trouble (nes),
Ear problem (wax)
Ear aches and discharges
Ear infection

Complaints of heart, blood vessels and circulatory system

15 Stroke/cerebral haemorrhage/cerebral thrombosis
Incl. stroke victim - partially paralysed and speech difficulty
Hemiplegia, apoplexy, cerebral embolism,
Cerebro - vascular accident

16 Heart attack/angina
Incl. coronary thrombosis, myocardial infarction

17 Hypertension/high blood pressure/blood pressure (nes)

18 Other heart problems
Aortic/mitral valve stenosis,
Aortic/mitral valve regurgitation
Aorta replacement
Atrial Septal Defect (ASD)
Cardiac asthma
Cardiac diffusion
Cardiac problems, heart trouble (nes)
Dizziness, giddiness, balance problems (nes)
Hardening of arteries in heart
Heart disease, heart complaint
Heart failure
Heart murmur, palpitations
Hole in the heart
Ischaemic heart disease
Pacemaker
Pains in chest (nes)
Pericarditis
St Vitus dance
Tachycardia, sick sinus syndrome
Tired heart
Valvular heart disease
Weak heart because of rheumatic fever
Wolff - Parkinson - White syndrome

Balance problems due to ear complaint = code 13

19 Piles/haemorrhoids incl. Varicose Veins in anus.

20 Varicose veins/phlebitis in lower extremities
Incl. various ulcers, varicose eczema

21 Other blood vessels/embolic
Arteriosclerosis, hardening of arteries (nes)
Arterial thrombosis
Artificial arteries (nes)
Blocked arteries in leg
Blood clots (nes)
Hand Arm Vibration Syndrome (White Finger)
Hypersensitive to the cold
Intermittent claudication
Low blood pressure/hypertension
Poor circulation
Pulmonary embolism
Raynaud's disease
Swollen legs and feet
Telangiectasia (nes)
Thrombosis (nes)
Varicose veins in Oesophagus
Wright's syndrome

NB Haemorrhage behind eye = code 10

Complaints of respiratory system

22 Bronchitis/emphysema
Bronchiectasis
Chronic bronchitis

23 Asthma
Bronchial asthma, allergic asthma
Asthma - allergy to house dust/grass/cat fur

NB *Exclude cardiac asthma - code 18*

24 Hayfever
Allergic rhinitis

25 Other respiratory complaints
Abscess on larynx
Adenoid problems, nasal polyps
Allergy to dust/cat fur
Bad chest (nes), weak chest - wheezy
Breathlessness
Bronchial trouble, chest trouble (nes)
Catarrh
Chest infections, get a lot of colds
Churg-Strauss syndrome
Chronic Obstructive Pulmonary Disease (COPD)
Coughing fits
Croup
Damaged lung (nes), lost lower lobe of left lung
Fibrosis of lung
Furred up airways, collapsed lung
Lung complaint (nes), lung problems (nes)
Lung damage by viral pneumonia
Paralysis of vocal cords
Pigeon fancier's lung
Pneumoconiosis, byssinosis, asbestosis and other industrial, respiratory disease
Recurrent pleurisy
Rhinitis (nes)
Sinus trouble, sinusitis
Sore throat, pharyngitis
Throat infection
Throat trouble (nes), throat irritation
Tonsillitis
Ulcer on lung, fluid on lung

TB (pulmonary tuberculosis) - code 37
Cystic fibrosis - code 03
Skin allergy - code 39
Food allergy - code 27
Allergy (nes) - code 41
Pilonidal sinus - code 39
Sick sinus syndrome - code 18
Whooping cough - code 37

If complaint is breathlessness with the cause also stated, code the cause:
breathlessness as a result of anaemia (code 38)
breathlessness due to hole in heart (code 18)
breathlessness due to angina (code 16)

Complaints of the digestive system

26 Stomach ulcer / ulcer (nes) / abdominal hernia / rupture

Double/inguinal/diaphragm/hiatus/umbilical hernia
Gastric/duodenal/peptic ulcer
Hernia (nes), rupture (nes)
Ulcer (nes)

27 Other digestive complaints (stomach, liver, pancreas, bile ducts, small intestine - duodenum, jejunum and ileum)

Cirrhosis of the liver, liver problems
Food allergies
Ileostomy
Indigestion, heart burn, dyspepsia
Inflamed duodenum
Liver disease, biliary artesia
Nervous stomach, acid stomach
Pancreas problems
Stomach trouble (nes), abdominal trouble (nes)
Stone in gallbladder, gallbladder problems
Throat trouble - difficulty in swallowing
Weakness in intestines

28 Complaints of bowel / colon (large intestine, caecum, bowel, colon, rectum)

Colitis, colon trouble, ulcerative colitis
Coleliac
Colostomy (nes)
Crohn's disease
Diverticulitis
Enteritis
Faecal incontinence/encopresis.
Frequent diarrhoea, constipation
Grumbling appendix
Hirschsprung's disease
Irritable bowel, inflammation of bowel
Polyp on bowel
Spastic colon

Exclude piles - code 19
Cancer of stomach/bowel - code 01

29 Complaints of teeth / mouth / tongue

Cleft palate, hare lip
Impacted wisdom tooth, gingivitis
No sense of taste
Ulcers on tongue, mouth ulcers

Complaints of genito-urinary system

30 Kidney complaints

Chronic renal failure
Horseshoe kidney, cystic kidney
Kidney trouble, tube damage, stone in the kidney
Nephritis, pyelonephritis
Nephrotic syndrome
Only one kidney, double kidney on right side
Renal TB
Uraemia

31 Urinary tract infection

Cystitis, urine infection

32 Other bladder problems / incontinence

Bed wetting, enuresis
Bladder restriction
Water trouble (nes)
Weak bladder, bladder complaint (nes)

Prostate trouble - code 33

33 Reproductive system disorders

Abscess on breast, mastitis, cracked nipple
Amenorrhea
Damaged testicles
Endometriosis
Gynaecological problems
Hysterectomy (nes)
Impotence, infertility
Menopause
Pelvic inflammatory disease/PID (female)
Period problems, flooding, pre-menstrual tension/syndrome
Prolapse (nes) if female
Prolapsed womb
Prostrate gland trouble
Turner's syndrome
Vaginitis, vulvitis, dysmenorrhoea

Musculo-skeletal - complaints of bones/joints /muscles

34 Arthritis/rheumatism/fibrositis

Arthritis as result of broken limb
Arthritis/rheumatism in any part of the body
Gout (*previously code 03*)
Osteoarthritis, rheumatoid arthritis, polymyalgia rheumatica
Polyarteritis Nodosa (*previously code 21*)
Psoriasis arthritis (also code psoriasis)
Rheumatic symptoms
Still's disease

35 Back problems/slipped disc/spine/neck

Back trouble, lower back problems, back ache
Curvature of spine
Damage, fracture or injury to back/spine/neck
Disc trouble
Lumbago, inflammation of spinal joint
Prolapsed invertebral discs
Schuermann's disease
Spondylitis, spondylosis
Worn discs in spine - affects legs

Exclude if damage/injury to spine results in paralysis - code 08
Sciatica or trapped nerve in spine - code 08

36 Other problems of bones/joints/muscles

Absence or loss of limb eg. lost leg in war, finger amputated, born without arms
Aching arm, stiff arm, sore arm muscle
Bad shoulder, bad leg, collapsed knee cap, knee cap removed
Brittle bones, osteoporosis
Bursitis, housemaid's knee, tennis elbow
Cartilage problems
Chondrodystrophia
Chondromalacia
Cramp in hand
Deformity of limbs eg. club foot, claw-hand, malformed jaw
Delayed healing of bones or badly set fractures
Deviated septum
Dislocations eg. dislocation of hip, clicky hip, dislocated knee/finger
Disseminated lupus
Dupuytren's contraction
Fibromyalgia
Flat feet, bunions,
Fracture, damage or injury to extremities, ribs, collarbone, pelvis, skull, eg. knee injury, broken leg, gun shot wounds in leg/shoulder, can't hold arm out flat - broke it as a child, broken nose
Frozen shoulder
Hip infection, TB hip
Hip replacement (nes)
Legs won't go, difficulty in walking
Marfan Syndrome
Osteomyelitis
Paget's disease
Perthe's disease
Physically handicapped (nes)
Pierre Robin syndrome
Schlatter's disease
Sever's disease
Stiff joints, joint pains, contraction of sinews, muscle wastage
Strained leg muscles, pain in thigh muscles
Systemic sclerosis, myotonia (nes)
Tenosynovitis
Torn muscle in leg, torn ligaments, tendonitis
Walk with limp as a result of polio, polio (nes), after affects of polio (nes)
Weak legs, leg trouble, pain in legs

Muscular dystrophy - code 08

37 Infectious and parasitic disease

AIDS, AIDS carrier, HIV positive (*previously code 03*)
Athlete's foot, fungal infection of nail
Brucellosis
Glandular fever
Malaria
Pulmonary tuberculosis (TB)
Ringworm
Schistosomiasis
Tetanus
Thrush, candida
Toxoplasmosis (nes)
Tuberculosis of abdomen
Typhoid fever
Venereal diseases
Viral hepatitis
Whooping cough

After effect of Poliomyelitis, meningitis, encephalitis - code to site/system
Ear/throat infections etc - code to site

38 Disorders of blood and blood forming organs and immunity disorders

Anaemia, pernicious anaemia
Blood condition (nes), blood deficiency
Haemophilia
Idiopathic Thrombochopenic Purpura (ITP)
Immunodeficiences
Polycthaemia (blood thickening), blood to thick
Purpura (nes)
Removal of spleen
Sarcoidosis (*previously code 37*)
Sickle cell anaemia/disease
Thalassaemia
Thrombocythenia

Leukaemia - code 01

39 Skin complaints

abscess in groin
acne
birth mark
burned arm (nes)
carbuncles, boils, warts, verruca
cellulitis (nes)
chilblains
corns, calluses
dermatitis
Eczema
epidermolysis, bulosa
impetigo
ingrown toenails
pilonidal sinusitis
Psoriasis, psoriasis arthritis (also code arthritis)
skin allergies, leaf rash, angio-oedema
skin rashes and irritations
skin ulcer, ulcer on limb (nes)

Rodent ulcer - code 01
Varicose ulcer, varicose eczema - code 20

40 Other complaints

adhesions
dumb, no speech
fainting
hair falling out, alopecia
insomnia
no sense of smell
nose bleeds
sleepwalking
travel sickness

Deaf and dumb - code 11 only

41 Unclassifiable (no other codable complaint)

after affects of meningitis (nes)
allergy (nes), allergic reaction to some drugs (nes)
electrical treatment on cheek (nes)
embarrassing itch (nes)
Forester's disease (nes)
general infirmity
generally run down (nes)
glass in head - too near temple to be removed (nes)
had meningitis - left me susceptible to other things (nes)
internal bleeding (nes)
ipinotaligia
old age/weak with old age
swollen glands (nes)
tiredness (nes)
war wound (nes), road accident injury (nes)
weight loss (nes)

42 Complaint no longer present

Only use this code if it is actually stated that the complaint no longer affects the informant.

Exclude if complaint kept under control by medication - code to site/system.

99 Not Answered / Refusal

6. Nurse Qu'aire: CAPI codeframes

OthNLth Reason for no infant length measurement. To be back coded to **NoAttL**.

1 Child asleep
2 Child too frightened or upset
3 Child too shy
4 Child would not lie still

OthWH Other reasons for not attempting waist-hip measurements. To be back coded to **WHPNABM**.

1 Respondent is chairbound
2 Respondent is confined to bed
3 Respondent is too stooped
4 Respondent did not understand the procedure

OthNBP Other reason not obtained blood pressure. To be back coded to **NAttBPD.**

1 Problems with PC
2 Respondent upset/anxious/nervous
3 'Error 844' reading
6 Problems with Cuff fitting/painful
7 Problems with Omron readings (zeros, no readings)
8 Problems with laptop

OthDifBP Other reason difficulty obtaining BP. To be back coded to **DifBPC.**

1 No problems taking blood pressure
2 Reading taken on left arm because right arm not suitable
3 Respondent was upset/anxious/nervous
5 Problems with cuff fitting/painful
6 Problems with Omron readings (zeros, no readings)

OthRefC Other reasons refusing to allow BP measurements to be sent to GP. To be back coded to **GPRefC.**

1 Hardly/Never sees GP
2 GP knows respondent's BP level
3 Does not want to bother GP

OthAttM Other reason why no demi-span measured. To be back coded to **NotAttM.**

1 Cannot straighten arms
2 Respondent confined to bed
3 Respondent too stooped
4 Respondent did not understand the procedure

OthRefBS Other reasons for refusing blood sample. To be back coded to **RefBSC.**

1 Previous difficulties with venepuncture
2 Dislike/fear of needles
3 Respondent recently had blood test/health check
4 Refused because of current illness
5 Worried about HIV or AIDS

OthSam Other reasons for not wanting blood sample results sent to GP. To be back coded to **SenSac.**

1 Hardly/never sees GP
2 GP recently took blood sample
3 Does not want to bother GP

OthBDif Other problems taking blood sample. To be back coded to **SamDifC.**

1 No problem
2 Incomplete sample
3 Collapsing/poor veins
4 Second attempt necessary
5 Some blood obtained, but respondent felt faint/fainted
6 Unable to use tourniquet

OthNoBSM Other reasons why blood sample not taken. To be back coded to **NoBSC.**

1 No suitable or no palpable vein/collapsed veins
2 Respondent was too anxious/nervous
3 Respondent felt faint/fainted