



NATIONAL DIET AND NUTRITION SURVEY

(NDNS)

Year 5

INTERVIEWER PROJECT INSTRUCTIONS

STUDY OVERVIEW	4
1.1 NDNS in a nutshell	4
1.2 Background and aims	5
1.3 NDNS website	5
1.4 NDNS report publications	5
1.5 Media coverage	6
CHANGES FOR YEAR	7
2.1 Sample – Basic and Young person split	7
2.2 Young Person’s Food Atlas	7
2.3 ActiGraphs	7
2.4 CAPI	7
2.5 Vouchers	7
PLANNING AND ORGANISING YOUR TIME	8
3.1 NDNS Fieldwork dates	8
3.2 Documents and Equipment	9
3.3 Interviewer calendars	10
3.4 General milestone guidance	10
3.5 ARFs	10
3.6 KPIs	10
3.7 Team Leaders	10
DEFINITIONS	10
4.1 Dwelling Unit (DU)	10
4.2 Household	11
4.3 Catering Unit (CU)	11
4.4 Main Food Provider (MFP)	11
4.5 Adult and child age brackets	11
YOUR SAMPLE	13
5.1 Who to interview	13
5.2 Interviewing children – consent for under 16s	13
5.3 Proxy interviews	14
5.4 Excluding pregnant/breastfeeding women	14
INTRODUCING NDNS	15
6.1 Notifying the Police is not required	15
6.2 Advance letters and Survey leaflets	15
6.3 Dietary feedback example	15
6.4 Doorstep introduction	15
6.5 Doorstep introduction for the Young Person boost sample	16
6.6 Visits to the Catering Unit (CU)	17
THE ARF	18
7.1 BASIC AND YOUNG PERSON ARFS	18
7.2 ADDRESS LABEL	18
7.3 SELECTION LABEL	19
7.4 FINAL OUTCOME (TOP RIGHT CORNER OF THE ARF)	19
7.5 CALLS RECORD (BOTTOM HALF OF FRONT PAGE OF THE ARF AND P2)	19
7.6 TASK LIST AND DIARY DATES	19
7.7 BASIC ADDRESS ARF / BLUE ARF (1-10)	19
<i>SECTION A - DWELLING UNITS (DUs)</i>	19
<i>SECTION B - CATERING UNITS (CUS)</i>	21
7.7.3 <i>SECTION C - ADULT SELECTION (AGE 19+)</i>	23
7.7.4 <i>SECTION D - CHILD SELECTION (18 MTHS – 18 YRS)</i>	24
<i>SECTION E - OUTCOME FOR RESPONDENTS</i>	27
<i>SECTION F UNPRODUCTIVE OUTCOME ELIGIBLE ADDRESSES</i>	27

SECTION G - Unproductive outcome: deadwood addresses	27
SECTION H - Unproductive outcome: unknown eligibility	27
SECTIONS I - J	27
7.8 YOUNG PERSON ADDRESSES ARF (11-27)/ CREAM ARF	27
SECTION C CHILD SELECTION	27
S D C O	27
QUESTIONNAIRE CAPI OVERVIEW	28
8.1 Introduction	28
8.2 Household (CU) structure interview	28
8.3 Household (CU) grid	28
8.4 Entering details of selected respondents	28
8.5 The MFP interview	28
8.6 Individual interviews	29
8.7 CAPI MODULES/ PARALLEL BLOCK	30
9. FOUR-DAY FOOD AND DRINK DIARY	30
9.1 The food diaries	31
9.1.1 Types of food diary in NDNS	31
9.1.2 Components of the food diary	31
9.1.3 Child and toddler diaries	31
9.2 Interviewer Diary Assessment Schedule (IDAS)	32
9.3 Other diary documents	32
9.3.1 Instruction booklet	32
9.3.2 Carer packs (child or toddler diary only)	32
9.3.3 Reminder card	32
9.3.4 Extra pages	32
9.4 Placing the food diary	33
9.4.1 Introducing the food diary	33
9.4.2 Practising with your respondent	33
9.4.3 Plastic bag for food labels	33
9.4.4 Food eaten away from home	34
9.4.5 Proxies	34
9.4.6 Arranging check up visit	34
9.4.7 Reminder phone call	34
9.5 Check up visit	34
9.5.1 Restarting the diary	35
9.5.2 Checking the food diary	35
9.5.3 Regional and ethnic foods	36
9.5.4 Meals on Wheels	36
9.5.5 School meals	36
9.5.6 The Young Person's Food Atlas	36
9.6 Pick up visit	38
9.7 Monitoring the quality of dietary data collection	39
9.7.1 Diary Evaluation	39
9.7.2 Early work feedback	39
9.7.3 Pre-point feedback	39
9.7.4 Post-briefing exercise	39
HEIGHT AND WEIGHT MEASUREMENTS	40
THE PHYSICAL ACTIVITY QUESTIONNAIRE	41
THE NHS CENTRAL REGISTER AND THE CANCER REGISTRY	43
THE NURSE VISIT	44
INCENTIVES GIFT CARD	46
WORKING MOBILE	46

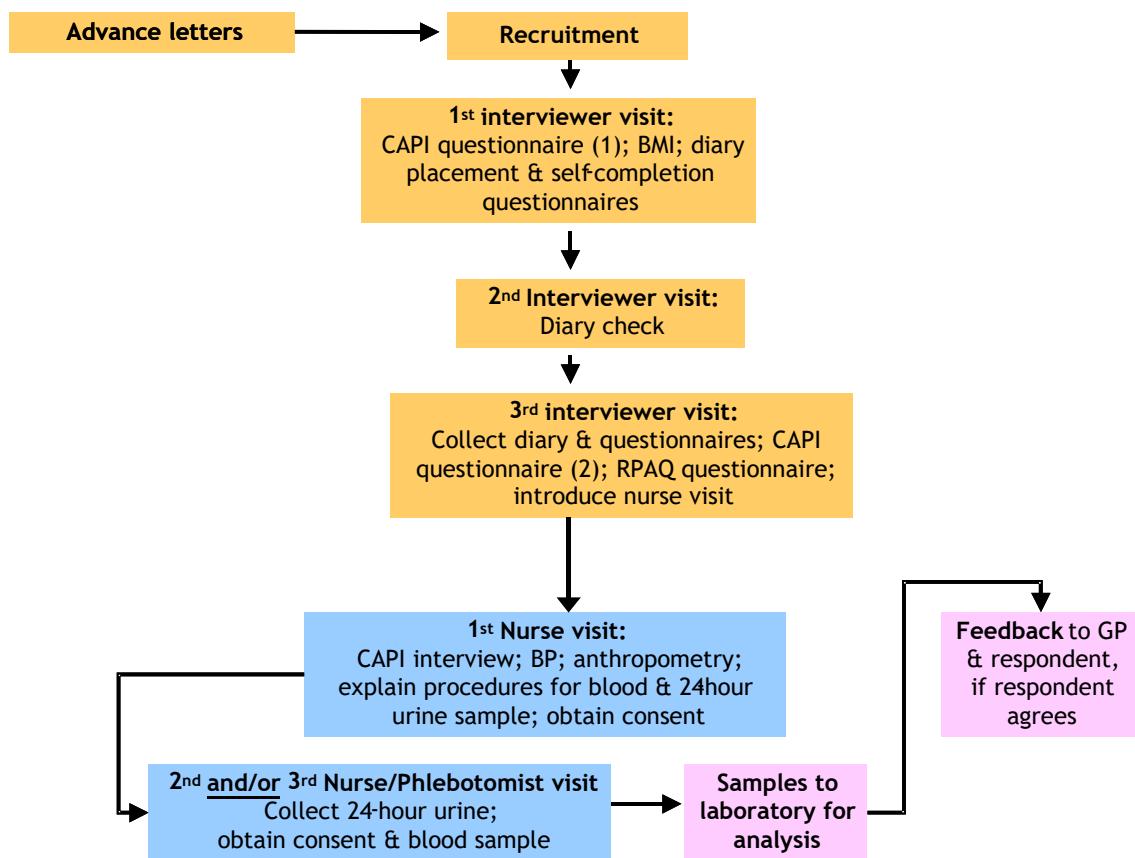
RETURNING WORK TO THE OFFICE	47
APPENDIX A HEIGHT MEASUREMENT PROTOCOL	49
APPENDIX B WEIGHT MEASUREMENT PROTOCOL	56

S O

1.1 NDNS

NDNS is a UK wide study that aims to measure people's nutritional health. It involves adult and child participants. Pregnant and breastfeeding women are excluded. There are 3 main interviewer visits to each household. The interviewer stage includes face-to-face interview and self-completion questionnaires, a 4-day food diary and height & weight measurements. There is an interviewer and nurse stage.

Interviewer fieldwork will run from April 2012 – March 2013. Below is a flowchart for NDNS, which you might find useful when mapping out your visits.



1.2 B

NDNS has been commissioned by the Department of Health (DH) and the Food Standards Agency (FSA). The Department of Health's purpose is to improve England's health and well-being. For more information see: www.dh.gov.uk. The Foods Standards Agency was set up in 2000 to 'protect public health and the interests of consumers in relation to food'. Its nutrition remit was to encourage and facilitate the eating of healthy diets in order to improve the nutrition and diet of the UK population. Since October 2010, the nutrition remit of the FSA in England has been transferred to the DH, and in Wales has been transferred to the Assembly Government. At present, these functions remain the responsibility of the FSA in Scotland and Northern Ireland. For more information see: www.food.gov.uk

W NDNS

- 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.

W

NDNS data underpins Government's work to protect consumer safety & promote healthy diets and is a major source through which the FSA and DH's information needs are met. NDNS data helps by:

- providing baseline data on nutrient intakes and nutritional status that can be compare with recommendations
- providing detailed food consumption data (i.e. what people eat) which is essential for assessing exposure to food chemicals
- Measuring progress towards Government policy objectives e.g. salt, saturated fat and fruit and vegetable consumption
- Track changes over time for example changes eating habits, lifestyles, cooking skills, the availability of different types of food, and re-formulations of manufactured foods.

1.3 NDNS

NDNS has its own website. It is designed to give respondents more information about the survey; interviewers may also find it useful to look through. 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: NDNS

1.4 NDNS

The Y1 and 2 combined data report was published in July 2011. So, does the UK population meet key UK dietary recommendations?

F V

Most adults did not meet the '5-a-day' guideline: on average, people aged 65+ ate more fruit and veg than any other age group. 37% of adults aged 65+ met the 5-a-day guideline; 30% of adults aged 19-64 years met the guideline; and only around one in 10 children aged 11-18 years met the '5-a-day' recommendation. Interestingly boys (ages 11-18 yrs) ate slightly more fruit and veg than girls.

F

Average intakes of saturated fat exceeded the recommended level in all age groups.

S

Non-milk extrinsic sugars (NMES), which are sugars found in confectionary and sugary drinks, exceeded the recommendations in all age groups, except for children aged 1.5-3 years and adults aged 65+. For children aged 4-18 years, soft drinks were the largest contributor to their NMES intake.

1.5 Media coverage

- NDNS was featured on the Channel 4 programme *Food Hospital*. See the following link to see the feature on NDNS research which shows that taking food supplements may be unnecessary for some <http://foodhospital.channel4.com/the-truth-about/videos/dr-pixie-investigates/the-truth-about-food-supplements/>
- Here are some newspaper cuttings from the most recent report:

T D T J

T G J

In Brief

Teenagers' diet warning

Nutritionists have issued a warning over teenage girls' diets, saying just seven per cent eat five portions of fruit and veg a day. One in 13 girls aged 11 to 18 ate five a day, with the average intake being 2.7 portions daily, according to the National Diet and Nutrition Survey.

Boys aged 11 to 18 also lacked essential vitamins and nutrients, with just one in eight eating their five a day.

Health

Girls eat only half their five-a-day, research finds

Doctors have voiced fears about teenagers' health after new research showed many children's diets contain too much saturated fat and too little fruit, vegetables and iron. Girls' eating habits emerged as a particular concern: those aged 11 to 18 consume on average only 2.7 of the recommended five portions a day of fruit and vegetables, according to the National Diet and Nutrition Surveys for 2008/09 and 2009/10. The Department of Health warned that children's "pooreating habits risk storing up a number of potential problems for later life, such as heart disease and some cancers". Denis Campbell

I J

HEALTH

Teenage girls have UK's worst diets

By **Nina Lakhani**

Teenage girls have the unhealthiest diet in the UK, sparking fears about a "ticking time bomb" of long-term health problems.

Fewer than one in 10 teenage girls eat the recommended five portions of fruit and vegetables a day and half are not getting enough iron, according to the

Department of Health's National Diet and Nutrition Survey.

Teenage boys fare only slightly better, eating on average 3.1 portions of fruit or vegetables a day – half a portion more than girls of the same age.

Young children, aged between one and a half and three, eat the most fruit and vegetables of any age group.

C Y

2.1 S B Y

Year 5 assignments will include 27 addresses as usual, of which addresses 1-10 are basic addresses and addresses 11-27 are young person addresses.

2.2 Y P F A

We have reduced the number of foods in the Atlas. There are still 3 versions of the atlas for different age groups.

2.3 A G

The ActiGraph element of the study has been removed.

2.4 CAPI

The CAPI remains almost identical to Year 4 of NDNS. The ActiGraph questions have been removed and the ethnicity and national identity questions have been updated to stay in line with the Census 2011 questions. If you notice anything that seems unusual, however, please contact us.

2.5 V

We have moved over to gift cards, which interviewers will have to activate via CAPI.

P

3.1 NDNS F

Q	M	W (2 weeks before start)	CAPI LIVE (3 days before start)	F S	F	N
Q	APR	Mon 19 Mar	Fri 29 Mar	Sun 1 Apr	Mon 14 May	<i>06-Jul</i>
	MAY	Mon 16 Apr	Fri 27 Apr	Tues 1 May	Tue 12 Jun	<i>07-Aug</i>
	JUN	Mon 21 May	Tue 29 May	Fri 1 Jun	Mon 16 Jul	<i>05-Sep</i>
Q	JUL	Mon 18 Jun	Thu 28 Jun	Sun 1 Jul	Mon 20 Aug	<i>08-Oct</i>
	AUG	Mon 16 Jul	Fri 27 Jul	Weds 1 Aug	Wed 12 Sep	<i>07-Nov</i>
	SEP	Mon 20 Aug	Wed 29 Aug	Sat 1 Sep	Mon 15 Oct	<i>06-Dec</i>
Q	OCT	Mon 17 Sep	Fri 28 Sep	Mon 1 Oct	Wed 14 Nov	<i>09-Jan</i>
	NOV	Mon 22 Oct	Mon 29 Oct	Thu 1 Nov	Mon 7 Jan	<i>06-Feb</i>
	DEC	Mon 5 Nov	Tue 20 Nov	Fri 23 Nov	Mon 21 Jan	<i>14-Mar</i>
Q	JAN	Mon 17 Dec	Thu 20 Dec	Tue 1 Jan	Thu 14 Feb	<i>11-Apr</i>
	FEB	Mon 21 Jan	Tue 29 Jan	Fri 1 Feb	Thu 14 Mar	<i>08-May</i>
	MAR	Mon 18 Feb	Tue 26 Feb	Fri 1 Mar	Mon 15 Apr	<i>06-Jun</i>

3.2 D E

This is a list of documents and equipment you will need, in visit order. Before starting work check that you have all supplies.

P	
Project instructions	White
D	
Laminated advance letters	White
ARF (Basic addresses)	Blue
ARF (Young person addresses)	Cream
NatCen leaflet	White
Stage 1 leaflet – Adult	White
Stage 1 leaflet – Child	White
V	
Contact cards	Turquoise
CAPI showcards	Cream
Laminate set of Interviewer reference cards	Various
Measurement Record Card	White
BMI leaflet	White
Interviewer diary assessment schedule	Lime green
Food diary – adult (A4)	White
Food diary – adult (A5)	White
Food diary – child (A4)	White
Food diary – toddler (A5 – parent fills in)	White
Diary instruction booklet – adult (A5)	White
Packaging cards (<i>in zipper bag</i>)	White
Practice sheets – adult	White
Practice sheets – child	White
Extra diary pages	White
Food diary reminder card	Meadow green
Carer letter	White
Carer food and drink recording sheet (<i>4 in each carer pack zipper bag</i>)	Aquamarine
Smoking & drinking self-completion – 8-12yr	Green
Smoking & drinking self-completion – 13-15yr	Pale blue
Smoking & drinking self-completion – 16-24yr	Peach
V M	
Interviewer diary assessment schedule	Lime green
Green pen	n/a
Laminate pack – IDAS prompt	White
Diary instruction booklet – adult (A5)	White
Young persons food atlas Booklet	Booklet(x3)
V	
CAPI showcards	Cream
Stage 2 leaflet – Adult	White
Stage 2 leaflet – Child & young person	White
Diary TOA receipt (£30)	Green
£30 Gift Card	n/a
Physical Activity self-completion	White
Interviewer diary assessment schedule	Lime green
Diary instruction booklet – adult (A5)	White
Laminate pack – IDAS prompt	White
Young persons food atlas Booklet	Booklet (x3)
Diary evaluation sheet	Spring green
NHSCR consent form	Pink

3.3 I

You will receive an Interviewer calendar within your workpack. These calendars outline start and end dates of fieldwork, as well as key deadlines for the very last day you can do CAPI 1, place diaries, and complete CAPI 2.

3.4 G

This is a list of all key milestones for NDNS assignments. Team leaders will be checking progress against this information:

B	Advanced letters can be sent out up to 2 weeks before the start of fieldwork. All advanced letters must be mailed out ahead of fieldwork start.
D	Pick up assignment at least 1 day before the start of fieldwork.
B	Start assignment on the first day of fieldwork. At the very latest assignments must be started within 3 days of the fieldwork start date.
B	All young person boost addresses (11 -27) should be screened within the first 2 weeks. This will help assess how large your workload will be.
A	All addresses must have been contacted/attempted within 3 weeks.
D	All Visit 1's (CAPI 1 an diary placement) to households to be completed All diaries placed
A	Mid week checks must be carried out on day 1 or 2 of the diary recording period (ideally face to face). Pick-up visits must be within 3 days of the last diary recording day. First completed diary must be sent to the office straight away.
A	Return all documents including your set of Young Person's Photo Food Atlases.

3.5 ARF

Make use of the task list and section to record diary dates on page 3 of the ARF – this will help you keep track of dates household visits are needed and tasks that you will need to complete.

3.6 KPI

- You should aim to visit all your addresses within the first 7 days of fieldwork
- Milestone 1 – by half way through fieldwork 60% of your addresses should be covered
- Milestone 2 – by three quarters of your way through fieldwork 80% of your addresses should be covered

3.7 T L

- Team Leaders will contact interviewers on a weekly basis to monitor progress on NDNS.

DEFINITIONS

4.1 D U 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.

4.2 H

The standard definition of a household applies to NDNS: One person living alone or a group of people (not necessarily related) living at the same address (or the selected DU within the address) who share cooking facilities AND share a living room or sitting room or dining area.

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.

4.3 C U 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.

4.4 M F P MFP

The Main Food Provider (MFP) 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.

4.5 A

For the purposes of respondent selection:

- are aged
- are aged

Respondents aged 17 and 18 are counted as children/young people. In the questionnaire, those aged 16-18 will usually follow the same routing as those aged 19+.

A	(i.e. the date you administer the ARF)	NDNS,
----------	--	--------------

CAPI

If when doing the respondent selection, you are told that someone is currently 18 but they will have their 19th birthday soon, they are still counted as a child and should be included in the relevant "child" selection grid on the ARF. If they are selected as the child respondent and turn 19 before you return to do the first visit interview and tasks, you would have to allocate the appropriate unproductive code for this individual. You would not do a reselection amongst those who are still aged under 19.

 I

Yes, you can interview a young person if the adult selected doesn't want to take part but is happy for the child to be interviewed.

YOUR SAMPLE

5.1 W

S

- There are 27 addresses in each assignment.
- There are 2 types of addresses: Basic addresses and Young Person addresses.

B addresses 1 to 10, you will select one adult (aged 19+) and one young person (aged 18 mths-18years) at random. In CUs with no such young people, just one adult will be selected.

Y addresses 11 – 27, you will select one child/young person (aged 18mths – 18 yrs). You will screen out households that do not have someone aged 18mnths – 18 yrs living there.

The ARF will guide you through the procedures for respondent selection (see section 7).

Each assignment contains 27 addresses

Basic Addresses:

- Addresses 1-10 are basic addresses
- Blue ARF
- Select up to 2 participants.
- One adult (aged 19+) and one child (aged 18months-18years) at random.

Young Person Boost Addresses:

- Addresses 11-27 are young person boost addresses
- Cream ARF
- Select one person aged between 18months-18years
- Screen out any households that don't have anyone aged 18months-18years
- No adult will be selected at these addresses

5.2 Interviewing children – consent for under 16s

For all children under 16 you must get permission from the child's parent(s) 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 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 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 and in CAPI.

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.

5.3 Proxy interviews

Apart from interviews with children you should 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** with the selected adult if the MFP is not – and will not – be available.

5.4 Excluding pregnant/breastfeeding women

NDNS does not include pregnant nor breastfeeding women, because of their special nutritional needs.

- 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 (19+) CU with children, and the adult is pregnant/breastfeeding, then you will attempt to interview a young person (18mths-18 years) only.
- If you accidentally select a pregnant/breastfeeding woman, there is a check question in CAPI. In which case you can reselect your respondents.

INTRODUCING NDNS

6.1 N P

Interviewers are no longer at the local police station to register their presence in the area before starting fieldwork or register via the local police non-emergency. Respondents can seek reassurance by visiting our website www.natcen.ac.uk/NDNS, using the NatCen freephone number 0800 652 4572, or emailing NDNS@natcen.ac.uk all of which are found on the advance letter.

6.2 A S

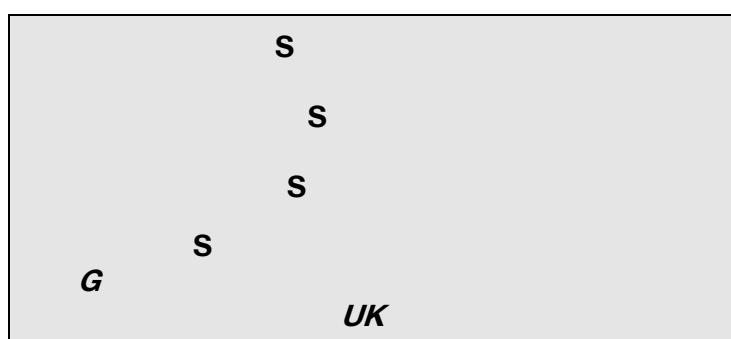
- An advance letter, printed on FSA and DH headed paper, describing the purpose of NDNS is sent by you to all sampled addresses a few days in advance of fieldwork. The letter briefly describes the study and states that you will be calling.
- There are two versions of the letter – one for the ‘basic’ addresses (1-10) and another for the “young person” addresses (11-27).
- You have been given a laminate copy 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 stage 1 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.

6.3 D

In your laminate pack there is an example of the personalised dietary feedback that the respondent can receive if they complete four diary days. You may wish to use this to encourage people to take part in the study.

6.4 D

The general rule is keep your initial introduction short, clear and to the point. Keep your explanation as short as possible saying as little as you can get away with.



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 mention measurements – this may put some people off. The interview and dietary data collection are very important, and we want them even if we do not get any measurements for a person.

W

- It is a national (Government) survey (on behalf of the Food Standards Agency and the Department of Health).
- 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 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 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 TOKEN OF APPRECIATION FOR EACH INDIVIDUAL TAKING PART**

6.5 D Y P

At "young person" addresses (11 -27), we are only looking for young persons aged 18mths -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 and the Department of Health.
- 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 and young people 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 young people.
- 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.

6.6 V C U CU

Interviewers make three main visits to a participating Catering Unit.

	Household Structure MFP interview CAPI 1 Smoking & drinking self-completion Height & weight measurements Place diary
	Midweek diary check up(s)
	Collect diary CAPI 2 Physical-activity self-completion Give token of appreciation (£30 gift card) Introduce the nurse visit

- For CUs with an adult and a young person respondent you should try to interview the adult and young person at the same visit, so that you do not need to make additional visits.
- Page 3 of the ARFs 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 and necessary for gaps of 7 days or longer.

THE ARF

7.1 BASIC AND YOUNG PERSON ARFS

You will receive a pre-labelled ARF for each of the addresses in your sample. Note that there are two versions of the ARF. The ARF header tells you whether the address is BASIC or YOUNG PERSON.

B BASIC ADDRESS ARF

- for addresses 01-10 where you will aim to select one adult (19+) and one child/young person (18 months -18 years)

C YOUNG PERSON ADDRESS ARF

- for addresses 11-27 which includes a screen for young people aged 18months - 18 years.

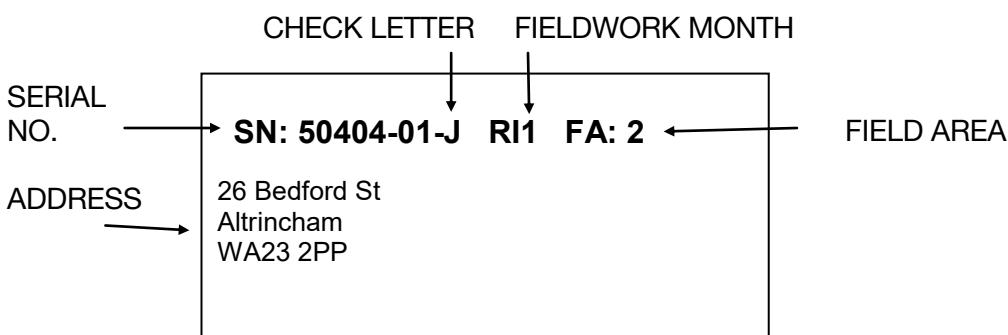
Each ARF enables you to:

- record all attempts to make contact at the address
- select a DUs
- select a CUs (within the selected DU)
- at basic addresses*: select an eligible adults (19+) within the selected CU
- select an eligible young person (18months-18 years) within the selected CU
- record the name of the legal guardian who gave consent for any one under 16 year olds
- record the final outcome for the selected respondent(s)
- It also provides a checklist of the tasks that you need to do

7.2 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 ('5' for year 5, 2012/13)
- Two digits for the MONTH (01=January; 04=April etc)
- Two digits for the Point number, within month (01..12)
- Two digits for the Address number, within point (01..27)
- A check letter.
- C** (for interviewers working in Wales), will be indicated by *CB* in the top right hand corner of the address and selection labels.



The _____ is the anonymised number assigned to that household. You will be asked to write it on a number of documents (e.g. self-completions). This enables the office to match all the documents 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.

7.3 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 7.6.

7.4 FINAL OUTCOME (TOP RIGHT CORNER OF THE ARF)

This is the outcome code for the 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 within CAPI. It can only be coded when you have completed all your tasks for that CU and will be given in the Admin block.

7.5 CALLS RECORD (BOTTOM HALF OF FRONT PAGE OF THE ARF AND P2)

Keep a full record of all the 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 you make. You may need to phone 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.

7.6 TASK LIST AND DIARY DATES

On page 3 there is a task list, as 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.

7.7 BASIC ADDRESS ARF BLUE ARF

SECTION A - DWELLING UNITS (DUs)

This section guides 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. You will need to follow the routing instructions carefully.

You will need to complete the	at Section J before making contact.
-------------------------------	-------------------------------------

A You first need to establish whether the address is , as a main residence. If is not traceable, residential or occupied then you will proceed to Section G. If you are not sure, you are routed to section H. If it is residential and occupied, then proceed to A2.

A A At this question you should **DU** 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 F to record why the address is unproductive. 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.

A If there are **DU** , list all of them in the grid in the order indicated. Then use the selection label on the front of the ARF to select one DU. Go along the first row ("DU/AD") 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/AD: 2 3 4 5 6 7 8 9 10 11 12 2 3 1 1 5 1 1 9 9 11 6
CU/CH: 2 3 4 5 6 7 8 9 10 11 12 1 2 3 5 6 6 1 4 8 7 7

If have an address with 13 or more DUs, list the DUs on a separate sheet of paper in the order indicated at A4. Then use the look-up chart in Section I 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 below. Given the selection label shown above, you can see that the Basement flat was the selected DU.

A3. **DU SUMMARY**

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

- A** List all DUs **DU** In flat/room number order or, from bottom to top of building, left to right, front to back) then select one using the selection label on the front of the ARF.

DESCRIPTION	DU CODE	DESCRIPTION	DU CODE
B F	(01)		07
G	02		08
F	03		09
F	04		10
	05		11
	06		12

IF DU

- Look at the selection label on front page.
- In 'DU' row: find number matching total number
- Look at 'Select' row directly beneath showing you which DU code to select.
- Ring corresponding DU code in grid above.
- Write in description of selected DU at A5.

IF DU

- Continue list on separate sheet if necessary
- Make a selection using the lookup chart in section I.
- Write in at A5.

A

ENTER CODE NUMBER OF SELECTED DU HERE

GO TO SECTION B

- A** Once you have selected a 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.

SECTION B - CATERING UNITS (CUS)

- B B** Here you will 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 F and code why.
- B** If there are 2 or more CUs, 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 B3. Then use the look-up chart in Section I. For example, if you have 13 CUs, the CU 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.

- B** 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 4, 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).

An example of a completed CU selection is shown below. Given the selection label shown above (page 22), you can see that the ‘Jill’ was the MFP in the selected CU. Enter the number of the selected CU at B4.

B C U CU

B NUMBER OF CATERING UNITS IN 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?*

NUMBER OF CU			GO TO B
Don't know	A		GO TO SECTION F

B CATERING UNIT SUMMARY

Only 1 CU	A	GO TO B
2+ CUs	(B)	GO TO B

B CU SELECTION

List the name of the main food provider (MFP) in each catering unit (i.e. the _____ in each Catering Unit) . Then select one using the selection label on front of ARF.

DESCRIPTION	CU C	DESCRIPTION	CU C
J	(01)		07
J , K	02		08
	03		09
	04		10
	05		11
	06		12

IF CU

- Look at the selection label on page 1 of ARF
- In 'CU' 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 CU

- Continue on separate sheet if necessary.
- Make a selection using the lookup chart in section I.
- Write in at B4 below.

B ENTER CODE NUMBER OF SELECTED CATERING UNIT HERE

		GO TO B
--	--	----------------

7.7.3 SECTION C - ADULT SELECTION (AGE 19+)

- C Once you have made contact with the CU and introduced the study, you then need to ,
CU As in most cases the CU will include all those living at the address, 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?" 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.

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/young person 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 770 and record this on the front of the ARF.

- C There are notes at C2 that remind you who is and is not eligible. **R** If you are unable to establish this, go to Section H to record the reason why.
- C If the **CU** (not pregnant nor breastfeeding) then they will be selected for interview.
- C In **CU** then one respondent needs to be selected at random. Use the grid to select an adult respondent for interview. Remember 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 770 at section E for Adult then continue to section D (to ascertain whether there is an eligible child).

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/AD) 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 *Adult Code*.

- C Enter the code number of the ADULT respondent and record their full name on the front page of the ARF.

See below for an example of Adult 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.

List names or initials of each non-pregnant/breastfeeding person aged 19+ in

NAME INITIAL	PERSON CODE	NAME INITIAL	PERSON CODE
K	01		07
P	02		08
S	03		09
	04		10
	05		11
	06		12

IF NON PREGNANT BREASTFEEDING PERSONS AGED **IF NON PREGNANT BREASTFEEDING PERSONS AGED**

- Look at the selection label on page 1 of the ARF
- In the 'DU/AD' row: find the number matching total number
- In 'Select' row: number beneath total number of persons is the 'selected person code'. Ring on grid above and record at C5.
- Continue on separate sheet if necessary.
- Make a selection using the lookup chart in section I.
- Record selection code at C5.

C	CODE OF SELECTED ADULT			GO TO C
C	RECORD NAME OF SELECTED ADULT ON FRONT OF ARF			GO TO SECTION D

7.7.4 SECTION D - CHILD SELECTION (18 MTHS – 18 YRS)

- D** Here, you will establish if there are any eligible young people in the CU, and if so, select one. Young people who live in that CU and are aged 18mths -18yrs are eligible. (Please exclude: teenagers who are pregnant or breastfeeding). Record the number of eligible children at D1.

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

Note that if you are told that someone is currently (i.e. on the date you are doing the respondent selection) 18 but will soon have their 19th birthday then you must include them in section D. It is their age at the time of selection that determines their eligibility for NDNS. If by the time you return to do the main interview they have turned 19 (i.e. are now an adult, according to the NDNS definition) then you would have to code them as “599 (**OFFICE APPROVAL ONLY**: Other unproductive)”. Please contact the office before using the code. You will also need to make a note of this at the *SAAAddIn* field in the Admin block, in case we decide to reissue – we would not be able to reissue this address. You would not carry out a reselection amongst those who are still classed as children.

- D** This summarises the number of eligible young people. If there are no eligible young people, code A, and continue to interview/record the final outcome for the selected adult. If there is one eligible young person, that child/young person will be selected. If there are two or more eligible young people, you will need to do a selection at D3.
- D** This grid enables you to select a young person. In CUs containing two or more eligible young people then one of them needs to be selected at random.

All eligible young people (aged 18mths-18yrs) should be listed in the grid, in alphabetical order. Then use the selection label on the front of the ARF to select the young person to include in the survey. Go along the CU/CH row until you reach the number of eligible young people in the CU, and then look below for the selection code of the young person to include. Ring this code in the column headed *Child Code*.

- D** Enter the code number of the Child respondent and record their full name on the front page of the ARF.
- D** If the selected child is aged under 16, you will need parental consent to interview the child. Always check that the consent giver is the legal guardian of the child. If consent is given, write the name of the person agreeing. If consent is not given, go to section E and code 432 (proxy refusal). Remember to return to section E to record the outcome of the selected adult respondent.

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

ENTER TOTAL NUMBER OF PERSONS AGED MTHS YRS					GO TO D
			OR CODE: Don't know	A	GO TO SECTION H

D CHILD SUMMARY

No eligible persons aged 18 mths – 18 yrs	A	GO TO SECTION E
1 person aged 18 mths – 18 yrs	B	GO TO D
2 + people aged 18 mths – 18 yrs	C	GO TO D

D CHILD SELECTION

List name or initials of each person aged 18 mths – 18 yrs in the (selected) CU, in .

NAME INITIAL	PERSON CODE	NAME INITIAL	PERSON CODE
F	01		07
G	02		08
K	03		09
N	04		10
	05		11
	06		12

IF NON PREGNANT BREASTFEEDING PERSONS IF NON PREGNANT BREASTFEEDING PERSONS AGED

- Look at the selection label on page 1 of the ARF.
- In the 'CU/CH' 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.
- Make a selection using the lookup chart in section I.
- Record selection code at D4.

D

ENTER CODE NUMBER OF SELECTED CHILD			GO TO D
-------------------------------------	--	--	---------

D

RECORD NAME OF SELECTED CHILD	ON FRONT OF ARF	GO TO D
-------------------------------	-----------------	---------

SECTION E- OUTCOME FOR RESPONDENTS

This is where you record the outcome for each respondent individually. The codes are standard.

SECTION F UNPRODUCTIVE OUTCOME ELIGIBLE ADDRESSES

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

SECTION G - Unproductive outcome: deadwood addresses

Section G allows you to record an outcome code for any addresses that are ineligible (deadwood). The codes are standard. Further information about the use of Deadwood codes should recorded at H4.

SECTION H - 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. The codes are standard. Further information about the use of Deadwood codes should recorded at H4.

SECTIONS I J

SECTION I is a L for 13+ DUs/CUs or eligible individuals

SECTION J, I, is where you record the standard observations that need to be made.

7.8 YOUNG PERSON ADDRESSES ARF CREAM ARF

Sections A and B, and most other sections of the YOUNG PERSON ADDRESS ARF are identical to the 'BASIC ADDRESS' ARF.

SECTION C CHILD SELECTION

- C** If there is at least one young person aged 18 mths-18 years, establish the number of persons within this age range. If you cannot establish the number code 'Don't know' and then select the appropriate outcome code in section G.

The remainder of section C is identical to Section D the 'BASIC ADDRESS' ARF – please refer to section 7.7.4 for instructions on how to complete this section.

S D C O

This is where you record the outcome for the Child respondent. The codes are standard.

QUESTIONNAIRE CAPI OVERVIEW

8.1 I

The CAPI questionnaire has : :

- ‘Household Structure’ interview
- Main Food Provider (MFP) interview
- Individual interviews (including self-completions):

8.2 H CU

The Household Structure interview must be completed before individual interview(s). It will be completed with the MFP or another adult respondent. 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.

8.3 H CU

The information collected about the composition and structure of the CU is the basis for all subsequent questions and filtering. Please check that you have:

- not omitted any CU member (you need to enter all members, not just the selected respondents);
- not included anyone who is not a member of the CU;
- 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 on 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.

8.4 E

At questions **A N MFPN** 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 4.4 for definition).

8.5 T MFP

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 and food preparation.

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’. 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). See section 0 for more information about navigating via parallel blocks.

If the MFP is unlikely to be available during any of your visits, you can do the MFP questionnaire by proxy 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.

8.6 I

Once you have completed the Household (CU) Structure Questionnaire (and hopefully, the MFP questionnaire), you will conduct an individual interview with the respondent(s). The CAPI program allows only one respondent to be interviewed at a time.

In basic address households there will be a maximum of 2 individual questionnaires:

- **R A** : first selected person (always an adult aged 19 or older)
- **R C** : second selected person (always a child/young person aged 18 months-18 years).

In young person address households, there will be just 1 individual questionnaire:

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

For each individual questionnaire (any age) there are : **CAPI** – completed at visit 1; and **CAPI** – completed at visit 2.

CAPI V	R
Access to Food at school	All respondents 18 months-18 years (except if 16-18 and in full time employment)
Usual Eating Habits	All respondents
General Health	All respondents
Oral/Dental Health	All respondents 16+
Smoking & Drinking ^a	All respondents 16+ (18-24 year olds may answer in a self-completion instead)
Education	All respondents 16+
Job/Income	All respondents 16+ (except if 16+ and in full time education)
Measurements (Height and weight)	All respondents

^a For respondents aged 8-17, these questions will be administered in a self-completion booklet (GREEN for 8-12 year olds, BLUE for 13-15 year olds and a PEACH booklet for 16 and 17 year olds). In addition, respondents aged 18-24 are given the option of completing the PEACH self-completion booklet or answering the questions via CAPI.

CAPI V	R
---------------	----------

Dietary supplements	All respondents
Exposure to sunlight	All respondents
NHS Central Register & Cancer Registry	All respondents 16+
Stable address	All CUs
Nurse introduction	All respondents

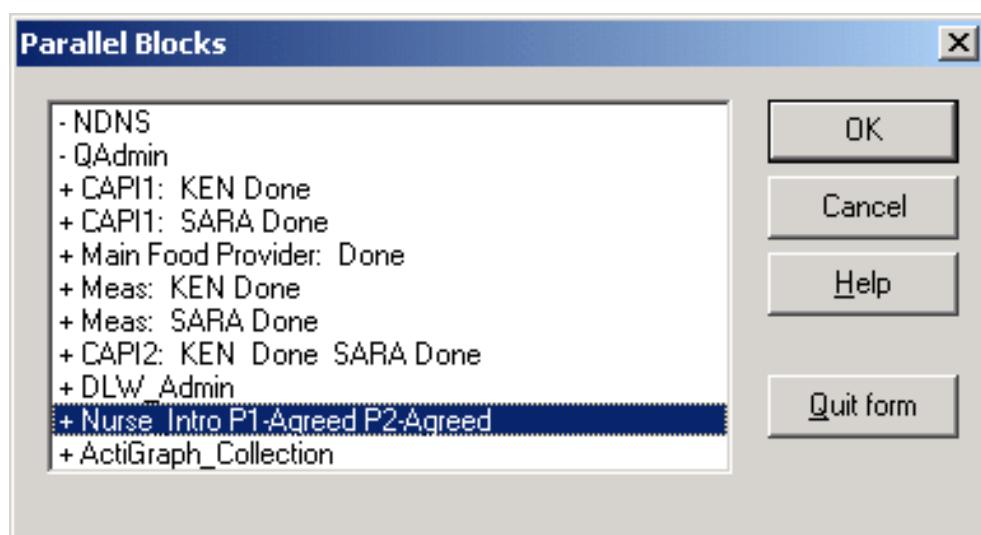
8.7 CAPI MODULES/ PARALLEL BLOCK

The computerised questionnaire consists of:

- | | |
|---|--------------|
| 1. The household (CU) structure questionnaire | NDNS |
| 2. The admin block | QA |
| 3. The MFP questionnaire | M F P |
| 4. The individual CAPI 1 interview(s) | CAPI |
| 5. The individual measurements | M |
| 6. The individual CAPI 2 interview(s) | CAPI |
| 7. Nurse introduction | N I |

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

Pressing <Ctrl+Enter>, brings up a screen called ‘Parallel Blocks’. It lists all blocks, and looks like this:



9. 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. 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.

9.1 The food diaries

9.1.1 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 wish to use a larger diary
- **Child diary (A4)** – for respondents aged 4-15
- **Toddler diary (A5)** – for respondents aged 1.5 to 3 years

9.1.2 Components of the food diary

Although there are different types of diaries, all are very similar in terms of how the information is collected. They all start with instructions for the respondent, followed by some example diary days and then a section for helping them describe the food and drink they had and how much. This is followed by the main diary itself that the respondent fills in and finally there are some questions on their usual eating habits to be completed at the end of the recording period.

9.1.3 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, ask the parent/carer to complete the diary with help from the child as appropriate
- Children over 12 can 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 young person boost, in some CUs, the child or toddler might be the only person keeping 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 the photographs have been validated for adults only. 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.

9.2 Interviewer Diary Assessment Schedule (IDAS)

The INTERVIEWER DIARY ASSESSMENT SCHEDULE (IDAS) provides a list of the documents you will need, instructions for placing the diary, what to look out for when checking the diary and other helpful reminders. **It is very important that you read through the IDAS before you start each assignment.** The IDAS PROMPT SHEET is a 2-sided abridged version of the IDAS to be used as a reference tool in the respondent's house. It can be found in your laminate pack.

9.3 Other diary documents

9.3.1 Instruction booklet

Each household should receive one instruction booklet. Although the instruction booklet is based on the adult diary (it contains the same instructions, example diary days and food pictures as the adult diary) it is still a useful reference tool regardless of whether an adult, child or toddler diary is being completed. In addition, it contains relevant description prompts for all ages. This means that all respondents can have the booklet open at the description prompts whilst filling in what they had to eat rather than having to flick back and forth in their diary.

9.3.2 Carer packs (child or toddler diary only)

The pack consists of (in a plastic zipper bag):

- 1 x carer letter.
- 4 x carer food and drink recording sheets (one for each diary day)

Young children and toddlers might have meals where the person keeping the diary on their behalf is not present e.g. at childminders, nursery, relative or friend's house. In order to get information on the foods consumed at these occasions, we need to ask the 'out-of-home' carer(s) to help. Ideally we want them to fill in the diary, but in some cases this won't be possible. These 'out-of-home' 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 simpler form for recording key details about what the child ate whilst in their care.

Therefore, in households where a parent is going to be completing the diary for their child, you should check whether it is likely that someone else will be feeding their child over the four-day diary recording period. If yes, explain that we would like 'out-of-home' carer(s) to record what was eaten while the child was in their care. The parent/primary carer should show the 'out-of-home' carer(s) the carer letter and then give them either the diary or one of the carer food and drink recording sheet. It is easier and safer if they are all kept in the plastic zipper bag. When the parent collects their child they should pick up the diary or carer food and drink recording sheet. Ensure that the respondent's serial number is on any loose sheets before returning them as they may become separated from the main diary.

9.3.3 Reminder card

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.

9.3.4 Extra pages

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.

9.4 Placing the food diary

9.4.1 Introducing the food diary

Based on the day of the first individual CAPI interview, the laptop will select four consecutive 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, male or female, date of birth and serial number 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.

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.

Please familiarise yourself with the important components of the food diary in order to explain these to your respondents. 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 gets an overview. Then go back through giving the respondent more detailed instructions using the IDAS PROMPT SHEET (see section 9.2).

9.4.2 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.

- Ask the respondent to recall a recent eating occasion (a few food items will suffice). If a parent is going to be completing the diary for their child, they should recall a recent eating occasion for their child.
- Record those food items *yourself* on the practice diary page, 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 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. This will also give you an opportunity to see if your respondent would struggle with the small A5 adult diary. Adults with impaired vision, poor handwriting or other difficulties may prefer the larger A4 format.

9.4.3 Plastic bag for food labels

These are for respondents to collect labels, in particular, ready meals and seasonal foods. 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.

9.4.4 Food eaten away from home

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 the diary with them when they are away from home. For young children this may mean another adult such as a child minder or nursery teacher completing the diary for the child. In that case, they should be given a carer pack (see section 9.3.2). 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, however, try and record as much information as possible, describing what is in dishes rather than just giving the name. For example, 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.

9.4.5 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 9.7.1). Where proxies are used, you should still encourage the respondent themselves to contribute as much as possible to completing the diary.

9.4.6 Arranging 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.**

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 them to recite a few entries so that you can gauge their completeness. 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. If a proxy is completing the diary then, whenever possible, both the respondent and the proxy should be present when you check it

9.4.7 Reminder phone call

If there is a gap between diary placement and the start of the diary recording period, and you have concerns that the respondent will forget to start their diary, please contact the respondents to remind them. If the gap is seven days or more, you will need to make a reminder phone call, running through the main points of completing the diary. These can be found on the REMINDER PHONE CALL checklist on page 8 of the IDAS. Arrange a mutually convenient time for you to call the respondent, a day or two before they are due to start, when they are at home so they can have the diary in front of them. Please cover everything on the document, referring respondents to the various sections in the diary where necessary. Make sure you also speak to respondent 2 if they are 12 years old or above. If this is not possible, ask respondent 1 to pass on the information.

9.5 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 such as the MFP.

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".

9.5.1 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**. 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 Wednesday. 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, 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.

9.5.2 Checking the food diary

The reason why we require so much detail on the food and drink 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. For those respondents who have requested dietary feedback (see section 6.3) inaccurate diaries result in misleading feedback. Therefore it is crucial that the diaries we receive from you are well completed with lots of detail and no missing information.

Missing information should be collected while you are at the respondent's home because this increases the chance of filling in any gaps. The IDAS PROMPT SHEET provides help on what you should be looking out for. **Not everything that the respondent has written (or not written) needs to be scrutinised. Priority should be given to missing portion sizes and inadequate descriptions of foods.**

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.

9.5.3 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'.

9.5.4 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.

9.5.5 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.

9.5.6 The Young Person's Food Atlas

If the respondent is aged under 16 the atlas must be used when reviewing portion sizes.

To improve accuracy in estimating portion sizes for children, there are 3 separate photo atlases that should be used when reviewing their diaries:

- A pre-school age atlas (18 months to 4 years),

- A primary school age atlas (4 to 11 years) and
- A secondary school age atlas (11 to 15 years).

As there is overlap between the ages, base your selection on the school stage that the respondent is at (i.e. primary, secondary, etc.). If this is not clear, for example, if the respondent is completing the diary during the school summer holidays, select the atlas for the younger age group. For example, if a 4 year old is between pre-school and primary, use the pre-school atlas. If an 11 year old is between primary and secondary school, use the primary atlas.

Information about the photos

- Most of the foods that appear in the atlases are shown as a series of seven photos of the food served and seven photos of leftovers. Children, especially toddlers, leave a large proportion of the foods served to them. Therefore being able to select a photo of leftovers increases accuracy and this is one of the many advantages of using the atlas over household measures
- While most of the photos show a single serving of a food item on a plate or bowl, such as a plate of pasta or a bowl of cornflakes, there are exceptions. For example, the photos of carrots and cheese show three servings on a plate. It is the same amount but shown in three different ways (cheese can be served sliced, grated or cubed). Please make sure respondents are aware that, when selecting these photos, they are indicating that they consumed one of the three servings (not all three!).
- The breakfast cereal photos are without milk, so please ensure respondents think about the cereal portion served before milk was added to it.

All of the photos were taken with the food displayed on a 9 inch diameter plate or 7.2 inch diameter bowl. At the back of each atlas is a life size photo of this plate and bowl and these should be shown to the child or parent before they select any photos and referred to throughout the review. The photo may be a different size to the plate/bowl used by the young person, but should be used to help put the atlas photographs into perspective.

Equivalent Food List

In some cases the photos can be used to estimate amounts for other foods in addition to the actual foods in each photograph. For example, the photos of boiled cabbage can also be used for boiled leeks. These other foods are listed on a separate card called the Equivalent Foods List that can be found at the back of each atlas. Please make sure that you have the Equivalent Foods List to hand. **As a rule, do not refer to any photos if a food is not listed on this card, but this card is for guidance only. If you need to make a judgement call, it is always better to use the atlas and have a photo selected, than not to use it.**

How to use the atlas

For each food consumed, check to see if it appears in the atlas or it is an equivalent food. If so, you must use the atlas to obtain a portion size in addition to that written by the respondent

Ask the respondent to select a photo of the amount served, write the code in the diary and then ask them to select a photo for any leftovers and write down that code.

- For children of secondary school age; ask the child themselves to select the photo.
- For children aged 9-11; the child's parent/carer should select the portion with some contribution from the child.
- For children aged 8 and under; the child's parent/carer should select the portion.

Please note: The parent/carer can **only** select photos if they were present at the time of eating. If they were not present, and the child is aged under 9, do not use the atlas for that particular food.

Each photo is labelled with a unique code. Ask the respondent to select a photo which is closest to the amount served and write down the corresponding code.

Time	Where? With whom? TV on? Table?	what	Brand Name	Amount eaten
		6am to 9am		<u>PHoop06</u>)
7:00	Kitchen Alone	Cheerios	Nestle	medium bowl

If the portion served was larger or smaller than any of the portions displayed they can describe the portion in terms of multiples or fractions of a photograph. If it is smaller than any of the 'as served' photos they can use a 'leftover' photo.

Time	Where? With whom? TV on? Table?	what	Brand Name	Amount eaten
		6am to 9am		<u>PHoop06 x 2</u>
7:00	Kitchen Alone	Cheerios	Nestle	medium bowl

If they did not consume all that was served, the respondent should estimate the amount leftover using one of the 'leftover' photos. Write down the corresponding code preceded by a minus sign. Please ensure that respondents know that you are asking them to select two pictures for each food (served and leftover).

Time	Where? With whom? TV on? Table?	what	Brand Name	Amount eaten
		6am to 9am		<u>PHoop06 - PHoop08</u>
7:00	Kitchen Alone	Cheerios	Nestle	medium bowl

Please note: some of the codes are very similar so please ensure that you write them clearly and accurately

IMPORTANT: Please remember that the atlas is only to be used when reviewing the diary. It should not be left with respondents under any circumstances. Respondents must still record how much they ate at the time of eating **for every item they record** either in household measures or weights from labels. It does not matter how accurately respondents have recorded what they ate; if the food is listed on the Equivalent Food List you should show them the photos in the atlas. Do not overwrite what the respondent has originally recorded. The photo codes are in addition to what the respondent has written.

Remember to return all 3 atlas booklets at the end of your assignments by Recorded Delivery.

9.6 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. 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.

9.7 Monitoring the quality of dietary data collection

In order to maintain a high standard of dietary data collection, we continually monitor and feedback to you the quality of the diaries you send in. Feedback comes in various forms and it is very important that you take note of any comments made.

9.7.1 *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 translated for them, you would note this in your evaluation. It also asks who filled in the majority of the diary (the respondent or another person e.g. their parent).

9.7.2 *Early work feedback*

This is based on your first completed diary and is sent via your Area Manager. It is only sent out if we pick up on any obvious omissions or errors so that these are not carried through to the other diaries.

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

9.7.3 *Pre-point feedback*

This is based on all the diaries from your completed assignment and is sent to you before you start a subsequent assignment. It highlights where improvements could be made but also provides positive comments.

9.7.4 *Post-briefing exercise*

These are sent out if you have any lengthy gaps between being briefed and your first assignment or between assignments. You should complete the exercise and return as instructed. You will then receive feedback.

H W M

You will be taking height and weight measurements for your selected respondents. You can introduce the height and weight measurements on your first visit, after you've introduced the diary. However heights and weights is a parallel block, so you could choose to take measurements at visit 2 or 3 instead.

H

- You will take height measurements for anyone aged 2 years and over
- You will be using the Frankfort Plane method for all respondents
- And the child stretch for all children (anyone age 2-15 years)
- Make use of the
- You will need to take and record two separate height measurements. If the two measurements differ by 0.05 centimetre, CAPI will prompt you to take a third.
- Record measurements in centimetres and millimetres, e.g. 176.5cm. If a measurement falls between two millimetres, it should be recorded to the nearest even millimetre.
- For the full height measurement protocol see Appendix A

W

- You will take weight measurements for all respondents (all ages)
- You will need to take and record one weight measurement in CAPI.
- For the full weight measurement protocol see Appendix B

M R C BMI

The respondent can have a record of their measurements but if they would prefer not to have them written down, then this is okay. 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. 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.

THE PHYSICAL ACTIVITY QUESTIONNAIRE

Overview

The Recent Physical Activity Questionnaire (RPAQ) is used to measure physical activity.

- To be completed by all respondents aged 16 and over
- At the beginning of CAPI 2 (Visit 3), while you are carrying out an initial check of the diary
- Check the questionnaire with respondents to ensure they have filled in all relevant questions
- Record any problems the respondent had in completing the questionnaire in the admin block.

The questionnaire

S A H - This section is about physical activity patterns in and around the house.

Q3 Computer use at home but not at work: This question refers to computer use whilst sitting. Respondents should not include computer use that involves active movement (e.g. Wii golf, tennis, boxing). Such activity should be recorded in Q17.

S B A - This section is about activities at work, school or college and travel to work, school or college. If the respondent has two part-time jobs, is at school or college and also works part-time, respondents should think about their main activity and answer the questions about that activity or job.

Q7 Type of work while at work / school or college: If respondents' main activity is school or college, they should choose the answer option that best fits the type of activity they do while there.

Q10-Q13 Travel to and from your main place of work / school or college in the last 4 weeks: Below are some guidelines outlining how respondents who don't have a 'usual' place of work, (e.g. a salesperson):

- If the respondent drives/cycles/walks to one central location, e.g. an office, and then drives out from there, the standard questions apply. The commute would be the travel from home to and from that office, the type of work would then be driving around and whatever else their job involves.
- If the respondent drives out from home without visiting a central office before/after, their daily commute would be zero ('he/she works from home') and their type of work is driving around and whatever else their job involves.
- If the respondent does a mixture of the above, i.e. works from home one week and drives out from a central location the next, they will need to estimate the average exposure over the last four weeks.

If all else fails – on the self-completion explaining the respondent's situation, so that we can decide what to do with it when it comes back to the office.

S C L This section asks about physical activity that respondents participated in during their leisure time.

Q14 Grid for respondent to complete about specific leisure time physical activities

- Ensure that respondents have completed each line. If respondents have not done an activity, they should tick 'None'.
- If respondents have done an activity, check that they have filled out the final two columns – 'Average time per episode – hours and minutes'.
- Check that respondents have looked at Q15.

Q16-Q17 Any other activities

In particular, respondents should record any other activity at these questions; such as: playing on the Nintendo Wii (e.g. Wii Sports such as golf, bowling, boxing etc), any other computer use involving active movement and Housework.

THE NHS CENTRAL REGISTER AND THE CANCER REGISTRY

In CAPI 2 (Visit 3) 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 and there is only one consent form.

W

- The respondent's details are already on the register (they are put there when they receive their NHS number).
- If respondents agree to be flagged on these lists, a flag will be put against the respondent's name to show that they took part in the NDNS.
- 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. This information could be extremely helpful to future medical research.
- The only information that the NatCen 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.
- If a respondent wishes to cancel this permission at any time in the future, they can do so by writing to us.

Here is some information on the two registers:

NHS C R

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.

C R

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.

THE NURSE VISIT

K

- All respondents completing at least three diary days will be eligible for a nurse visit
- There is gap of two to five months between interviewer and nurse fieldwork on NDNS
- Nurse documents, e.g. Nurse Record Form, will be generated in the office
- Nurses arrange their own appointments
- Respondents can ‘agree’, ‘disagree’ or say they are ‘unsure’ about the nurse visit
- Anyone agreeing or unsure will receive £5 unconditional voucher sent from the office
- You will record in CAPI Admin details which could help the nurse make contact with respondents.

I

The introduction to the nurse visit appears at the end of CAPI2. The CAPI page 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. Some may be nervous of seeing a nurse and you will need to allay their concerns. As well as the usual “yes/no” answer codes, there is an “unsure” code. Nurses will contact ‘unsure’ people to see if they are now willing to be visited.

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. 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 encourage them to change their mind:

- The nurse is the best person to describe what s/he does at their visit. The respondent can always change his/her mind after hearing more about it.
- By agreeing to be contacted by 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 each measurement.
- 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

Avoid calling the nurse visit a ‘health check’ – it is not. 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 lovely 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”

“S/he 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”

T S

You will have Stage 2 leaflets to give to all respondents so they can make an informed decision about whether to progress to the nurse stage. The leaflet provides information that respondents might need to know before the nurse arrives, e.g. what measurements are taken. Note that there are two versions of the Stage 2 leaflet (one for adults/young people and another for children). It is not your job to explain these leaflets or the measurements. The nurse will provide a more detailed leaflet and go through all of the measurements when he/she visits.

N

Nurses will: Take details of any prescribed medications; Infant length; Waist and hip circumferences; Mid-upper arm circumference; Demi-span; Blood pressure; 24-hour Urine sample; Blood sample. Before the nurse carries out any measurements, the respondent will be given a leaflet that describes the measurements. Before the urine and blood samples are taken, agreement will be obtained in writing. 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.

I G C

Each respondent who completes 3 or 4 diary days will receive a £30 gift card. Gift cards for children should be given to the parent for their child to use. The CAPI program will automatically prompt you to enter the last (shown in bold) of the gift card number that is shown on the front of the card, for each respondent. When prompted by CAPI you should write the amount of £30 in the area on the top right hand side of the card, hand over to your respondent and inform them that the card will be activated and live to use after approximately 48 hours. Please note that this is totally dependent on you transmitting the case promptly and may take up to 72 hours if the case is transmitted on a Friday.

There is no need to get the respondent to sign a receipt.

The card can be used in many shops including: Argos, Boots, HMV, River Island

You will receive a float of these gift cards prior to starting work, that are not of any monetary value until activated by Lover2reward upon receipt of your transmission. If you anticipate needing more gift cards, contact Logistics in Brentwood, who will arrange for you to be sent some more. Do this as soon as you have done your selections so that the cards will reach you before your final visit to the address.

WORKING MOBILE

If you have to work mobile these tips may help you plan your limited time...

Q H I

Schedule at least 4 visits to the area:

- Visit 1 for screening;
- Visit 2 for CAPI 1 / first appointments;
- Visit 3 for CAPI 2 and diary pick ups;
- Visit 4 for a general mop up.

Q W I

Don't use the CAPI diary dates. Always make use of the self-selection diary dates when working mobile, to make sure you can complete work within the limited time. Make reminder phone calls to ensure your participants do start on the given date. Consider calling them on the start date to just to make sure.

Q W

You have the option to make mid-week diary checks by phone.

Q D I

If possible do arrange diary pick-ups within 3 days of the last diary date, if this isn't possible make a note about why on the diary evaluation form. You should also record the fact that you were working mobile in this form.

RETURNING WORK TO THE OFFICE

Transmitting CAPI work

Transmit CAPI work at the end of each day. You should not wait until a household is complete before returning your work. You can complete the admin block at a later point.

★ 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.

Returning paper documents

Paperwork should also be returned after work at an address is complete.

Before returning work for an address:

- ✓ check all paper dietary documents for correct serial numbering and completion – all diaries, self-completions, Token of Appreciation receipts.
- ✓ Collate documents in person number order.

Return work in separate envelopes, posted at the same time:

- Top copies of the £30 Token of Appreciation receipts

★ 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 **2 separate envelopes**:

1. Consent forms & voucher receipts
2. Diaries (and associated documents) & self-completions

It is vital to keep documents separate to protect the respondent's anonymity. The consent forms contain names and addresses and the diaries and self-completions contain personal information that can be matched to the consent form by serial number.

Returning Diaries

- Diaries, and associated documents must be returned to the office via **R D**.
- Return your first completed diary back to the office as soon as you have collected it from the respondent – please don't wait until you have several. We will provide early work feedback based on this diary.
- All other diaries should be returned in up to four batches per assignment. Self-completions should be returned in the same envelope.

Expenses for postage

To claim for your expenses for sending the diaries back via Recorded Delivery please claim on your trip and send in receipts to Pay. Your fee for visiting the post office will be generated in the CAPI. Remember you still should only make a maximum of three visits to the Post Office to send diaries back per assignment.

Last return of work

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

When your assignment is completed, make your **Support menu** as follows:

- From the main menu system select **W H S A S T S D** to display Support menu screen.
- Select '**E A**' and follow on-screen instructions. For further help, consult page 73 of the CMS User Guide.
- Return all paperwork to the Office as detailed above.

APPENDIX A HEIGHT MEASUREMENT PROTOCOL

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.

T

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.

T

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.

T

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.

A

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.

D

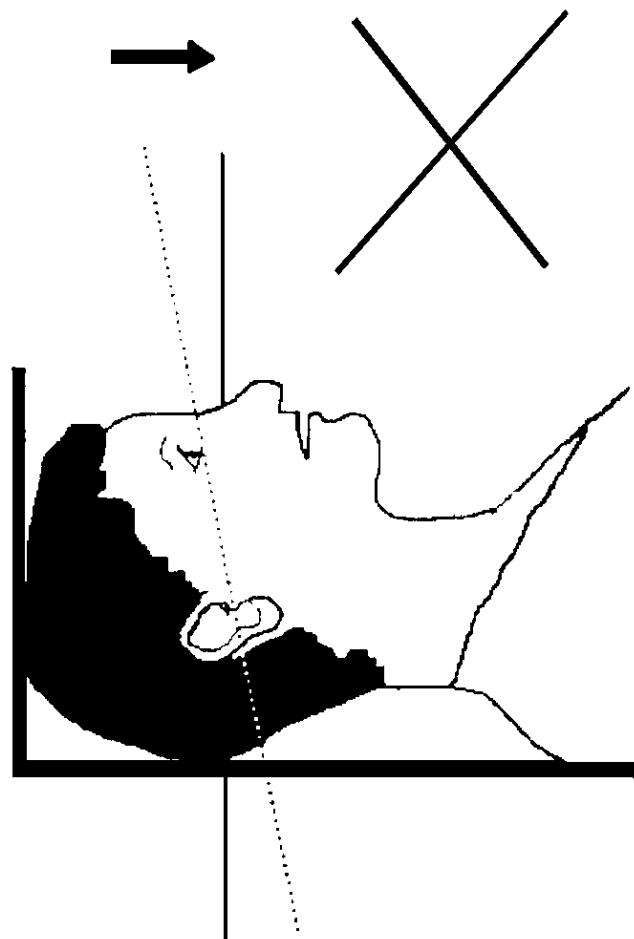
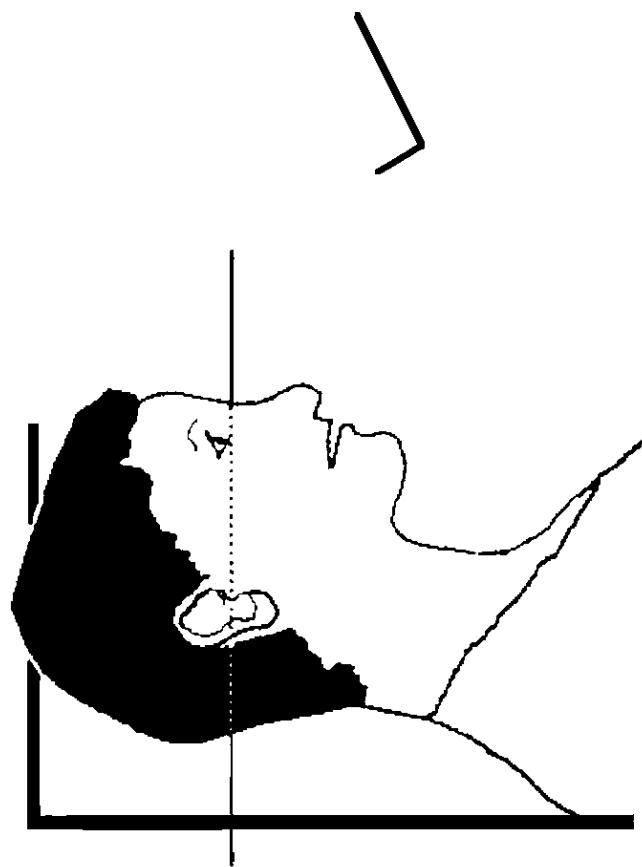
Follow these rules:-

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

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 breathe 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 cm. If a measurement falls between two , it should be recorded to the . E.g., if respondent's height is between 176.4 and 176.5 cm, you should round it down to 176.4. Likewise, if a respondent's height is between 176.5 and 176.6 cm, you should round it up to 176.6 cm.
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

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.

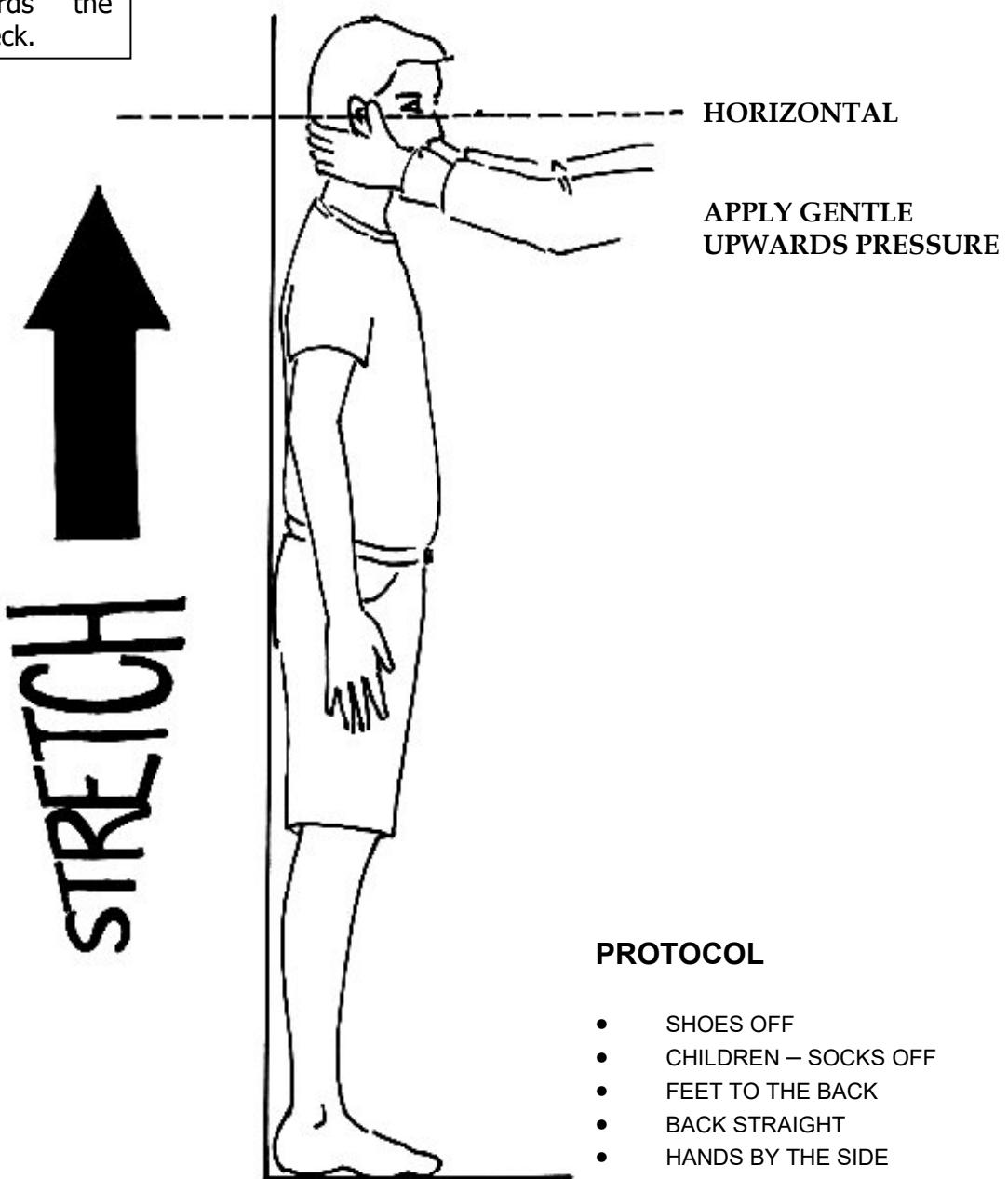
6. Cup the child's head in your hands, placing the heels of your palms either side of the chin, with your thumbs just in front of the ears, and your fingers going round towards the back of the neck. (See diagram).
7. Firmly but gently, apply upward pressure lifting the child's head upwards towards the 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 NOT TAKING A HEIGHT MEASUREMENT FOR CHILDREN UNDER 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 (*ResNHt* 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 WEIGHT MEASUREMENT PROTOCOL

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:

S S

- 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.

S

- 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.

S

- 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 a fixed battery which cannot be removed.

T THD

- 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.

W	T	S
---	---	---

B S S T

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.

W C

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.

W ,

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.

NATIONAL DIET AND NUTRITION SURVEY

***Food and Drink Diary
Instructions***

NATIONAL DIET AND NUTRITION SURVEY

Food and Drink Diary Instructions

Instructions.....	2-3
Diary examples.....	4-27
Examples and advice on food descriptions.....	28-34
Pictures for food portion size guidance.....	35-38
<i>Breakfast cereals</i>	
<i>Rice</i>	
<i>Spaghetti</i>	
<i>Chips</i>	
<i>Broccoli or cauliflower</i>	
<i>Stew or curry</i>	
<i>Battered fish</i>	
<i>Quiche/Pie</i>	
<i>Cheese</i>	
<i>Sponge cake</i>	
Drink volume guidance.....	39-40

If you have any queries about how to complete the diary please contact a member of the NDNS Team at NatCen on freephone **0800 652 4572** between 8.30am-5.30pm.

PLEASE READ THROUGH THESE PAGES BEFORE STARTING YOUR DIARY

We would like you to keep this diary of everything you eat and drink over 4 days. Please include all food consumed at home and outside the home e.g. work, college or restaurants. It is very important that you do not change what you normally eat and drink just because you are keeping this record. Please keep to your usual food habits.

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.

Time Slots

Please note the time of each eating occasion into the space provided.

Where and with whom?

For each eating occasion, please tell us what **room or part of the house** you were in when you ate, e.g. kitchen, living room, 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 ate alone or with others. If you ate with others please describe their relationship to you e.g. partner, children, colleagues, or friends. We would also like to know **when you ate at a table** and **when you were watching television whilst eating**. For those occasions where you were **not** at a table or watching TV please write 'Not at table' or 'No TV' rather than leaving it blank.

What do you eat?

Please describe the food you eat in as much detail as possible. Be as specific as you can. Pages 28 - 33 will help with the sort of detail we need, like **cooking methods** (fried, grilled, baked etc) and any **additions** (fats, sugar/sweeteners, sauces, pepper etc).

Homemade dishes

If you have eaten any **homemade dishes** e.g. chicken casserole, please record the name of the recipe, ingredients with amounts (including water or other fluids) for the whole recipe, the number of people the recipe serves, and the cooking method. Write this down in the recipe section at the end of the record day. Record how much of the whole recipe you have eaten in the portion size column (see examples on pages 4 - 27).

Take-aways and eating out

If you have eaten **take-aways** or **made up dishes not prepared at home** such as at a restaurant or a friend's house, please record as much detail about the ingredients as you can e.g. vegetable curry containing chickpeas, aubergine, onion and tomato.

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.

Labels/Wrappers

Labels are an important source of information for us. It helps us a great deal if you enclose, in the plastic bag provided, labels from all **ready meals**, labels from **foods of lesser known brands** and also from any **supplements** you take.

Portion sizes

Examples for how to describe the **quantity** or **portion size** you had of a particular food or drink are shown on pages 28 - 33.

For foods, quantity can be described using:

- **household measures**, e.g. 1 teaspoon (tsp) of sugar, 2 thick slices of bread, 4 dessertspoons (dsp) of peas, $\frac{1}{2}$ 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.
- **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
- **picture examples** for specific foods on pages 34 - 36.

For drinks, quantity can be described using:

- the **size of glass, cup etc** (e.g. large glass) or the **volume** (e.g. 300ml). Examples of typical drinks containers are on 38 – 39.
- **volumes from labels** (e.g. 330ml can of fizzy drink).

We would like to know the **amount that was actually eaten** which means taking **leftovers** into account. You can do this in two ways:

1. Record what was served and note what was not eaten e.g. 3 dsp of peas, only 2 dsp eaten; 1 large sausage roll, ate only $\frac{1}{2}$
2. Only record the amount actually eaten i.e. 2 dsp of peas; $\frac{1}{2}$ a large sausage roll

Was it a typical day?

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.

Supplements

At the end of each recording day 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.

When to fill in the diary

Please record your eating as you go, not from memory at the end of the day. Use written notes on a pad if you forget to take your diary with you. Each diary day covers a 24hr period, so please include any food or drinks that you may have had during the night. Remember to include foods and drinks between meals (snacks) including water.

Overleaf you can see examples of 4 days that have been filled in by different people. These examples show you how we would like you to record your food and drink, for example a ready meal and a homemade dish.

It only takes a few minutes for each eating occasion!

Thank you for your time – we really appreciate it!

Day: Thurs		Date: 31 March			
Time	Where? With whom? TV on? Table?	Food/Drink description & preparation	Brand Name	Portion size or quantity eaten	
How to describe what you had and how much you had can be found on pages 28-34					
6am to 9am					
6.30 am	Kitchen Alone No TV Not at table	Filter coffee, decaffeinated milk (fresh, semi-skimmed) Sugar white	Douwe Egberts Silverspoon	Mug A little 1 level tsp	
7.30 am	Kitchen Partner TV on At table	Filter coffee with milk and sugar Cornflakes Milk (fresh, semi-skimmed) Toast, granary medium sliced Light spread Marmalade	As above Tesco's own Hovis Flora Hartleys	As above 1B drowned 1 slice med spread 1 heaped tsp	
9am to 12 noon					
10.15 am	Office desk Alone No TV Not at table	Instant coffee, not decaffeinated Milk (fresh, whole) Sugar brown	Kenco	Mug A little 1 level tsp	
11 am	Office desk Alone No TV Not at table	Digestive biscuit – chocolate coated on one side	McVities	2	

Time	Where? With whom? TV on? Table?	Food/Drink description & preparation	Brand Name	Portion size or quantity eaten
12 noon to 2pm				
12.30 pm	Work tea room With colleagues No TV At table	<p><i>Ham salad sandwich from home</i> <i>Bread, wholemeal, thick sliced</i> <i>Light spread</i></p> <p><i>Low fat Mayonnaise</i> <i>Smoked ham thinly sliced</i> <i>Lettuce, iceberg</i> <i>Cucumber with skin</i></p> <p><i>Unsweetened orange juice from canteen</i></p> <p><i>Apple with skin from home, Braeburn</i></p>	<p><i>Tesco's own</i> <i>Flora</i></p> <p><i>Hellmans</i> <i>Tesco's own</i></p> <p><i>Tropicana</i></p>	<p>2 slices thin spread on 1 slice</p> <p>2 teaspoons 2 slices 1 leaf 4 thin slices</p> <p>250ml carton</p> <p>medium size, core left</p>
2pm to 5pm				
3 pm	Meeting room With supervisor No TV Not at table	<p><i>Tea, decaffeinated</i> <i>Milk (fresh, whole)</i> <i>Jaffa cake – mini variety</i></p>	<p><i>Twinings</i> <i>Tesco's own</i> <i>McVities</i></p>	<p>Mug Some 6</p>

Time	Where? With whom? TV on? Table?	Food/Drink description & preparation	Brand Name	Portion size or quantity <u>eaten</u>
5pm to 8pm				
6.30 pm	Pub, partner No TV At table	Gin Tonic water diet Lager 3.8% alcohol Salted peanuts	Gordon's Schweppes Draught, Carlsberg KP	Single measure 1/2 small glass 1 pint 1 handful
8 pm	Dining room Family No TV At table	Spaghetti, wholemeal Bolognese sauce (see recipe) Courgettes (fried in butter) Tinned peaches in juice (juice drained) Single cream UHT Orange squash No Added Sugar	Tesco's own Prince's Sainsbury's own	3b 6 tablespoons 4 tablespoons 3 halves 1 tablespoon 200ml glass, 1 part squash, 3 parts tap water
8pm to 10pm				
9 pm	Sitting room Alone TV on Not at table	Grapes, green, seedless Chocolates, chocolate creams Potato crisps, Prawn Cocktail	Bendicks Walkers	15 2 25g bag from multipack
10pm to 6am				
10.30 pm	Bed room Partner No TV Not at table	Camomile tea (no milk or sugar)	Twinings	1 mug

Was the amount of **food** that you had today about what you usually have, less than usual, or more than usual?

Yes,
usual

No, **less**
than usual

No, **more**
than usual

*Please tell us why you had less than
usual*

*Please tell us why you had more
than usual*

Was the amount you had to **drink** today, including water, tea, coffee and soft drinks [and alcohol], about what you usually have, less than usual, or more than usual?

Yes,
usual

No, **less**
than usual

No, **more**
than usual

*Please tell us why you had less than
usual*

*Please tell us why you had more
than usual*

Went to pub after work

Did you **finish all the food and drink** that you recorded in the diary today?

Yes

No

If no, please **go back to the diary and make a note of any leftovers**

Did you take any **vitamins, minerals or other food supplements** today?

Yes

No

If yes, **please describe the supplements you took below**

Brand	Name (in full) including strength	Number of pills, capsules, teaspoons
Healthspan	<i>Omega3 fish oil with vitamin A, C, D & E</i>	<i>2 capsules</i>
Boots	<i>Calcium (1000mg) with vitamin D</i>	<i>1 tablet</i>
Holland & Barrett	<i>Vitamin C 60mg</i>	<i>1 tablet</i>

Please record over the page details of any recipes or (if not already described) ingredients of made up dishes or take-away dishes.

Write in recipes or ingredients of made up dishes or take-away dishes

NAME OF DISH: Bolognese sauce

SERVES: 4

Ingredients	Amount	Ingredients	Amount
Co-op low fat beef mince	500g	Lea & Perrins worcester sauce	dash
garlic	3 cloves		
onion	1 medium		
sweet red pepper	1 medium		
Napoli chopped tomatoes	400g tin		
Tesco tomato puree	1 tablespoon		
Tesco olive oil	1 tablespoon		
mixed herbs	1 dessertspoon		

Brief description of cooking method

Fry onion & garlic in oil, add mince and fry till brown.

Add pepper, tomatoes, puree, Worcester sauce & herbs. Simmer for 30 mins

Day: Friday		Date: 28.09.2007			
Time	Where? With whom? TV on? Table?	Food/Drink description & preparation	Brand Name	Portion size or quantity <u>eaten</u>	
How to describe what you had and how much you had can be found on pages 28-34					
6am to 9am					
8.00 am	Café take away – eating on my way to work Alone	Cappuccino, no sugar Blueberry muffin, regular not low fat	Starbucks Starbucks	Medium size One	
8.45 am	Office desk Alone No TV Not at table	Tap water		300 ml glass	
9am to 12 noon					
10am	Office desk Alone No TV Not at table	Banana Black tea semi-skimmed milk, no sugar	Typhoo Asda	One, medium size Large Mug A lot	

Time	Where? With whom? TV on? Table?	Food/Drink description & preparation	Brand Name	Portion size or quantity <u>eaten</u>
<i>12 noon to 2pm</i>				
1 pm	Work tea room With colleague No TV At table	<p><i>Crayfish sandwich</i> <i>multiseed bread, medium cut,</i> <i>crayfish in lemon mayonnaise, no other spread</i> <i>rocket leaves</i></p> <p><i>Apple & Raspberry fruit drink - standard</i></p>	<p><i>M&S pre-packed Sandwich</i></p> <p>J2O</p>	<p><i>2 slices</i> <i>Medium filling</i> <i>6 to 8</i></p> <p><i>1 bottle, 275ml</i></p>
<i>2pm to 5pm</i>				
4.30 pm	Friends House Lounge With Friend Not at table TV on	<p><i>Coffee, instant</i> <i>Semi-skimmed milk</i></p> <p><i>Fairy Cake, homemade, see recipe</i></p>	Kenco	<p><i>Medium mug</i> <i>A lot</i> <i>1cake</i></p>

Time	Where? With whom? TV on? Table?	Food/Drink description & preparation	Brand Name	Portion size or quantity eaten
5pm to 8pm				
7.30 pm	Kitchen/Diner With boyfriend At table No TV	Chicken in creamy mushroom and white wine sauce for 2, oven White rice (homemade), boiled Wine 13% alcohol	Sainsbury's, 370g (wrapper collected) Easy cook, Italian, Sainsbury's Sauvignon Blanc, New Zealand	½ pack 1C 1 small glass, 125ml
8pm to 10pm				
9.15 pm	Sitting Room With boyfriend Not at table TV on	Squash, apple & blackcurrant, no added sugar, Crisps	Sainsbury's Pringles, sour cream and chives	1 average glass, 200ml 5
10pm to 6am				
11.30 pm	Bedroom Alone Not at table TV on	Water	tap	1 medium glass

Was the amount of **food** that you had today about what you usually have, less than usual, or more than usual?

Yes,
usual

No, **less**
than usual

No, **more**
than usual

*Please tell us why you had less than
usual*

Felt unwell

*Please tell us why you had more
than usual*

Was the amount you had to **drink** today, including water, tea, coffee and soft drinks [and alcohol], about what you usually have, less than usual, or more than usual?

Yes,
usual

No, **less**
than usual

No, **more**
than usual

*Please tell us why you had less than
usual*

Felt unwell

*Please tell us why you had more
than usual*

Did you **finish all the food and drink** that you recorded in the diary today?

Yes

No

If no, please **go back to the diary and make a note of any leftovers**

Did you take any **vitamins, minerals or other food supplements** today?

Yes

No

If yes, **please describe the supplements you took below**

Brand	Name (in full) including strength	Number of pills, capsules, teaspoons
<i>Holland & Barrett</i>	<i>Evening Primrose Oil – 1000mg</i>	<i>1 capsule</i>
<i>Holland & Barrett</i>	<i>Super EPA fish oil – 1000mg</i>	<i>1 capsule</i>

Please record over the page details of any recipes or (if not already described) ingredients of made up dishes or take-away dishes.

Write in recipes or ingredients of made up dishes or take-away dishes

NAME OF DISH: Fairy Cakes

SERVES: makes 20 cakes

Ingredients	Amount	Ingredients	Amount
Tate & Lyle caster sugar	175g	Silver Spoon icing sugar	140g
Anchor butter, unsalted	175g	Yellow food colouring	3 drops
Eggs from market	3	water	2 tablespoons
Homepride self-raising flour	175g		
Baking powder	1 teaspoon		

Brief description of cooking method

Mix together and bake for 15 min.

Mix icing sugar with water and add colouring. Approx. 1 teaspoon of icing on each cake

Day: Monday		Date: 11 June 2007					
Time	Where? With whom? TV on? Table?	Food/Drink description & preparation	Brand Name	Portion size or quantity <u>eaten</u>			
How to describe what you had and how much you had can be found on pages 28-34							
6am to 9am							
7am	Dining Room Wife TV on At table	<i>Porridge Made with semi-skimmed milk Honey</i> <i>Orange Juice, 100% juice</i>	Quaker Sainsburys Sainsburys Tropicana	30g sachet 200ml milk 2 tsp 1/4 pint			
9am to 12 noon							
10am	Work desk Colleagues No TV Not at table	<i>Coffee, white, with sugar (bean to cup)</i> <i>Bourbon biscuits</i>	Vending machine Tesco's	Regular size vending cup 2 biscuits			

Time	Where? With whom? TV on? Table?	Food/Drink description & preparation	Brand	Portion size or quantity <u>eaten</u>
<i>12 noon to 2pm</i>				
1pm	Work Restaurant Colleagues At table No TV	<p><i>Pepperoni pizza with peppers and olives – thin crust</i></p> <p><i>Salad –</i> <i>Tomatoes</i> <i>Cucumber</i> <i>Lettuce (iceberg)</i> <i>Carrots</i></p> <p><i>Thousand Island Dressing</i></p> <p><i>Coca-cola, standard</i></p>	<p><i>Made in work restaurant</i></p> <p><i>Tesco</i></p>	<p><i>9 inch, ate 1/3</i></p> <p><i>4 cherry</i> <i>About 6 slices</i> <i>About 4 leaves</i> <i>About 10 slices</i></p> <p><i>1 tbsp</i></p> <p><i>330ml can</i></p>
<i>2pm to 5pm</i>				
3pm	Work desk Alone No TV Not at table	<i>Bottle of water</i> <i>Banana</i>	<i>Evian</i>	<i>500ml bottle</i> <i>1 large</i>

Time	Where? With whom? TV on? Table?	Food/Drink description & preparation	Brand	Portion size or quantity eaten
5pm to 8pm				
7pm	Indian Restaurant Wife and Friends No TV At table	Papadum Mango Chutney Cucumber Raita Chicken Tikka Prawn Bhuna Niramish (Vegetable side dish, including okra, tomato) Pilau Rice Keema Nan Onion Bhaji Beer 4.6% alcohol Water	Corona Don't know	1 and half About 4 teasp About 4 teasp 1 chicken breast 3 serving spoons 1/2 of dish (about 4 table spoons) 1 dish 1/2 of a large size nan 1 large bhaji 3 bottles 2 med glasses
8pm to 10pm				
9pm	Pub Wife and Friends TV on At table	Beer, draught, 3.8% alcohol Salt and Vinegar Crisps, Crinkle cut	Carlsberg McCoys	2 pints 1 handful
10pm to 6am				

Was the amount of **food** that you had today about what you usually have, less than usual, or more than usual?

Yes,
usual

No, **less**
than usual

No, **more**
than usual

*Please tell us why you had less than
usual*

*Please tell us why you had more
than usual*

Was the amount you had to **drink** today, including water, tea, coffee and soft drinks [and alcohol], about what you usually have, less than usual, or more than usual?

Yes,
usual

No, **less**
than usual

No, **more**
than usual

*Please tell us why you had less than
usual*

*Please tell us why you had more
than usual*

More beer than usual as celebrating
birthday

Did you **finish all the food and drink** that you recorded in the diary today?

Yes

No

If no, please **go back to the diary and make a note of any leftovers**

Did you take any **vitamins, minerals or other food supplements** today?

Yes

No

If yes, **please describe the supplements you took below**

Brand	Name (in full) including strength	Number of pills, capsules, teaspoons

Please record over the page details of any recipes or (if not already described) ingredients of made up dishes or take-away dishes.

Write in recipes or ingredients of made up dishes or take-away dishes

NAME OF DISH:

SERVES:

Brief description of cooking method

Day: Friday		Date: 7 Sept 2007			
Time	Where? With whom? TV on? Table?	Food/Drink description & preparation	Brand	Portion size or quantity <u>eaten</u>	
How to describe what you had and how much you had can be found on pages 28-34					
6am to 9am					
7.30 am	Dining room Friends No TV At table	Cooked breakfast: Pork sausages, fried in sunflower oil Unsmoked streaky bacon, grilled, fat eaten Mushrooms, fried Baked beans Hash browns, oven baked Tomato, grilled Orange juice Tea Whole milk White Sugar	Walls Tesco Heinz Birds Eye Tropicana Twinings Sainsbury's Silverspoon	2 regular size 2 rashers 6 2 tbsp 2 1, medium Small glass 1 mug Dash 2 heaped teasp	
9am to 12 noon					
10am	Work desk Alone No TV Not at table	White coffee, no sugar	Vending machine	1 cup	

Time	Where? With whom? TV on? Table?	Food/Drink description & preparation	Brand	Portion size or quantity <u>eaten</u>
<i>12 noon to 2pm</i>				
1pm	<i>Work canteen Colleagues No TV At table</i>	<i>Soup – minestrone White bread, thick slices from large loaf Butter, salted</i>	<i>Don't know Don't know Lakeland Dairies</i>	<i>1 soup bowl 2 slices 2 portion packs</i>
<i>2pm to 5pm</i>				
3pm	<i>Work desk Alone No TV Not at table</i>	<i>White coffee Chocolate digestives (half coated)</i>	<i>Vending machine McVities</i>	<i>1 cup 2</i>

Time	Where? With whom? TV on? Table?	Food/Drink description & preparation	Brand	Portion size or quantity eaten
5pm to 8pm				
8pm	<i>Friend's house Friends (birthday party) Not at table No TV</i>	<i>Buffet: Cheese and tomato pizza Potato salad 4 Sandwiches (all with spread): Tuna, sweetcorn and mayo on white bread Wafer thin ham & cucumber on wholemeal bread Smoked salmon and cream cheese on wholemeal bread Cheddar Cheese and pickle on white bread Quiche Lorraine Water biscuits Cheddar cheese Pickle Beer, 5% alcohol, canned</i>	<i>Don't know Don't know Tesco Carr's Branston's Heineken</i>	<i>1/6 of 9in pizza 1 tbsp See recipe section 1/8 quiche 4 4 thick slices 2 tsp 2 pints</i>
8pm to 10pm				
9pm	<i>Friend's house Friends TV on Not at table</i>	<i>Beer, 5% alcohol, canned Salted peanuts</i>	<i>Heineken KP</i>	<i>2 pints 2 handfuls</i>
10pm to 6am				
11pm	<i>Living room Alone TV on Not at table</i>	<i>Dry white wine, 13.5% alcohol</i>	<i>Jacob's Creek</i>	<i>1 small glass</i>

Was the amount of **food** that you had today about what you usually have, less than usual, or more than usual?

Yes,
usual

No, **less**
than usual

No, **more**
than usual

*Please tell us why you had less than
usual*

*Please tell us why you had more
than usual*

Went to party

Was the amount you had to **drink** today, including water, tea, coffee and soft drinks [and alcohol], about what you usually have, less than usual, or more than usual?

Yes,
usual

No, **less**
than usual

No, **more**
than usual

*Please tell us why you had less than
usual*

*Please tell us why you had more
than usual*

Went to party

Did you **finish all the food and drink** that you recorded in the diary today?

Yes

No

If no, please **go back to the diary and make a note of any leftovers**

Did you take any **vitamins, minerals or other food supplements** today?

Yes

No

If yes, **please describe the supplements you took below**

Brand	Name (in full) including strength	Number of pills, capsules, teaspoons

Please record over the page details of any recipes or (if not already described) ingredients of made up dishes or take-away dishes.

Write in recipes or ingredients of made up dishes or take-away dishes			
NAME OF DISH: Buffet sandwiches		SERVES: 1	
Ingredients	Amount	Ingredients	Amount
<i>Thick sliced white bread</i>	<i>2 slices</i>	<i>Cheddar cheese</i>	<i>2 slices</i>
<i>Thick sliced wholemeal bread</i>	<i>2 slices</i>	<i>Pickle</i>	<i>2 tsp</i>
<i>Unknown spread</i>	<i>Medium spread on all slices</i>		
<i>Tuna, sweetcorn & Mayo</i>	<i>1 tbsp</i>		
<i>Wafer thin ham</i>	<i>1 slice</i>		
<i>Cucumber</i>	<i>2 slices</i>		
<i>Smoked salmon</i>	<i>1 slice</i>		
<i>Cream cheese</i>	<i>2 tsp</i>		
Brief description of cooking method			

Spoon size does matter!!!! When describing amounts check the spoons you use with the life size pictures at the back of this diary

Food/Drink	Description & Preparation	Portion size or quantity
Bacon	Back, middle, streaky; smoked or un-smoked; fat eaten; dry-fried or fried in oil/fat (type used) or grilled rashers	Number of rashers
Baked beans	Standard, reduced salt or reduced sugar	Spoons, weight of tin
Beefburger (hamburger)	Home-made (ingredients), from a packet or take-away; fried (type of oil/fat), microwaved or grilled; economy; with or without bread roll, with or without salad e.g. lettuce, tomato	Large or small, ounces or in grams if info on package
Beer	What sort e.g. stout, bitter, lager; draught, canned, bottled; % alcohol or low-alcohol or home-made	Number of pints or half pints, size of can or bottle
Biscuits	What sort e.g. cheese, wafer, crispbread, sweet, chocolate (fully or half coated), shortbread, home-made	Number, size (standard or mini variety)
Bread (see also sandwiches)	Wholemeal, granary, white or brown; currant, fruit, malt; large or small loaf; sliced or unsliced loaf	Number of slices; thick, medium or thin slices
Bread rolls	Wholemeal, white or brown; alone or with filling; crusty or soft	Size, number of rolls
Breakfast cereal (see also porridge)	What sort e.g. Kellogg's cornflakes; any added fruit and/or nuts; Muesli – with added fruit, no added sugar/salt variety	Spoons or picture 1
Buns and pastries	What sort e.g. iced, currant or plain, jam, custard, fruit, cream; type of pastry; homemade or bought	Size, number
Butter, margarine & fat spreads	Give full product name	Thick/average/thin spread; spoons
Cake	What sort: fruit (rich), sponge, fresh cream, iced, chocolate coated; type of filling e.g. buttercream, jam	Individual or size of slice, packet weight, picture 10

Spoon size does matter!!!! When describing amounts check the spoons you use with the life size pictures at the back of this diary

Food/Drink	Description & Preparation	Portion size or quantity
Cereal bars	What sort; with fruit/nuts, coated with chocolate/yoghurt; fortified with vitamins/minerals	Weight/size of bar; from multipack
Cheese	Type e.g. cheddar, cream, cottage, soft; low fat	Picture 9, or number of slices, number of spoons
Chips	Fresh, frozen, oven, microwave, take-away (where from); thick/straight/crinkle/fine cut; type of oil/fat used for cooking	Picture 4, as A, B, or C or 2 x B, etc
Chocolate(s)	What sort e.g. plain, milk, white, fancy, diabetic; type of filling;	Weight/size of bar
Coffee	With milk (see section on milk); half milk/half water; all milk; ground/filter, instant; decaffeinated. If café/takeaway, was it cappuccino, latte etc	Cups or mugs, size of takeaway e.g. small. medium
Cook-in sauces	What sort; pasta, Indian, Chinese, Mexican; tomato, white or cheese based; does meat or veg come in sauce; jar or can	Spoons, size of can or jar
Cream	Single, whipped, double or clotted; dairy or non-dairy; low-fat; fresh, UHT/Longlife; imitation cream e.g. Elmlea	Spoons
Crisps	What sort e.g. potato, corn, wheat, maize, vegetable etc; low-fat or low-salt; premium variety e.g. Kettle chips, Walker's Sensations	Packet weight, standard or from multipack
Custard	Pouring custard or egg custard; made with powder and milk/sugar, instant, ready to serve (tinned or carton); low fat, sugar free	Spoons
Egg	Boiled, poached, fried, scrambled, omelette (with or without filling); type of oil/fat, milk added	Number of eggs, large, medium or small
Fish (including canned)	What sort e.g. cod, tuna; fried (type of oil/fat), grilled, poached (water or milk) or steamed; with batter or breadcrumbs; canned in oil, brine or tomato sauce	Size of can or spoons (for canned fish) or picture 7 for battered fish

Spoon size does matter!!!! When describing amounts check the spoons you use with the life size pictures at the back of this diary

Food/Drink	Description & Preparation	Portion size or quantity
Fish cakes & fish fingers	Type of fish; plain or battered or in breadcrumbs; fried, grilled, baked or microwaved; economy	Size, number, packet weight
Fruit - fresh	What sort; eaten with or without skin	Small, medium or large
Fruit - stewed/canned	What sort; sweetened or unsweetened; in fruit juice or syrup; juice or syrup eaten	Spoons, weight of can
Fruit – juice (pure)	What sort e.g. apple, orange; sweetened or unsweetened; pasteurised or UHT/Longlife; freshly squeezed; added vitamins/minerals, omega 3	Glass (size or volume) or carton size
Hot chocolate, cocoa malted drinks etc	Type; standard/low calorie/lite; instant; all water / half milk half water / all milk (see section on milk); any sugar added	Cup or mug plus how much powder e.g. teaspoons, weight on packet
Ice cream	Flavour; dairy or non-dairy alternatives e.g. soya; luxury/premium	Spoons/ scoops
Jam, honey	What sort; low-sugar/diabetic; shop bought/brand or homemade	Spoons, heaped or level, or thin or thick spread
Marmalade	Type; low-sugar; thick cut; shop bought/brand or homemade	Spoons, heaped or level, or thin or thick spread
Meat (see also bacon, burgers & sausages)	What sort; cut of meat e.g. chop, breast, minced; lean or fatty; fat removed or eaten; skin removed or eaten; how cooked; with or without gravy	Large/small/medium, spoons, or picture 6 for stew portion

Spoon size does matter!!!! When describing amounts check the spoons you use with the life size pictures at the back of this diary

Food/Drink	Description & Preparation	Portion size or quantity
Milk	What sort; whole, semi-skimmed, skimmed or 1% fat; fresh, sterilized, UHT, dried; soya milk (sweetened/unsweetened), goats' milk, rice milk, oat milk; flavoured; fortified with added vitamins and/or minerals. Formula milks for toddlers	Pints, glass (size or volume) or cup. On cereal: <i>damp/average/drowned</i> . In tea/coffee: <i>a little/some/a lot</i> . Formula: <i>proportion of formula to water</i>
Milkshake	Fresh or long life/UHT; dairy or non-dairy alternative e.g. soya; if powder, made up with whole, semi-skimmed, skimmed milk; flavour; fortified with vitamins and/or minerals	Glass (size or volume) cups or volume on bottle/carton
Nuts	What sort; dry roasted, ordinary salted, honey roasted; unsalted	Packet weight, handful
Pie (sweet or savoury)	What sort/filling; one pastry crust or two; type of pastry	Individual or slice, or picture 8
Pizza	Thin base/deep pan or French bread; topping e.g. meat, fish, veg; stuffed crust	Individual, slice, fraction of large pizza e.g. $\frac{1}{4}$
Porridge	Made with oats or cornmeal or instant oat cereal; made with milk and/or water; added sugar, honey, syrup or salt; with milk or cream	Bowls, spoons
Potatoes (see also chips)	Old or new; baked, boiled, roast (type of oil/fat); skin eaten; mashed (with butter/spread and with or without milk); fried/chips (type of oil/fat); instant; any additions e.g. butter	Mash – spoons, number of half or whole potatoes, small or large potatoes
Pudding	What sort; e.g. steamed sponge; with fruit; mousse; instant desserts; milk puddings	Spoons, picture 10 for slice of sponge
Rice	What sort; e.g. basmati, easy cook, long or short grain; white or brown; boiled or fried (type of oil/fat)	Spoons or picture 2

Spoon size does matter!!!! When describing amounts check the spoons you use with the life size pictures at the back of this diary

Food/Drink	Description & Preparation	Portion size or quantity
Salad	Ingredients; if with dressing what sort (oil and vinegar, mayonnaise)	Amount of each component
Sandwiches and rolls	Type of bread/roll (see Bread & Rolls); butter or margarine; type of filling; including salad, mayonnaise, pickle etc. If shop-bought, where from?	Number of rolls or slices of bread; amount of butter/margarine (on both slices?); amount of filling
Sauce – cold (including mayonnaise)	Tomato ketchup, brown sauce, soy sauce, salad cream, mayonnaise; low fat;	Spoons
Sauce – hot (see also cook-in sauces)	What sort; savoury or sweet; thick or thin; for gravy - made with granules, stock cube, dripping or meat juices	Spoons
Sausages	What sort; e.g. beef, pork; fried (type of oil/fat) or grilled; low fat	Large or small, number
Sausage rolls	Type of pastry	Size - jumbo, standard, mini
Scione	Fruit, sweet, plain, cheese; type of flour; homemade	Small, medium or large
Savoury snacks - in packet	What sort: e.g. Cheddars, cheese straws, Twiglets, Pretzels	Size (standard or mini variety), packet weight
Smoothies	If homemade give recipe. If shop-bought, what does it contain e.g. fruit, milk/yoghurt, fruit juice	Glass or bottle (size or volume)
Soft drinks – squash/concentrate/cordial	Flavour; no added sugar/low calorie/sugar free; “high” juice; fortified with added vitamins and/or minerals	Glass (size or volume)
Soft drinks – carbonated/fizzy	Flavour; diet/low-calorie; canned or bottled; cola – caffeine free	Glass, can or bottle (size or volume)

Spoon size does matter!!!! When describing amounts check the spoons you use with the life size pictures at the back of this diary

Food/Drink	Description & Preparation	Portion size or quantity
Soft drinks – ready to drink	Flavour; no added sugar/low calorie/sugar free; real fruit juice? If so, how much?; fortified with added vitamins and/or minerals	Glass, carton or bottle (size or volume)
Soup	What sort; cream or clear; fresh/chilled, canned, instant or vending machine. If home-made, give recipe	Spoons, bowl or mug
Spaghetti, other pasta	What sort; fresh/chilled or dried; white, wholemeal; canned in sauce; type of filling if ravioli, cannelloni etc	Spoons (or how much dry pasta) or picture 3
Toddler foods	<u>Food in jars</u> : description and ingredients (e.g. vegetable risotto, fruit puree); <u>Dry Foods</u> : description (e.g. baby rice, cauliflower cheese); made up with milk and/or water	Size of jar or packet, spoons for powdered foods (volume of water/milk used to mix with cereal or powder)
Spirits	What sort: e.g. whisky, gin, vodka, rum	Measures as in pub
Sugar	Added to cereals, tea, coffee, fruit, etc; what sort; e.g. white, brown, demerara	Heaped or level teaspoons
Sweets	What sort: e.g. toffees, boiled sweets, diabetic, sugar-free	Number, packet weight
Tea	With/without milk (see section on milk); decaffeinated, herb	Mugs or cups
Vegetables (not including potatoes)	What sort; how cooked/raw; additions e.g. butter, other fat or sauce	Spoons, number of florets or sprouts, weight from tins or packet
Wine, sherry, port	White, red; sweet, dry; % alcohol or low-alcohol	Glass (size or volume)
Yoghurt (inc drinking yoghurt), fromage frais	What sort: e.g. natural/plain or flavoured; creamy, Greek, low-fat, very low fat/diet, soya; with fruit pieces or fruit flavoured; twinpot; fortified with added vitamins and/or minerals; longlife/UHT; probiotic	Pot size or spoons

Spoon size does matter!!!! When describing amounts check the spoons you use with the life size pictures at the back of this diary

Food/Drink	Description & Preparation	Portion size or quantity
Home-made dishes	Please say what the dish is called (record recipe or details of dish if you can in the section provided) and how many persons it serves	Spoons – heaped or level, number, size
Ready-made meals	Full description of product; does it contain any accompaniments e.g. rice, vegetables, sauces; chilled or frozen; microwaved, oven cooked, boil-in-the-bag; low fat, healthy eating range. Enclose label and ingredients list if possible in your plastic bag	Packet weight (if didn't eat whole packet describe portion consumed)
Take-away food or food eaten out	Please say what the dish is called and give main ingredients if you can. Give name of a chain restaurant e.g. McDonalds	Spoons, portion size e.g. small/medium/large

Use the pictures to help you indicate the size of the portion you have eaten.

Write on the food record the picture number and size A, B or C nearest to your own helping.

Remember that the pictures are much smaller than life size.

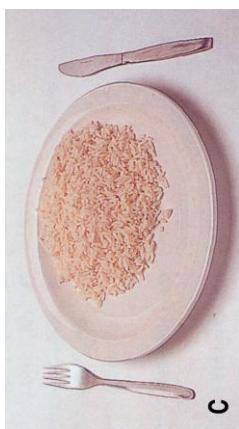
The actual size of the dinner plate is 10 inches (25cm), the side plate, 7 inches (18cm), and the bowl, 6.3 inches (16cm).

The tables on pages 16-21 also give examples of foods that you might eat and how much information is required about them.

Please note, these photographs should not be used to describe children's portions – please use household measures

1. Breakfast cereals





2. Rice

3. Spaghetti

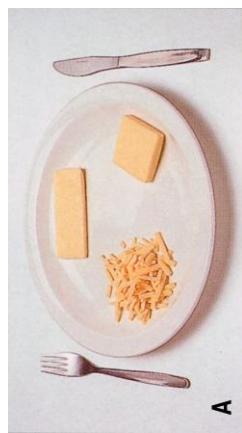
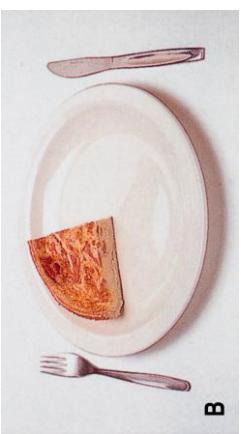
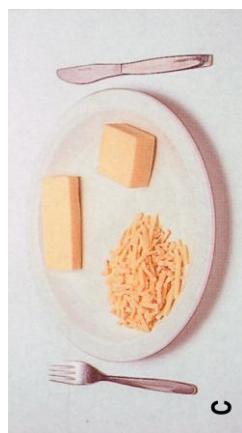
4. Chips



5. Broccoli or cauliflower

6. Stew or curry

7. Battered fish



8. Quiche / Pie

9. Cheese

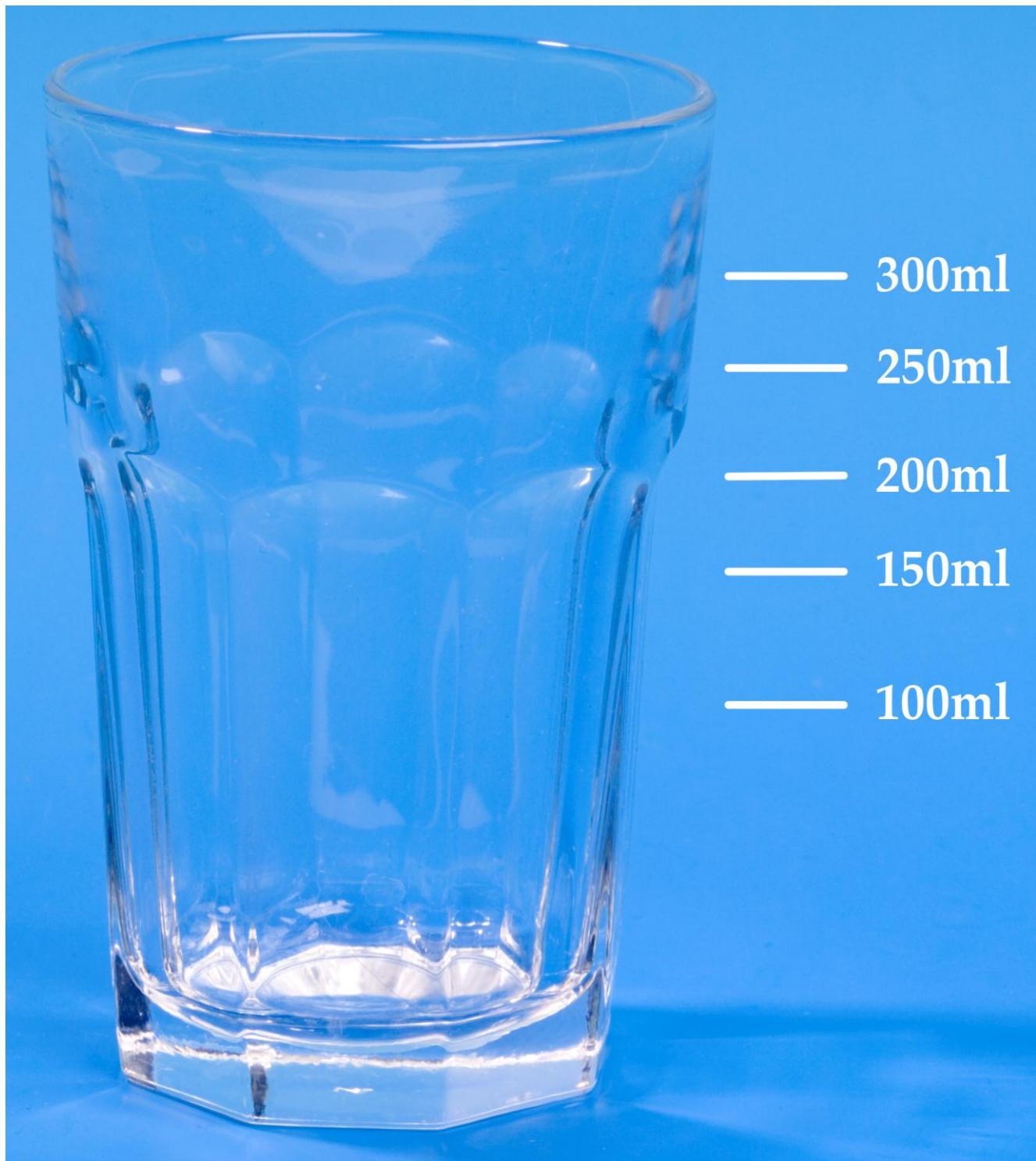
10. Sponge cake

**Typical quantities of drinks in various containers
measured in millilitres (ml)**

	Small glass	Average glass	Large glass	Vending cup	Cup	Mug
Soft drinks	150	200	300			
Wine	125	175	250			
Hot drinks				170	190	260

Glasses come in different shapes and sized. On the next page is a life size glass showing approximate volumes. You can use this picture as a guide for estimating how much volume of drink the glass holds you are drinking from.

Life Size Glass



Acknowledgements

Thanks for permission to use pictures from:

Nelson, M., Atkinson, M.
& Meyer, J. (1997).
A Photographic Atlas of Food Portion Sizes.
London, MAFF Publications.

NDNS

INTERVIEWER DIARY ASSESSMENT SCHEDULE

This document contains the following information for interviewers:

- A. INSTRUCTIONS FOR PLACING THE DIARY page 3 - 8
- B. REVIEWING THE DIARY page 9 - 12
- C. FOOD AND DRINK DESCRIPTION PROMPTS page 13

SECTION A: INSTRUCTIONS FOR PLACING THE DIARY

Diary documents

You will need the following documents **for each respondent**:

- Adult diary (ages 16+), child diary (ages 4 - 15) or toddler diary (ages 1½ - 3 to be completed by parent/carer)
- Separate instructions booklet (one per household)
- Plastic bag for food labels. Each bag will contain a double-sided card with instructions on what information on packaging is helpful.
- Practice diary pages
- One carer pack containing one carer letter, four double sided food and drink recording sheets and a zip lock bag (child or toddler diary only)
- Reminder card
- Extra diary pages (2 double-sided sheets) (adult or toddler diary only)

Placing the Diary

It is important that when you leave the household, the respondent(s) feels confident with what is expected of them and is aware of the information in the diary that will help them record what they have eaten as accurately as possible.

You will need to give them key instructions as to how to complete the diary. Remember for toddlers and younger children, a parent/carer will be doing the recording on their behalf.

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.

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

They should write down everything **at the time of eating** rather than from memory later. This means taking the diary with them when they go out. If they do forget the diary then they should make notes while they are out and transfer them to the diary later.

Although there are different types of diaries, all are very similar in terms of how the information is collected. They all start with instructions for the respondent, followed by some example diary days and then a section for helping them describe the food and drink they had and how much. This is followed by the main diary itself that the respondent fills in and finally there are some questions on their usual eating habits to be completed at the end of the recording period. Please familiarise yourself with the important components of the food diary in order to explain these to your respondents when placing the diaries. Use the **examples** within the diaries themselves to demonstrate what information is needed. These can be found on:

PAGE 4-15 OF ADULT DIARY
PAGE 4-11 OF CHILD DIARY
PAGE 4-15 OF TODDLER DIARY

a) Day and 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.

b) Time Slots

For easy use each day is divided into sections, from the first thing in the morning to late evening and through the night. Respondents should note the time of each eating occasion in the column provided.

c) Where and with whom, at table and TV on?

For each eating occasion, respondents need to tell us what **room or part of the house** they were in e.g. kitchen or living room. If they ate at work canteen, a restaurant, fast food chain or car, they should write that location down. We would also like to know **who they share their meals with**, e.g. whether they ate alone or with others. If they ate with others they should describe the relationship e.g. partner, children, colleagues. We would also like to know **if they ate at a table and whether they were watching television whilst eating**. For those occasions where they were **not** at a table or watching TV they should write 'Not at table' or 'No TV' rather than leaving it blank. All this information is useful in two 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. Explain to your respondents why we collect this detail as a way of encouraging them to record it for each eating occasion.

d) 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. The **prompts** can be found on:

PAGE 16-21 OF ADULT DIARY
PAGE 12-17 OF CHILD DIARY
PAGE 16-21 OF TODDLER DIARY

Respondents 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.

e) Recipes

There are special pages for any homemade recipes e.g. shepherds pie, vegetable lasagne, apple crumble and respondents should list the ingredients, the amount of each ingredient (including water or other fluids), how many people the recipe was for, how much of the recipe the respondent ate and a brief cooking method. If necessary respondents should get all the recipe details from whoever cooked the dish.

f) Brand name

Wherever possible we ask that respondent's record brand names as this is very helpful for coding. Please note it is the brand name we want not the supermarket where the product was bought.

g) Portion sizes

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** e.g. one teaspoon (tsp) of sugar, two thick slices of bread, 4 tablespoons (tbsp) of peas, $\frac{1}{2}$ cup of gravy or **weights from packaging** e.g. 420g tin of baked beans, 125g pot of yoghurt, 330ml can of fizzy drink.

Respondents should be careful when describing amounts in spoons that they are referring to the correct spoon size. They should compare the spoon they are using with the life size pictures in the front of the diary.

[FOR RESPONDENTS COMPLETING ADULT DIARY ONLY]

If the respondents is 16 and over they can describe the amount of certain foods using the picture examples on **pages 22-25** e.g. 4B, 6A, 9C.

The picture examples can **only** be used to describe foods stated in the adjacent label. For example any type of breakfast cereal can be described using pictures 1A, 1B and 1C. However pictures 2A, 2B and 2C can only be used to describe rice."

For drinks, quantity can be described using: the **size of glass, cup etc** (e.g. large glass) or the **volume** (e.g. 300ml). In the adult and child diaries there is a picture of a life size glass and some other guidance on volumes. This is to ensure consistency when respondents are describing, for example, a small glass. They should refer to the table and life size glass so that their 'small glass' is the same volume as ours!

PAGE 26-27 OF ADULT DIARY

PAGE 18 OF CHILD DIARY

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, tea with milk and sugar. So a sandwich would be split into bread, spread and filling(s) and the amount of each component recorded separately. For example:

Sandwich:	bread	2 thin slices
	butter	thin spread on both slices
	ham	1 medium slice
	tomato	$\frac{1}{2}$ medium slice

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 cucumber in a sandwich.

h) Questions on that day's food and drink intake

These need to be filled out by respondents at the end of each diary 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.

i) Leftovers

This is a prompt for respondents to check that the amounts they have recorded in the diary reflect what was actually eaten and that they have taken into account any leftovers. This is particularly important with toddlers and young children or other proxies.

j) Dietary supplements

If respondents have taken supplements, they need to record them in the table provided including brand, type and strength of the supplement, and how many taken.

Practise makes perfect!

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

Using the [A4 practice diary pages](#) (there are 2 types: an adult/toddler one which is based on the adult/toddler diary and a child one based on the child's diary), ask the respondent(s) to recall a recent eating occasion (a couple of food items will suffice). If a parent is going to be completing the diary for their child, they should recall a recent eating occasion for their child. 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 where and with whom. Refer to the food description pages, demonstrating how these ensure 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.

Then ask your respondent(s) 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 you feel they are coping. Some adult respondents, especially those with impaired vision, may struggle so offer them the larger A4 version of the adult diary. Others may prefer to use the A4 diary for other reasons. Remember you will be returning to the household on the second day of recording so if you have concerns about a respondent's ability, you will have another chance to go over things and check what they have done so far.

Finally.....

Plastic bag for food labels

These are for respondents to collect labels, in particular, ready meals and seasonal foods. 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.

Reminder card

When handing over the diary please complete the details on the front cover of the diary including the date of the day they should start recording. You should also write this date on the [Reminder Card](#) and ask them to put this somewhere prominent such

as on their fridge door, bedroom mirror etc. It may also help the respondent if you write in the day and dates of the diary days allocated by CAPI in the diary itself.

Extra pages

You also have extra pages to give to respondents filling out the adult or toddler diaries. These are to use if they run out of space in the main diary. Please point out to respondents that they need to enter the day and date on any extra pages they use. Before returning any used extra pages, you must enter the serial number at the top in case they become separated from the main diary.

Carer pack

The pack consists of (in a plastic zipper bag):

- 1 x carer letter.
- 4 x carer food and drink recording sheets (one for each diary day)

Young children and toddlers might have meals where the person keeping the diary on their behalf is not present e.g. at childminders, nursery, relative or friend's house. Ideally we want 'out-of-home' carer(s) to fill in the diary or, as an alternative, they can fill in a carer food and drink recording sheet, which is a simpler form for recording key details about what the child ate whilst in their care.

In households where a parent is going to be completing the diary for their child, you should check whether it is likely that someone else will be feeding their child over the four-day diary recording period. If yes, explain that we would like 'out-of-home' carer(s) to record what was eaten while the child was in their care. The parent/primary carer should show the 'out-of-home' carer(s) the carer letter and then give them either the diary or one of the carer food and drink recording sheet. It is easier and safer if they are all kept in the plastic zipper bag. When the parent collects their child they should pick up the diary or carer food and drink recording sheet. They do not need to transcribe information recorded on the carer food and drink recording sheet into the diary but they must keep any loose sheets safe until you collect them.

Before returning any used carer recording sheets, you must enter the serial number at the top in case they become separated from the main diary

Instruction booklet

Please provide respondents with an instruction booklet (one per household). The instruction booklet contains the same instructions as in the diary. It is aimed to make filling out the diary easier by providing all the instructions, description prompts, and photos in a separate booklet, saving the respondents from having to flick back and forth in the diary.

Arrange check up visit and reminder phone call

Please arrange a check-up visit, with the respondent before you leave. The visit should be on the second day of the diary recording to enable you to check the respondent understands what is required and is recording sufficient details for coding.

In order to fully review the diary, a home visit is important. In the few cases where this is not possible, a phone call may be made instead of a visit. However, substituting phone calls for home visits should be kept to a minimum and the office will be monitoring the numbers of each.

If there is a gap of seven days or more between the diary placement and start date (first date of diary recording), please arrange a mutually convenient time with the respondent when they are at home for you to make a reminder phone call (one or two days before the start date). When you call, run through everything on the reminder phone call list (below), referring the respondent to the corresponding pages in their diary when necessary.

Reminder phone call list to respondents

What you should cover:

- Remind respondents about the voucher
- Remind respondents about the dietary feedback
- Run through main points of completing diary



Food/Drink description and preparation

- Respondents need to record **as much detail as they can**.
- There are **prompts** for most foods in the diary [refer respondent to pages 16-21 of adult, 21-17 of child or 16-21 of toddler diary].
- **Cooking methods** (fried, grilled, baked etc) should be recorded.
- Any **additions** (sugar/sweeteners, sauces, pepper etc) should be recorded.
- Respondents should record as much detail as possible about dishes not prepared at home such as in takeaways or restaurants.

Brand name

Please note we want brand names, not the supermarket where products were bought.

Portion sizes

- Use household measures or weights from packaging.
- For some foods portion sizes are next to their **food description prompts** [as above].
- Respondents should refer to the life-size **spoons** and **glass**.
- **Adults only can use photos of foods**.
- Composite foods such as salads or sandwiches should be split into their component parts and the amount of each component recorded separately.

Recipes

- Respondents should use the special pages for any homemade recipes.
- They should list the ingredients, the amount of each ingredient (including water or other fluids), how many people the recipe serves and how much of the recipe the respondent ate.
- If necessary respondents should get all the recipe details from whoever cooked the dish.

Leftovers

- Respondents need to record any leftovers. The 'quantity eaten' column should be what they actually consumed, not the portion served.

Food labels/packaging

- Encourage respondents to collect all food labels.
- **Ready meals** and **seasonal** foods packaging are particularly useful.

Remind respondents about the instructions and examples at the front of the diary.

B: REVIEWING THE DIARY

We want the diary to be as complete and accurate as possible. Missing information should be collected while you are still at the respondent's home because this increases the chance of filling in any gaps. If you are visiting the respondent after 1 or 2 days of recording, this is an opportunity to point out things they may be omitting, and therefore improve recording for the remaining days. Please use a green pen when you write on the diaries so that we can see where you have needed to probe for additional information or made changes.

Focus on checking:

- **Portion size:** does each food and drink item have a corresponding portion size? Double check that leftovers have been taken into account particularly with children and elderly respondents. If the MFP or a carer has completed the diary, check portion sizes with the respondent

[IF THE RESPONDENT IS AGED UNDER 16]

THE ATLAS MUST BE USED WHEN REVIEWING PORTION SIZES

To improve accuracy in estimating portion sizes for children, there are 3 separate photo atlases that should be used when reviewing their diaries: a pre-school atlas for 18 months to 4 years, a primary school atlas for 4 to 11 years and a secondary school atlas for 11 to 15 years.

Most of the foods that appear in the atlases are shown as a series of 7 photos of the food served and 7 photos of leftovers. When reviewing the diary, if you come across a food that appears in the atlas, you should show the photos to the respondent. Ask them to select a photo of the amount served, write the code in the diary and then ask them to select a photo for any leftovers and write down that code.

- For children of secondary school age; ask the child themselves to select the photo.
- For children aged 9-11; the child's parent/carer should select the portion with some contribution from the child.
- For children aged 8 and under; the child's parent/carer should select the portion.

Please note: The parent/carer can only select photos if they were present at the time of eating.

In some cases the photos can be used to estimate amounts for other foods in addition to the actual foods in each photograph. These are listed on a separate card called the Equivalent Foods List that can be found at the back of each atlas. **Do not refer to any photos if a food is not listed on this card.**

All of the photos were taken with the food displayed on a 9 inch diameter plate or 7.2 inch diameter bowl. At the back of each atlas is a life size photo of the plate and bowl and these should be shown to the child or parent before they select any photos and referred to throughout the review.

**** IMPORTANT ****

The atlas is only to be used when reviewing the diary. Respondents must still record how much they ate at the time of eating either in household measures or weights from labels.

It does not matter how accurately respondents have recorded what they ate; if the food is listed on the Equivalent Food List you should show them the photos in the atlas.

Do not overwrite what the respondent has originally recorded. The photo codes are in addition to what the respondent has written. Remember, it does not matter how accurately respondents have recorded their portion sizes, it is always necessary to use the atlas with children aged under 16.

HOW TO USE THE PHOTO ATLAS

The majority of foods in the atlas are displayed as 7 'as served' portions on one page and 7 'leftover' portions on the following page. Each photo is labelled with a unique code. Ask the respondent to select a photo which is closest to the amount served and write down the corresponding code.

Time	Where? With whom? TV on? Table?	what	Brand Name	Amount eaten
6am to 9am				
7:00	Kitchen Alone	Cheerios	Nestle	PHoop06 medium bowl

If the portion served was larger or smaller than any of the portions displayed they can describe the portion in terms of multiples or fractions of a photograph. If it is smaller than any of the 'as served' photos they can use a 'leftover' photo.

Time	Where? With whom? TV on? Table?	what	Brand Name	Amount eaten
6am to 9am				
7:00	Kitchen Alone	Cheerios	Nestle	PHoop06 x 2 medium bowl

If they did not consume all that was served, the respondent should estimate the amount leftover using one of the 'leftover' photos. Write down the corresponding code preceded by a minus sign.

Time	Where? With whom? TV on? Table?	what	Brand Name	Amount eaten
6am to 9am				
7:00	Kitchen Alone	Cheerios	Nestle	PHoop06 - PHoop08 medium bowl

- **Descriptions of food and drink:** have sufficient details been recorded? Be as specific as you can. Use the prompts in the INSTRUCTION BOOK pages 28-34 to check. Use section C: FOOD AND DRINK DESCRIPTION PROMPTS of this booklet to probe the respondent for missing information, like **cooking methods** (fried, grilled, baked etc) and check for any **additions** (fats, sugar/sweeteners, sauces, pepper etc).

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

For foods eaten away from the home and takeaways, have details been recorded of what these dishes contain, either in the diary itself or on the recipe pages?

- **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?
- **Missing meals and snacks:** are there empty time slots? Ask the respondent to confirm whether they ate or drank anything during that time. 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. Try and fill in any gaps with the respondent. ***Do not try and fill in entire missing days retrospectively.*** If they have genuinely not eaten anything in that time period, write this into the diary i.e. "Nothing eaten or nothing taken" so that it is clear that you have confirmed this. If the respondent is unwell, make sure this is recorded in the question at the end of each diary day.

Note: if time allows, try and fill in any missing **Where/With whom/At Table/TV on.** Encourage respondents to record this as they go along.

Remember also to check after each diary day....

Typical day: has the respondent told us whether the day was usual or unusual? If they ate more or less than usual, have they given a reason why?

Leftovers: has the respondent ticked that they ate EVERYTHING they recorded and if not, have they gone back and written in the leftovers?

Dietary supplements: have sufficient details been recorded for any supplements taken? If the strength of the supplement is missing e.g. 100mg or 25 μ g, ask to see the container.

[FOR PICK UP VISIT ONLY] General questions about 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.

After collecting the diary don't forget to complete a DIARY EVALUATION and return it with the diary.

**REMEMBER TO SEND IN YOUR FIRST COMPLETED DIARY AS
SOON AS YOU HAVE COLLECTED IT.**

C: FOOD DESCRIPTION PROMPTS

In general the following information is required:

- **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 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.

School lunches

Often parents will have been given weekly menus by the school and you can use this either to prompt the child for missing detail or clarify the name or content of a dish. Ask if you can keep the menu or make a photocopy and return it with the diary.



National Diet and Nutrition Survey

Rolling Program 2008 – 2014

Food Coding & Editing
Instructions

1. Contents

1.Contents	2
2.Introduction	3
2.1 NDNS Diet coding	3
2.2 Food Diaries	3
3.Getting started	3
3.1 Diary questions	3
3.2 General comments	4
4.Using DINO to code a food diary	4
4.1 Coding Details	4
4.2 Dietary Coding screen	4
4.2.1 Default data	4
4.2.2 Additional data	4
4.2.3 Questions	5
5.Coding foods	9
5.1 Food name	9
5.2 String	9
5.3 Coding number and food codes	9
5.4 Portion sizes	9
5.5 Children's and Toddler's portion sizes	9
5.6 Time	10
5.7 Recipe group	10
6.Weight changes on cooking and calculating recipes	11
6.1 Weight changes on cooking	11
6.2 Calculating recipes	11
6.3 Cooked food codes	13
6.4 Recipe grouping - Rules	14
7.Queries	14
7.1 Missing food code	14
7.2 Missing Portion codes	14
7.3 Insufficient information to code a food	14
7.4 Insufficient information to code portion size	15
7.5 Query spreadsheet	16
8.Young Person's Photo Atlas (Q2 coding only)	16
8.1 Using the food atlas	16
8.2 General comments	17
8.3 Coding foods	17
8.3.1 Equivalent foods requiring an adjustment factor	19
8.3.2 Incorrect use of the atlas	19

2. Introduction

2.1 NDNS Diet coding

Interviewers for the National Diet and Nutrition Survey (NDNS) provide all respondents with a food diary. In this diary they are asked to record all food and drink items they consume for any 4 consecutive days. During these four days the interviewer visits the respondent to ensure a good level of detail is provided in the diary. In many cases the interviewer will probe for further details on foods/portion sizes and write further information in the diary using a green pen. The diaries are then sent to the diet coders at HNR.

Diet coding is the process of entering this information into the database known as DINO (Diets In Nutrients Out). Each food recorded is assigned two codes, a food number and a portion size. These codes are linked to the NDNS nutrient composition database that contains the nutritional information for over 6000 foods (in 2008).

In some cases queries are created when coding, as there is not enough information in the diary to select a code. This could be due to a lack of detail or ambiguous information. There are a number of standardised procedures used to solve queries, a process known as editing. Once diaries are coded, edited and fully complete the food and nutrient intakes can be calculated and the data analysed in a number of different ways.

2.2 Food Diaries

Three types of diary are used in the study:

- Adults (16yrs+) – available in A5 and A4 versions
- Child (4-15yrs)
- Toddler (1.5-3yrs)

Each of these diaries has been designed to take into account factors specific to the age of the respondent filling in the diary.

3. Getting started

3.1 Diary questions

Enter the gender and date of birth then complete the form using the diary questions at the end of each day and the diary evaluation form.

Day 1 enter:

- The date of the first diary day
- Whether the respondent had any dietary supplements
- Whether the respondent ate more or less than usual and the reason
- Whether the respondent drank more than usual, less than usual and the reason why
- Salt use (found at the back of the food diary)

- Whether the respondent is on a special diet or not and any corresponding details (found at the back of the food diary)
- Interviewer feedback (from the peach coloured NDNS diary evaluation form – see section [3.2](#))

Day 2 to Day 4 (change days using the tabs under the General Comments box):

- The date of each diary day
- Whether the respondent had any dietary supplements
- Whether the respondent ate and drank, more or less than usual

3.2 General comments

In the **general comments** box enter the interviewers comments from the NDNS Diary evaluation form. This box can also be used to enter your own comments should you have any. You may want to comment on the overall quality of the diary or if you notice anything especially unusual. State either interviewer or coder in brackets after each comment e.g. "the respondent drank 6 pints of milkshake each day" (interviewer).

4.Using DINO to code a food diary

4.1 Coding Details

Enter the subject ID, date of birth and gender as before. Then from the first day of the diary enter the default details i.e. date, day of the week and the time slot of the first recorded meal.

All fields on this form are mandatory. Once the form has been completed click OK. The form will then 'look' at the appropriate subject to ensure that the subject ID is valid by checking the corresponding Gender and Date of Birth. If either of these fields do not match a message is displayed. The form will also check that the Diet Record Date matches the Day of Week. Again a message will be displayed if they do not agree. These tests have been devised to help prevent accidental typing errors.

4.2 Dietary Coding screen

4.2.1 Default data

The top left hand side of the screen displays the default data for the subject. This is the information entered on the previous two forms.

4.2.2 Additional data

The bottom left hand frame contains fields for;

- Food codes and portion sizes
- Consumption time
- Coding type – To save frequently consumed items
- Takeaway item? – To flag food if eaten as part of a takeaway
- Recipe group – For manually entered recipes

- Query type – For classifying queries by type
- Notes – For coders comments, beside the information on queries e.g. source of information
- Flagging icon – Use this to highlight queries
- Food name – This is the name linked to the coding number

4.2.3 Questions

For each food a code needs to be allocated describing **where** the food was consumed, **with whom**, if the respondent was **watching TV** and whether they were **sitting at a table**. Table opposite shows the categories for coding where and with whom.

WHERE	WITH WHOM
Home - kitchen	A - Alone
Home - living room	B - Partner
Home - dining room	C - Partner&children
Home - bedroom	D - Child/Children
Home - garden	E - Family (incl relatives)
Home - other	F - Friends
Home - unspecified	
Friend's or Relative's house	G - Family & Friends
Restaurant, pub, night club	H- Parent(s)/Carer
Coffee shop, shop, deli, sandwich bar	I - Siblings
Fast food outlet	J - Parent(s)/Carer&Siblings
School canteen - Food from home	K - Carer & other children
School canteen - Bought food	L - Work colleagues
School canteen - other	M - Flatmate
School playground	N - Other
School classroom	O - Not specified
School other	P - Others - General Public
Work canteen - Food from home	Q - Others - Known to Respondent
Work canteen - Bought food	
Work canteen - other	
Work desk	
Work other	
Nursery/Kindergarten	
Carer's home	
Sports club, Sports leisure venue	
Street	
Bus, car, train	
Other place	
Outside other	
Not at home - unspecified	
Unspecified	
Place of worship	
Holiday accommodation	
Leisure activities, shopping, tourist attractions, cinema, places of interest	
Public Hall/Function Room	
Community Centre/Day Centre/Drop in	

Here are a few examples/clarifications:

Where

- You will notice that the **where** code options for school canteen and work canteen distinguish between **food from home** and **bought food**. **Bought food** refers to food purchased at school/work or an

alternative venue e.g. the local sandwich shop. **Food from home** refers to homemade foods e.g. homemade salad.

- **Fast food outlets** are distinguished from restaurants by the use of cutlery e.g. Pizza Hut is a restaurant as they provide cutlery whereas KFC is a fast food outlet as they don't.
- The distinction between the **Restaurant, pub, nightclub** option and the **Coffee shop, shop, deli, sandwich bar** option is that in the former alcohol would be available.
- **Leisure activities, shopping, tourist attractions, cinema, places of interest** this would also include Hairdressers, hobbies, car dealers etc. Sports activities should be coded under **Sports club, sports leisure venue**.
- **Other Place** should be used for Hospital, Nursing home, Garage/service station & Parties where the party place is unspecified.
- **Community Centre/Day Centre/Drop in** should be used to capture community meals (more common in older respondents).
- **Bus, car, train** should only be coded when being used as a mode of transport. If the respondent works as a taxi driver or a trucker, **Work other** should be used.
- **Sports club, sports leisure venue** should only be used if the respondent is participating in a sport/activity – **Outside other** or **Other place** can be used if they are a spectator; **Restaurant...** or **Coffee shop...** can be used if they are eating a meal at, for example, a gym or sports centre.
- If a respondent states that they were sitting at the table at home with their family, but they do not specify which room they were in check the other days to see if the room has been recorded elsewhere.
- If a child respondent's parents live apart, eating in the sampled household only should be coded as **Home**. Eating at the other parent's house should be coded as **Friend's or Relative's house**. The information in the Subject's tab on the coding page may give an indication of whether they live with their mother or father.
- Sitting room should be coded as **Home - Living room**.
- If a respondent states 'front room' or 'back room' you can make a judgement on whether it is their **Living room** or **Dining room** based on whether they have a TV or a table in that room. If no information is given or it is unclear, code as **Home - other**
- If the respondent has not stated where they are but you are confident that they were at home then code as **Home - unspecified**. For example, a toddler having a cup of milk at 8pm and their dinner earlier had been at home. Likewise, if the place has not been stated but you think they were NOT at home then code as **Not at home - unspecified**. For example, an adult is drinking pub measures and says that they drank more because they were 'on a girls' night out', then you can assume that they were not at home even if you are unable to say exactly where they were. If it is unclear either way, code as **Unspecified**.

With whom

- For **with whom, E – Family (incl relatives)** refers to unspecified family or wider family e.g. grandparents, aunts.

- For adult respondents who eat with their parents or siblings, with whom should be coded as **E – Family**, rather than H or I; this would be the same for respondents who eat with their grown-up children.
- A ‘carer’ is defined as an adult who is taking charge of a child (or other adult). ‘Carer’ would be used for a childminder/babysitter, but not for a teacher or a nursery nurse – for young children at nursery, the place option selected would capture that the child would not be eating unsupervised.
- The code **H – Parent(s)/Carer** or **K – Carer & other children**, however, should not be used if a relative e.g. grandmother or older sibling is taking care of the child – this should be coded as **E – Family** or **I – Sibling**.
- If the respondent is at work, go by their definition of who they eat with (**Friend** or **Colleague**) for deciding what to code for with whom. Clients should be coded under **Colleague**.
- If a respondent under the age of 18 years states they ate with their girlfriend or boyfriend, this should be coded as **Friend**. For a respondent aged 18 years or over, **Partner** should be coded.

Table/TV

- Respondents should only record information about watching TV/sitting at the table not any other activities like listening to the radio/sitting on the sofa/playing on the computer. If they provide this details, but do not say about TV/table tell the Research Assistant in the interviewer feedback you send.
- Do not assume from other details you give that the respondent is or is not watching TV/sitting at the table e.g. just because they are on the sofa does not mean they are not eating with a table pulled up in front of them. If unsure, code as **unspecified**.
- If a respondent states they ate at their **Work desk** the option for table should be coded as **No** – the place option selected will capture that they were eating at their desk.

If any of this information is not recorded in the diary please select the relevant **not specified** code. If in doubt ask the Research Assistant or Dietary Assessment coordinator or code as **not specified**. However, people often record less detail towards the end of the diary – you may be able to work out some of the missing information from the first days.

5.Coding foods

5.1 Food name

If you are familiar with a food name you can enter the text directly into the **food name** field. If you are unsure of a food name use the **string** field and **food trees** to limit the number of foods in the list.

5.2 String

This field is used to limit the foods in the food name field. Type text into this box and only food names containing that text will appear in the food name box e.g. type *bread* and only foods with bread in the name will appear in the food name field.

The text you enter may contain ‘wildcards’. Wildcards are used to substitute for unknown characters. ‘?’ will ignore one character e.g. ‘coca?cola’ will find ‘coca cola’ and coca-cola’. ‘*’ will ignore any characters e.g. ‘corn*flakes’ would find ‘Cornflakes’ and ‘Corn Flakes’, ‘bacon*boiled’ would find ‘Bacon Collar, Lean only, boiled’ and ‘Bacon, collar joint, lean and fat, boiled’.

5.3 Coding number and food codes

Each food held within DINO is assigned to a food code and also a coding number, which are different (see the red box below). For example, aubergine fried in blended vegetable oil has a food code of 1659, but the coding number is 1263.

Once you are familiar with some of the more common foods on DINO and know their respective food code you may wish to enter this number directly, which will save you needing to search using the string field or food trees. *NB Foods should not be coded directly using the coding number.*

5.4 Portion sizes

The portion sizes shown will only be those applicable to the food selected in Food Name. If you have a weight in grams or volume in mililitres, select ‘grams’ or ‘mls’ from the drop down list. Then use the ‘X’ field to enter the number of grams or millilitres (if millilitres is not an option and you are coding a liquid, select 1g and flag this entry). Portion sizes can also be described using the pictures in the adult diary. These will be recorded as 1-10 with A, B or C. 1-10 being the different picture numbers; A, B and C small, medium and large respectively.

5.5 Children’s and Toddler’s portion sizes

You will notice that not many foods in the database have a corresponding child or toddler portion size. This is because we encourage respondents to record foods in household measures e.g. 2 tbsp of mashed potato or 1 tsp of ice cream. However in some cases the respondent will not record a portion size, or may record “small, medium or large”. A spreadsheet NDNS_Kids_portion_sizes is available to help you code these.

The worksheets in this spreadsheet are categorised into age groups 1-3, 4-6, 7-10, 11-14 and 15-18. There are two extra sheets for 7yr and 10yr portions. These sheets provide average portion sizes for a range of commonly consumed foods e.g. an eight yr portion of chicken curry is 148g.

If you are coding a diary for a respondent aged 16-18 years and they have described portion sizes using food photographs, use the corresponding adult portion sizes, rather than the portion size from the spreadsheet.

See sections [7.2](#) and [7.4](#) for information on how to deal with a portion size query.

5.6 Time

Enter the time of each eating occasion in 24hr or 12hr format e.g. 18.00 or 6pm. The recording period for a diary day is from 6am to 5.59am the next day. Therefore if a food is recorded at 3am on day one you would not code this food, however if food was recorded at 3am on day 5 (the night of day 4) you would code this food.

Each food diary should cover four 24-hour periods.

5.7 Recipe group

Recipe groups are allocated to homemade dishes, toddler foods and manufactured items. These groups link together the component ingredients of mixed dishes and classify them as a single item. Each ingredient in a homemade recipe should be allocated a homemade recipe group (see section [6.4](#) for guidance) e.g. when coding individual ingredients for a homemade Spaghetti Bolognese you would allocate each item to the 'other beef and veal - homemade recipe' group.

Occasionally manufactured foods will be recorded in diaries that are not in the database. As discussed in section [7](#) you will need to query these items. The food composition coordinator will decide whether the new food should be added to the database, or whether the composite ingredients should be coded as separate items. In the latter case you will need to allocate each ingredient to the appropriate recipe group e.g. 'commercial toddler foods' or 'manufactured chicken products including ready meals'. If the appropriate recipe group isn't available raise a query and it can be added.

6. Weight changes on cooking and calculating recipes

6.1 Weight changes on cooking

Occasionally respondents record portion sizes in uncooked measurements e.g. 25g dry white rice (boiled) or 8oz rump steak (grilled). The cooked weights of these foods need calculating before the food can be coded. Refer to McCance and Widdowson 7th Edition (pg 512-519) for estimated weight changes on cooking. e.g.

25g dry white rice
% weight change boiled = +177
 $(25 \times 1.77) = 44.25\text{g}$
25 (dry weight) + 44.25g (cooking gain) = **69.25g white rice boiled**

Or

8oz steak (227g)
% weight change grilled = -28
 $(227 \times 0.28) = 64\text{g}$
227g (raw) - 64g (cooking loss) = **163g rump steak grilled**

These calculations are also used to deduce the raw weight of a cooked ingredient e.g. chicken used in a recipe. The FSA 'Food portion sizes' book only provides the weight of cooked chicken breasts so the raw weight would need calculating to enter chicken breasts in a recipe e.g.

4 medium sized chicken breasts cooked = 130g (weight of 1 cooked chicken breast) X 4 = 520
% weight change casserole = -25 (i.e. cooked weight is 75% of raw)
Raw weight = (cooked weight / per cent remaining after cooking) X 100.
 $(130g/75) \times 100 = 173.3\text{g (per breast)}$
173.3g (per breast) X 4 = 693g raw chicken breast.

6.2 Calculating recipes

When home-made dishes are eaten respondents are asked to record the recipes in the space provided after each diary day. If sufficient details are recorded (including a full list of ingredients, each with an amount) you can calculate the proportion of the recipe that the respondent ate and enter the individual ingredients into DINO as described below.

If the respondent eats the whole recipe you firstly take into account the weight changes during cooking and enter a cooked food code and weight for each ingredient and then link them together by allocating a recipe group to each ingredient (see section [6.4](#)).

If a respondent eats half or a quarter of the recipe, then again, code each item using cooked codes but divide the raw weight of each ingredient by 2 or 4 respectively.

Recipe: Chicken risotto	
Ingredients	Amount
onions	1 medium
chicken breast	2 medium
butter	20g
rice	300g
stock	600g
parsley	tbsp

When a respondent describes the amount of the recipe eaten as a weight or in tablespoons we do not know what proportion of the dish this is i.e. we know how much a tablespoon of cooked chicken risotto weighs but not how much of each ingredient of the recipe is in that tablespoon. This is when you would use the **recipe calculator** in DINO. It calculates the proportion (amount/g) of each ingredient that the respondent has eaten.

- Enter the recipe name in the top box
- Enter the subject ID
- Enter the ingredients listed in the diary into the first column
- Enter the amounts in the 'weight' column in grams. Always enter the raw weight in this column, except where dry ingredients are used:

In the example below the raw weight of chicken was calculated from the cooked weights in the FSA portion size book (section 6.1)

As rice is a dry ingredient the cooked weight was entered after deducting the amount of water absorbed on cooking from the stock in the recipe [300g rice absorbs 531g stock on cooking (weight gain factor +177), leaving 69g stock from 600g in the original recipe].

Make any notes on further calculations in the source notes box

Water, stock and tinned tomatoes are the most common types of liquids used in recipes so deduct water absorbed on cooking dry ingredients from these

If more than 100mls of liquid are used in a recipe you will need to calculate the weight of this volume in grams. Do this by multiplying the volume with the specific gravity from the FSA 'food portion sizes book' e.g. 200mls condensed milk = 232g (specific gravity 1.16)

- Use the McCance and Widdowson supplements to find an estimated weight loss for the whole recipe. If the recipe for the dish you are calculating is not available, use the weight loss from a similar dish as a substitute. Take into account the cooking method used along with the proportions and types of liquid; and the amounts of meat and vegetables used when selecting an alternative. Record which recipe you use in the source notes (risotto example shows recipe 198 from the meat dishes supplement)
- Enter this figure into the percentage weight loss box

- Enter the portion size as recorded by the respondent as a weight in grams in the box below. You may need to use DINO or the FSA 'food portion sizes' book to find this weight
- The weight of each of the component ingredients will be automatically calculated in the 'portion size' column.
- Save the recipe.
- You then need to code each ingredient in DINO in the usual way remembering to always select a cooked code and allocate it to a recipe group (see section [6.3](#) for a list of cooked codes).
- Where ingredients are present in very small amounts e.g. herbs, spices, salt, the final portion weight may be less than 0.01g. This would be calculated as 0 by DINO so it is important that these ingredients are entered as 0.01g so that they show up as an ingredient.

NOTE: The method described above results in an overestimation of the total weight (g) of food consumed. However it gives us a 'best fit' in terms of nutrient content and is more reliable for disaggregating vegetables, meat etc.

6.3 Cooked food codes

When entering recipes in DINO always select codes for cooked ingredients. The following list gives examples of some cooked codes in the database:

Batter with losses
 Chicken Flesh with losses
 Cod, Haddock with losses
 Egg after baking/boiling
 Egg and crumb after frying losses
 Flour, plain after baking
 Flour, self raising after baking
 Flour, strong bread with cooking losses
 Flour, brown with cooking losses
 Flour, wholemeal with cooking losses
 Lemon juice, 50% vit C loss
 Liver, calves with frying losses
 Liver, lambs with frying losses
 Milk, whole after boiling
 Milk, semi-skimmed after boiling
 Milk, skimmed after boiling
 Oatmeal with cooking losses
 Oats with losses on boiling
 Onion with frying losses
 Pizza base with losses
 Plaice with losses
 Potatoes, old with frying losses
 Potatoes, new with frying losses
 Rice white with losses
 Tomato puree with losses
 2682 Wine or sherry after cooking in stews

6.4 Recipe grouping - Rules

Each food in the recipe should be assigned to the appropriate recipe group. All homemade dishes will fall into the homemade categories. Recipes are generally grouped according to their main ingredient e.g. Chicken risotto is a rice dish as the main component is rice. However, there are some exceptions to this e.g. Cottage pie is likely to contain more potato than beef mince but it is classified as a meat dish. The recipes are recorded on the recipe spreadsheet, when recipe calculators are applied.

7. Queries

Most queries can be classified into one of four categories;

- Missing food code
- Missing portion code
- Insufficient information to code food
- Insufficient information to code portion size

7.1 Missing food code

Foods will appear in diaries that don't have a corresponding food code in DINO. They may be new products, or existing foods that we haven't come across before. Collect as much information about the product as you can from the Internet, or any other sources available, and pass it on to the food composition coordinator.

7.2 Missing Portion codes

Occasionally respondents will record portion sizes in the diaries that we don't have. Record all the necessary details in the query spreadsheet. The food composition co-ordinator will review the query and if necessary weigh the food and add the portion size to the database.

7.3 Insufficient information to code a food

Sometimes you will not have sufficient detail on the diary page to be able to code a food accurately. The first thing to do is see if the food features on another dietary day and whether relevant information has been recorded there. If not, other sources of information are:

- **Subject information** – click on the subject information in the bottom left hand side of the screen. This brings up details of how some foods are prepared in the household, as well as household structure and ethnic group.
- **General questions about food/drink** – At the back of each diary the respondent provides information on frequently consumed items in their kitchen e.g. bread, squash, oil etc. You may need to refer to the details collected on the relevant pages when allocating food codes for these particular foods. For Toddler diary only there are also some questions about the frequency of eating outside the home.
- **Food labels/wrappers** – Respondents are asked to collect wrappers from unusual foods and ready meals. They will be in a plastic bag labelled with the respondents subject ID.

- **Default foods** – Default codes are available for frequently consumed foods. They should only be selected when a food is recorded without enough detail to pick an alternative code e.g. someone may record gravy without stating whether the gravy is thickened, or has had the fat skimmed off. You should only use a default if there is nothing else on the diary that can help inform a more accurate decision and in conjunction with the points made in the rest of this section. There is no need to raise a query if you use a default unless you have any doubts about your decision.
- **Catering questionnaire** – When school meals are recorded with insufficient detail to select the appropriate codes we can contact the school to obtain more information i.e. on recipes or type of oil used etc.

7.4 Insufficient information to code portion size

If a portion size is missing in the food diary and packaging has not been sent in, an estimate can be made using the following methods (in order of preference of use):

Adults:

- If item consumed on another day base on this size
- Base size on usual portion size for this particular respondent e.g. if the respondent tends to have small portions, code a small portion
- Use average portion size from FSA Food Portion Sizes book
- Use medium portion size from DINO

It is important to try and maintain consistency of data input, record in the notes section on DINO the reason for choosing portion size.

Children:

- If item consumed on another day base on this size
- Base size on usual portion size for this particular respondent e.g. if the respondent tends to have small portions, code a small portion.
- Refer to NDNS_Kids_portion_sizes spreadsheet and use an average portion for their age group. For children aged 7 and for children aged 10, refer to the list specific to their age.

Toddlers:

- If item is consumed on another day base on this size
- Base size on usual portion size for this particular respondent e.g. if respondent tends to have small portions, code a small portion
- Refer to NDNS_Kids_portion_sizes spreadsheet, worksheet ages 1-3
- Refer to toddler food rules worksheet and use rules to estimate a portion size based on adults portion sizes

School meals:

- If item is consumed on another day base on this size
- For primary school children (4-11) use the infant and junior school meals spreadsheet in NDNS_Kids_portionsizes depending on the age.
- For secondary school children (11-18) use the secondary school meals spreadsheet in NDNS_Kids_portionsizes.

- For children at nursery use the nursery column in the nursery school meals spreadsheet in NDNS_Kids_portionsizes.
- NB: as there is an overlap for children aged 11, please check with the NDNS research scientist as to whether they are at primary or secondary school.

7.5 Query spreadsheet

All queries that can't be solved using the information provided above will be added to a query spreadsheet. Each Dietary Assessment Assistant has their own personal query spreadsheet and you should use this to record your queries. Add your queries for each week to the master copy by Friday so that they can be reviewed by the food composition coordinator on a Monday. These queries will then be discussed in more detail at the weekly meeting where actions to solve them are devised.

8. Young Person's Photo Atlas

8.1 Using the food atlas

There are 3 separate photo atlases used with children of:

- pre-school age (18 months to 4 years)
- primary school age (4 to 11 years)
- secondary school age (11 to 15 years).

When interviewers are reviewing the diary with respondents, where foods have been eaten that appear in the atlas, the portion size should also be described using the photos e.g. Cheerios. The atlas is only to be used when reviewing the diary. Respondents must still record how much they ate at the time of eating either in household measures or weights from labels.

For children >9yrs of age, it is appropriate to ask the child themselves to select the portion sizes of the foods consumed. For children under 9 years, the child's parent/carer should select the portions. Whether it is the child or the parent selecting the photos, the interviewer should lead this review, finding the photos and showing them to the respondent. The interviewer should be the one writing the photo numbers in the diary.

All of the photos were taken with the food displayed on a 9 inch diameter plate or 7.2 inch diameter bowl. At the rear of the atlas is a life size photograph of the plate and bowl on which the photographs have been taken. This should be shown to the respondent before showing them any of the food photographs.

'As served' and 'leftover' portions

The majority of foods in the atlas are displayed as seven '**as served**' portions on one page and seven '**leftover**' portions on the following page. Each photo is labelled with a unique code. The respondent should be

asked to select a photo which is closest to the amount served and the interviewers should write down the corresponding code.

If the portion served was larger or smaller than any of the portions displayed they can describe the portion in terms of multiples or fractions of a photograph. If it is smaller than any of the 'as served' photos, a 'leftover' photo can be used.

If respondents did not consume all that was served, they should estimate the amount leftover using one of the 'leftover' photos. The interviewer should write down the corresponding code preceded by a minus sign.

In some cases the photos can be used to estimate amounts for other foods in addition to the actual foods in each photograph. These are listed on a separate card called the ***Equivalent Foods List (EFL)*** that can be found at the back of each atlas. Interviewers should not refer to any photos if a food is not listed on this card.

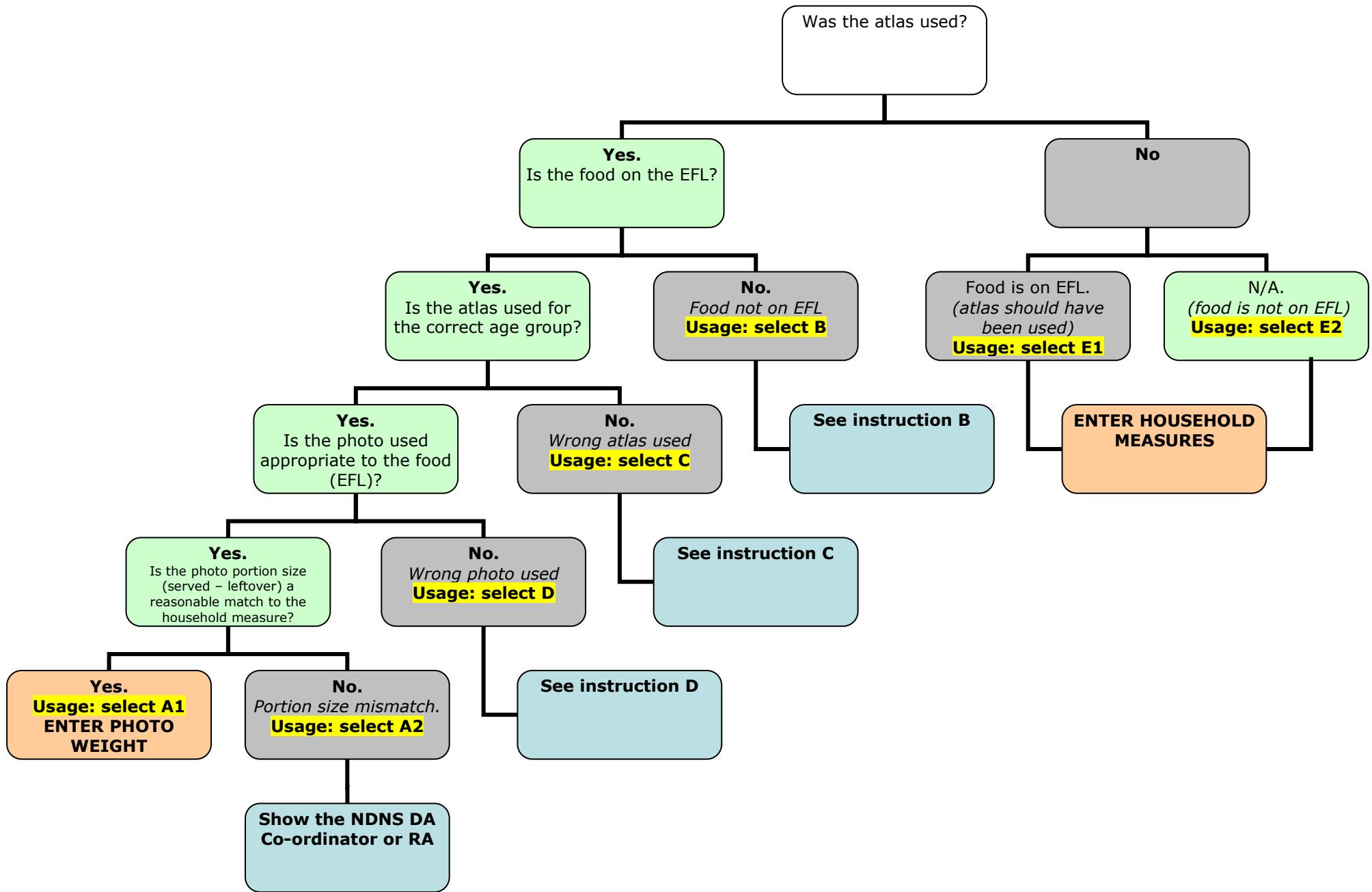
8.2 General comments

In the ***general comments*** box, write any feedback that you have about how the atlas has been used. You may need to go back to this form after coding the diary if you have something to add that was not apparent before coding. This may be comments like, 'respondent always selected middle photo', 'difficult to decipher codes written in' 'interviewer seemed to have left atlas with respondent as no household measures recorded', 'atlas used with respondent over 16 years'.

8.3 Coding foods

Open the coding form as usual (see sections 4 and 5). For respondents in Q2 and under 16 years some additional questions on the atlas will be shown on the coding form.

Use the decision tree opposite to decide whether to use a photo weight or a household measure and how to answer the *Atlas Used* and *Atlas Usage* questions.



If the atlas has **not** been used you will code household measures. In the *Atlas Usage* box select **E1** if the food is on the EFL and the atlas should have been used. Select **E2** if the food is not on the EFL so use of the atlas is not applicable.

If the atlas has been used and you can answer 'yes' to all the questions in the decision tree, use the **food atlas weights look-up file**, clicking on the tab corresponding to the atlas used, to find the weight for the selected photo. The foods are ordered as they are in the atlas. Search for the photo specified in the diary. If two photos are referred to because there were leftovers, calculate the amount eaten by subtracting the leftover quantity from the 'as served' quantity. If an interviewer writes 'half way between photo M706 and M707' for example, calculate the weight in the middle of the weights for the two photos, and make a note that the interviewer has written this in the notes box at the bottom of the coding form. Enter the weight in grams in the portion size box. Select **A1** in the *Atlas Usage* box to indicate that the atlas has been used correctly.

Note: For foods that include the inedible weight as well as the edible, please ensure just the edible weight is coded (for melon, edible portion = 66%).

For foods that may be homemade or composite that are shown by one photo in the atlas (stew for example), only answer 'yes' to the *Atlas Used* question for one of the ingredients, but make sure all of the ingredients are grouped together by recipe group. For other ingredients, choose 'no' in the *Atlas Used* question, and select **E2** in the *Atlas Usage* box to indicate that use of the atlas is not applicable.

8.3.1 Equivalent foods requiring an adjustment factor

For some foods on the EFL an adjustment factor is required to account for the different weights between the foods being described and the food in the photo. For example, the photograph of stew shows a chicken stew, but this photo can be used to describe all types of stew.

8.3.2 Incorrect use of the atlas

We want to get the best portion data possible for each food and in some cases the best available data may come from a photo even if an interviewer has not followed the rules in using the photos.

If the atlas has been used but you answer 'no' to one of the questions in the decision tree, see the corresponding instruction referred to. Select the given letter in the *Atlas Usage* box.

Instructions

B As a rule, do not use the photo weight if the food is not on the EFL. However, if no household measure has been given and the food in the photo is a reasonable match to the food in the diary, it may be appropriate to use the photo weight. Please discuss these cases with the DA Co-ordinator or RA.

C If the Atlas for the wrong age group is used, look at the size of the discrepancy between the household measure and the photo weight. If the discrepancy is small and the value seems feasible for a child of that age, code the photo weight. If you are at all unsure please see the DA Co-ordinator or RA.

D As a rule, do not use the photo weight if the wrong photo has been used. However, if no household measure has been given and the food in the photo is a reasonable match to the food in the diary, it may be appropriate to use the photo weight. Please discuss these cases with the DA Co-ordinator or RA.

A2 Portion size mismatch refers to a mismatch between photo weights and portion sizes given in clear household measures (ie tablespoons **NOT** medium amount, full plate, etc). Where a default kids portion size would have to be used for the household measure, this should not be recorded as a portion size mismatch, no matter how large the discrepancy. If there is a mismatch make a note of the household measure weight in the notes box at the bottom of the form. Whilst this isn't strictly incorrect use of the atlas, it is important that we capture each occurrence of this.

If the atlas has been used to describe a school meal in a child under 11y (i.e. the parent/carer has selected the photograph), do not use the photo weight unless no household measure is given. In these cases in the pilot, for the atlas usage question code 'portion size mismatch' to capture that the usage is not correct but that the error is not in the way that the atlas has been used.

NOTE: if the atlas has been used for respondents over 16 years make a note of this in the general comments box (see above) and code household measures as usual. If no household measures are given use the photo atlas rather than an average portion size, but only if the photo value appears feasible and it is taken from the 11-15 year old atlas. Do not use the photo weight if the food is not on the EFL or a photo for the wrong food has been used.

The National Diet and Nutrition Survey (NDNS)

Year 5: 2012/13

**Nurse Project Instructions
V8.1**

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

Contents

1	CONTACTS PAGE	5
2	NDNS WEBSITE FOR PARTICIPANTS.....	5
3	NDNS REPORT PUBLICATIONS	5
4	BACKGROUND & AIMS	6
4.1	Key features of NDNS.....	6
4.2	The purpose of NDNS.....	6
4.3	Data collected	7
5	SUMMARY OF SURVEY DESIGN	8
5.1	Sampling.....	8
6	FIELDWORK OVERVIEW.....	9
6.1	Stage 1: the interviewer visit	9
6.2	Stage 2: the nurse visit	9
6.2.1	Nurse content summary.....	10
7	THE NURSE VISIT(S) IN YEAR 5	11
7.1	The use of cryogesic spray (children 1.5-16 years).....	11
7.2	'Extended role' nurse, children aged 6-10 years	11
7.3	New Cryogesic spray leaflet.....	11
7.4	Updated Urine leaflets	11
7.5	CAPI updates.....	12
8	PAPERWORK	12
8.1	Nurse sample cover sheet	12
8.2	Nurse Record Forms (NRFs)	12
8.3	NRF Labels/Serial Numbers	13
8.4	Participant information sheets	14
9	WHAT DO PARTICIPANTS KNOW ABOUT YOUR VISIT?.....	16
9.1	The interviewer introduction	16
9.2	Nurse advance letters	17
10	ACHIEVING HIGH RESPONSE RATES	18
10.1	The importance of high response	18
10.2	"Selling the nurse stage..."	19
10.3	Being persuasive	20
11	CONTACTING PARTICIPANTS.....	21
11.1	Making appointments	21
11.2	Broken appointments	21
11.3	Number of calls you must make	21
12	CARRYING OUT THE INTERVIEW	23
12.1	Feed-forward data.....	23
12.2	The nurse interview documents	23
12.3	Organising the interview.....	24
12.4	Getting into the nurse schedule (CAPI).....	24
12.5	Household information instructions	24
12.6	Parallel blocks.....	25

12.7	Individual information	26
12.8	Is anyone pregnant?	26
12.9	Prescribed medications (all participants).....	26
13	INTRODUCING YOUR MEASUREMENT TASK.....	28
13.1	The introduction	28
13.2	The Stage 2 leaflet.....	28
14	THE CONSENT BOOKLET	29
14.1	Completing the consent booklet.....	29
14.1.1	Participant signatures	30
14.1.2	Child Assent.....	30
15	OBTAINING CONSENT TO INTERVIEW MINORS	31
16	PROTOCOLS MANUAL	32
17	BLOOD SAMPLING PROTOCOL.....	33
17.1	Introduction	33
17.2	Eligibility Criteria	33
17.2.1	Obtaining blood samples from diabetics.....	33
17.3	Overview of blood collection procedures	34
17.4	Taking blood from children.....	34
17.5	Scheduling appointments.....	35
17.6	Liaison with the extended role nurse or paediatric phlebotemist.....	35
17.7	Equipment and Consumables	36
17.7.1	Labels	36
17.7.2	Blood tubes.....	37
17.7.3	Equipment	37
17.8	Blood consent	38
17.9	Blood sampling procedure	39
17.9.1	Collecting the blood sample:	39
17.9.2	Labelling the blood monovettes:	40
17.9.3	Despatching blood tubes to Addenbrooke's	41
17.9.4	Despatching the blood samples to the field laboratory:.....	42
17.10	Cryogesic spray	43
17.10.1	Storing Cryogesic spray.....	43
17.10.2	Applying Cryogesic spray	43
17.11	Ametop gel.....	44
17.11.1	Use of Ametop gel	44
17.11.2	Storing Ametop gel	45
17.11.3	The pros and cons of using Ametop gel	45
17.11.4	Applying Ametop gel	45
17.12	Blood sampling token of appreciation.....	46
17.13	Cancellation of blood sampling appointments – what to do in CAPI	46
17.14	Other important points	47
18	24-HOUR URINE SAMPLES	48
18.1	Introduction	48
18.2	Eligibility criteria	48
18.3	Overview of 24 hour urine procedures	48
18.4	Scheduling urine appointments	48
18.5	Equipment and consumables	49
18.5.1	Labels	49
18.5.2	First nurse visit:.....	50
18.5.3	Sub-sampling visit:.....	50
18.6	Urine collection procedure	50
18.6.1	During the first nurse visit:	50
18.6.2	The 24 hour urine sample collection:.....	51

18.6.3	During the sub-sampling visit:	51
18.6.4	Immediately after the visit:	52
18.7	Token of appreciation	52
18.8	Cancellation of 24 hour urine sub-sampling appointments – what to do in CAPI	52
18.9	Other important points	53
19	RETURN OF WORK.....	54
19.1	Nurse Record Form	54
19.2	Returning work to the office	54
19.3	Returning documents and equipment to the office	55
APPENDIX A	SUMMARY OF NURSE MEASUREMENTS & SAMPLES	61
APPENDIX B	NURSE DOCUMENTS	64
APPENDIX C	NURSE EQUIPMENT	66
APPENDIX D	COMPLETED DESPATCH NOTES	67
APPENDIX E	ORGANISING AND TIMING NURSE VISITS.....	72
APPENDIX F	BLOOD ANALYTES.....	74
APPENDIX G	GUIDE TO LABELS	76

1 CONTACTS PAGE

Nurse supervisors - Your Nurse Supervisor regularly can help with any queries or questions you may have relating to clinical issues when working on NDNS. Please direct other queries to your team leader.

Equipment contact - We now have a dedicated email address for stationery, equipment and supplies on all projects: equipment@natcen.ac.uk

We hope you will find this useful, as it will enable you to email outside office hours. Messages left after the office is closed will be picked up the next working day. Please ensure that you quote a project number and please try to be specific about which documents etc. that you need, in order to cut down any queries.

**Please do not leave project-specific queries or other messages on this email address,
it is purely for supplies.**

2 NDNS WEBSITE FOR PARTICIPANTS

NDNS has its own website. It is designed to give participants more information about the survey. You can refer participants 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 NDNS REPORT PUBLICATIONS

A few months after the nurse fieldwork is completed, a report is put together for the FSA and Department of Health which is published on their website:

http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsStatistics/DH_128166

The report contains key results of the survey for the year, such as response rates, sample characteristics and figures on key nutrients such as intake of saturated fat, fibre and fruit and vegetable consumption. At the end of the current four-year rolling programme, a more detailed report will be published.

The first NDNS headline results report was published on the FSA website in February 2010 – this contained results from Year 1 of NDNS. The year 3 report was published on the Department of Health's website in summer 2012. Please have a look at the summary of the report, which highlights the key findings.

4 BACKGROUND & AIMS

4.1 Key features of NDNS

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

4.2 The purpose of NDNS

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

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

Since October 2010, the nutrition remit of the FSA in England has been transferred to the Department of Health and nutrition policy in Wales has been transferred to the Government in Wales. At present, these functions remain the responsibility of the FSA in Scotland and Northern Ireland.

The FSA and Department of Health'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. Following a review of the dietary survey programme in 2003, FSA's Board agreed in principle that future surveys should be carried out on an ongoing basis in order to strengthen the ability to track changes over time arising from rapidly changing eating habits, lifestyles, cooking skills, the availability of different types of food, and re-formulations of manufactured foods. The new format of continuous fieldwork provides a more responsive framework for dietary surveys, giving more ability to identify emerging policy issues, responding more rapidly to changing data needs and giving better opportunities to identify and analyse trends. This will enable the development, implementation and monitoring of effective policies to improve the nation's diet and nutritional status. This is particularly important at a time when under-nutrition, particularly for some micronutrients, is accompanied by over-nutrition, 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.

Fieldwork for the fifth year of the study launched in April 2012 for interviewers and July 2012 for nurses.

4.3 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).
- blood sample collection (and analysis of nutritional status indices).
- 24-hour urine collection.

The study will sample people living in private residential Catering Units (CUs) 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.

5 SUMMARY OF SURVEY DESIGN

5.1 Sampling

A total of 5,265 addresses have been drawn from 195 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 Wales. The addresses are issued to interviewers on a monthly basis over the year.

Each interviewer assignment contains 27 addresses.

Basic Addresses: In 10 of the 27 addresses (addresses 1-10), one adult (aged 19+) and one child (aged 18months-18years) is selected at random. In CUs with no such children, just one adult will be selected.

Young Person Boost Addresses: The remaining 17 addresses (addresses 11-27) are for a “young person” boost – here, the interviewer will select one person aged between 18months-18years and *no* adults; and any households containing people aged 19+ only (i.e. no-one aged 18months-18years) are screened out.

For selected participants there are two main parts to the survey, an interviewer-administered first stage (Stage 1), and a visit by a nurse (Stage 2). Co-operation is entirely voluntary at each stage.

Nurse assignments

You will be provided with full details of participants at each address in your sample. This will consist of all participants who agreed to be contacted by a nurse at the interviewer stage and are eligible for a nurse visit. To be eligible a participant must have been interviewed by the interviewer AND must have provided 3 or more days of diary data.

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. You won’t receive any information about unproductive households or households where no-one agreed to be contacted by the nurse. In a household where one participant agreed a nurse could contact but the other refused, you *will* receive information about the participant who refused, in case they change their mind.

6 FIELDWORK OVERVIEW

6.1 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.
 - Self-completion booklets to record smoking and drinking habits of children and young people.
 - Self-completion booklet to record physical activity, for participants aged 16 and over.
- Collection of dietary data for four consecutive days using a diary.
- Taking of physical measurements of standing height and weight.

At the end of the interviewer stage, the token of appreciation (£30 high street gift card) is given, the second stage of the survey is introduced (the nurse visit) and the interviewer asks for permission for the nurse to contact.

6.2 Stage 2: the nurse visit

Participants who agree a nurse can contact will be sent a **£5 high street voucher as a token of appreciation** for agreeing to be contacted. This will be sent from the office, with a nurse stage advance letter, prior to the nurse fieldwork start date.

A qualified nurse carries out the second stage of the survey 8 weeks after the end of interviewer fieldwork. As a result, their sample size (i.e. number of participants to visit) is known at the start of the fieldwork period. **You no longer need to register yourself at the police station**, although any useful information including the police station the office registered interviewers at will be fed through in CAPI Admin.

The nurse will collect details of any prescribed medications 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 ages 16-64 where standing height is not obtained during the interviewer stage).
- Blood pressure (ages 4 and over).

Nurses aim to take 24-hour urine samples (from all participants aged 4 and older) and blood samples (from all participants, 18 months and older). Where the NatCen nurse does not have recent experience in paediatric phlebotomy, paediatric phlebotomists have been recruited to take blood from those aged 1.5-10years. The NatCen nurse will then accompany the phlebotomist to the participant's home (see sections 17 to 19 for further details of the urine and bloods visits). For Year 5, some nurses have been trained to take blood from children aged 6 years and over. For these nurses ('extended role' nurses), a paediatric phlebotomist will only be required to take blood from children aged 1.5–5 years.

Before the nurse carries out any measurements, the participant 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.

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 participant'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 participant, if they so wish.

The following table summarises the nurse tasks on NDNS. Bloods and/or urines may be collected on the second or third visit depending on individual scenarios.

1st visit	CAPI interview. Carry out measurements. Introduce the 24-hour urine sample. Introduce the blood sample.
2nd visit for those agreeing	Collect the 24-hour urine sample. Take blood sample.
3rd visit for those agreeing	Collect the 24-hour urine sample, if not done on 2 nd visit. Take blood sample, if not done on 2 nd visit.

6.2.1 Nurse content summary

Some of the measures are limited to particular age groups. The table below shows which measures the nurse will attempt to collect 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						• ^a	•
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 interviewer 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.

7 THE NURSE VISIT(S) IN YEAR 5

Following careful consideration, we have made a few changes to various protocols for Year 5. The key changes are outlined below and further information is provided elsewhere in these instructions and at briefings.

7.1 The use of cryogesic spray (children 1.5-16 years)

As well as Ametop gel for use on children aged 1.5–16 years, we have ethics approval to use cryogesic spray. Ethyl chloride (Cryogesic®) is a vapo-coolant and provides targeted pain relief when sprayed onto the skin prior to venepuncture. It has no anaesthetic properties but because of the coolant effect on the skin as the ethyl chloride evaporates, it reduces the sensitivity of the skin to pain.

Cryogesic® takes effect within seconds of being sprayed onto the skin. The effect also wears off quickly as the skin warms back up and is therefore a useful alternative to the topical anaesthetic gels and creams (e.g. Ametop® or EMLA®) which require application to the venepuncture site 30 minutes prior to the procedure, which in children can heighten anxiety needlessly. It is also useful for children who are allergic to Ametop® gel.

There is a Clinical Procedure Guideline explaining how to use cryogesic spray, as well as a short DVD. As well, please refer to section 17.10 in these project instructions for further detail and please read the Cryogesic Spray information leaflet.

The Multi-Centre Research Ethics Committee has approved the use of Cryogesic spray.

7.2 ‘Extended role’ nurse, children aged 6-10 years

In June 2012 we trained 24 nurses to take blood from children aged 6-10 years (inclusive). The ‘extended role’ NDNS Nurse will then be able to take blood samples from children aged 6yrs upwards within their allocated addresses, but will still need to engage the services of the current Paediatric Phlebotomists on Panel for those children aged 1.5-5 yrs (inc.). As usual, this will need to be arranged via the Logistics Nurse unit. ‘Extended role’ nurses will now only need to contact a paediatric phlebotomist for children aged 1.5-5 years.

Some ‘extended role’ nurses have also said they’re willing to help any other NDNS non ‘extended role’ nurses in their Area, by undertaking the venepuncture for children aged 6-10yrs in their NDNS workload. If you know and are in touch with an ‘extended role’ nurse in your area, you can arrange this between yourselves although please let the Logistics Nurse unit know the details. If you don’t know an ‘extended role’ nurse in your area please arrange via the Logistics Nurse Unit. Again this needs to be arranged through the Logistics Nurse Unit.

Please refer to section 17 in these project instructions for further detail.

7.3 New Cryogesic spray leaflet

Similar to the Ametop gel leaflet, we have a leaflet for use of Cryogesic spray. Please read this and use accordingly in field.

7.4 Updated Urine leaflets

Please read the updated urine leaflets (now 2-sided A4 leaflets). The 24-hour collection protocol is more clearly detailed and laid-out. The purpose of the changes is to make the procedure easier to understand by participants by providing a step by step guide.

7.5 CAPI updates

The CAPI remains almost identical to Year 4 of NDNS. The key change is listed below, but you may also notice some minor changes when you run through an example interview. If you notice anything that seems unusual, however, please contact us.

A. Questions about the use of cryogesic spray

As well as offering the use of Ametop gel for children <16 years, we are now offering the use of Cryogesic spray as an alternative. If a respondent answers yes to having either Ametop or Cryogesic, a new set of Cryogesic questions will come on route **before Ametop** is offered. This set of questions includes an allergy to Ethyl Chloride or Cryogesic question (please note, there's no alternative way to describe an allergy to Ethyl Chloride) Unlike Ametop, which takes 30 minutes to take effect, Cryogesic spray **takes effect within seconds**. If the respondent doesn't want Cryogesic spray or is allergic to Ethyl Chloride they will be routed to the Ametop questions.

B. Questions about Extended Role nurses:

Questions on taking blood in children, and associated soft and hard checks, have been updated to reflect the fact we now have a number of nurses who have taken on the 'extended role' of taking blood from children aged 6-10 years inclusive. In particular, there is a new question in the Admin block called "NExVis" which will trigger the relevant fee.

Finally, you no longer need to register yourself at the police station, although any useful information including the police station the office registered interviewers at will be fed through in CAPI Admin.

8 PAPERWORK

8.1 Nurse sample cover sheet

At the start of each assignment you will be given a list of addresses where at least one participant has agreed to be contacted by a nurse in the point you 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 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.

8.2 Nurse Record Forms (NRFs)

You will receive a **Nurse Record Form (NRF)** for each household where there is work for you to do.

The NRFs have two functions:

- they tell you the address of the households where there is work for you (shown on the address label on the front page).
- they are also the forms on which you report to the office how successful you have been at those households.

The NRFs will arrive from the office with an address label stuck at the top of page 1. On the Address Label you will find the:

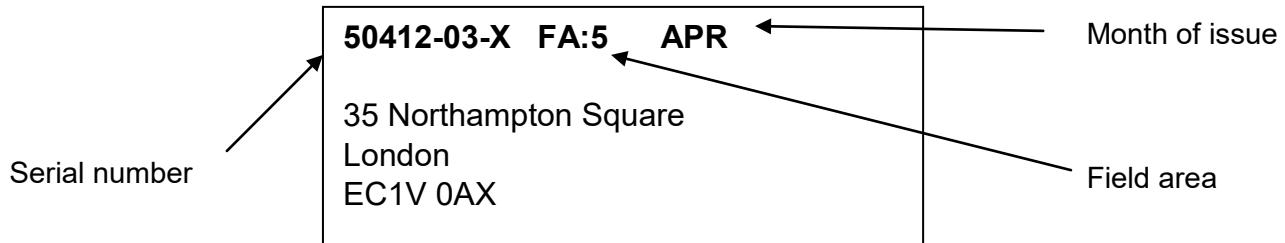
- address
- household serial number

You complete **ALL** parts of the NRF.

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 have **not** been interviewed you **cannot** take any measurements. Under no circumstances must you ever measure an individual if an interviewer has not completed a full interview on CAPI.

8.3 NRF Labels/Serial Numbers

The NRF address label looks like this:



Each address/household/person in the survey has been assigned a unique identity number – the serial number. It allows us to distinguish which documents relate to which person.

The serial number consists of the following digits:

- Year - 1 digit to show the year within the NDNS series (i.e. 20012/13 = year 5)
- Month - Two-digit number to show the month of issue (i.e. March = 03)
- Point number - Two-digit number to show the point number, within month (between 01 and 15)
- Address number - Two-digit number to show the address number within the point, (01-10 = Basic; 11-27 = Young Person)
- Check letter (CKL) – A letter of the alphabet which allows the computer to check that a correct serial number has been entered.

The year, month, point and address plus the check letter are all found on the address label at the top of the nurse record forms (NRFs), as well as on the participant information sheets. An NRF and corresponding participant information sheet for each household (where at least one participant has agreed to be contacted by a nurse) will be included in your work packs.

8.4 Participant information sheets

The participant information sheet is separated into a number of sections. The first section will provide you with the following information:

- Household serial number
- The household's telephone number, if known
- Address
- Date of first interview (with the interviewer)
- Name of interviewer

The second section will provide you with the following information about Participant 1 and / or Participant 2:

- Participant serial number
- Whether each participant answered 'yes' or 'unsure' when asked for agreement to be contacted by the nurse. This will help you to gauge how to pitch your initial contact with each participant
- Participant name
- Parent(s) name (only for participants under the age of 16)
- Participant age
- Participant date of birth
- Sex of participant

The third section of the information sheet will provide you with the following information:

- Detail relating to the location of the household within the address
- Unusual circumstances – specific information for you including best times to call, information about the household occupants etc. that the interviewer feels you might find useful
- the police station at which the office registered the interviewer (remember, you no longer need to register yourself).
- Other information – any other additional information that might be of relevance to you

Please note: Any sensitive information will be phoned through from the office rather than being included on the participant information sheet.

Serial Numbers:

Each individual participant's section on the participant info sheets (see Appendix E) will show a serial number. The person number is the additional number at the end of each serial number. The person number is a one-digit number assigned by the interviewers to each person in a household. Only selected and eligible people are given a person number.

Rules are:

Person number 1 = selected participant aged 19+

Person number 2 = selected participant aged 1.5 yrs to 18 yrs

Great care must be taken to ensure that the correct serial number for a particular person is used on all documents and blood / urine tubes for that participant. 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.

Household location:

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 Brentwood who will be happy to help.

There may also be some household location details on the bottom of the participant info sheet – this information will have been provided by the interviewer.

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

The age of the participant is ‘frozen’ at the time the interviewer has made her/his visit and administered the household questionnaire. The age that is shown on the **participant information sheet** 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 would have had a particular measurement you **do not do that particular test except for child bloods**. For example, if a participant was 3 years old at interview but becomes 4 years by your visit, do not measure their blood pressure even though (s)he is 4 years old when you see him/her. If participants query this or ask you to perform the measurement/test you must explain to them that you are not able to because the age of the individual is based on the **age at interview**. The computer will automatically calculate which measurements you should take in this situation.

However, the exception to this rule is child bloods. For this, the age of the individual will be based on age at nurse visit. Therefore, if a child is 10 at the interviewer visit but has turned 11 by the time you see them, **you** need to take the blood from the child. See section 17 for further detail.

9 WHAT DO PARTICIPANTS KNOW ABOUT YOUR VISIT?

9.1 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 in a couple of months and explain some more about what is involved and answer any questions you have. May I get him/her to contact you?"

Participants have three options at this question: '**Yes**', '**Unsure**' and '**No**'. All participants who answered '**yes**' or '**unsure**' will be included in your sample. The participant information sheets will indicate whether a participant answered 'yes' or 'unsure' so you can alter your introductions appropriately. In addition, in a two-person household where one of the fully productive participants agreed to / was unsure about the nurse contacting them, and the other refused, you will receive information about both. This is just in case the participant who refused later changes their mind. Your participant information sheet will indicate if one participant refused.

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 participant 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.
- Participants are not 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 participant 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.

At the end of the interview each participant 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. Nurses have a *separate* version of the Stage 2 leaflet, which explains the measurements and samples in more detail. When you arrive for your appointment, make sure that the participant has the interviewer Stage 2 leaflet (and has read it) and give them the nurse version of the leaflet. Allow them to read the leaflet and then explain in detail the measurements and samples involved in your visit. Note there are different Stage 2 leaflets for different age groups.

After interviewers have secured agreement for the nurse to contact participants Interviewers will complete additional Admin questions about the addresses and participants, to help you locate and get participants on board.

Interviewers do not generate nurse documents (such as the NRF or NNV) nor will there be a "nurse link" to feed-forward information from the interviewer directly to you. NRFs, Participant Information Sheets (see section 8.4) and feed-forward data will be generated centrally, from the office. Note that you will not receive any NNVs (No Nurse Visit sheets) on this survey – your sample will be set in

advance of your fieldwork start date so all addresses you receive will definitely contain at least one participant who has agreed to see you / has said they are unsure about a nurse contacting.

There will be no formal liaison between you and the interviewer but please feel free to contact the interviewer or the office if you wish to talk through any information in person (we understand that there may on occasion be information that an interviewer does not want to enter onto the computer). Likewise, the interviewer will be provided with your details in case he/she wishes to discuss any particular participants or other practical aspects of the assignment with you.

9.2 Nurse advance letters

A week before the nurse fieldwork start date, a stage 2 advance letter will be sent from the office to all participants who said 'yes' or 'unsure' when asked if a nurse could contact. The letter will remind participants about stage 2 and will include the £5 token of appreciation. The office will also record the nurse name on the letter so the participant will know who to expect. When contacting participants, remind them about the stage 2 advance letter as they may have forgotten. Examples of the nurse advance letters are supplied during briefings and included in your work packs.

10 ACHIEVING HIGH RESPONSE RATES

In most cases participants will be looking forward to your visit. Having completed the interview and the diary they have already invested time in our survey, and most will be willing to complete the second stage. In addition, they will have had a break from the first part of the survey so will hopefully be ready to take part in the next stage. However, some participants may need persuading – especially those participants who said they were ‘unsure’ about being contacted by a nurse. Please think carefully about what to say to participants, and make sure you know whether they said ‘yes’ or ‘unsure’ before making contact, so that you can pitch your introductions appropriately.

10.1 The importance of high response

Past experience shows that achieving high nurse response rates requires continuous hard effort. A high response rate at both stages of the survey is crucial if the data collected are to be worthwhile. Otherwise, we run the risk of getting findings that are biased and unrepresentative, as people who do not take part are likely to have different characteristics from those who do. Keeping participant co-operation through to this important second stage of the survey is therefore vital to its success.

Keep your introduction short

While you will need to answer queries that participants 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, particularly those who answered ‘unsure’, and if you say too much you may simply put them off. The general rule is to keep your initial doorstep introduction short, simple, clear and to the immediate point. Points to remember about your doorstep introduction:

- Show your identity card
- Say who you are
- Say who you work for
- Remind participants about agreeing to the second stage of the survey
- Remind participants about the stage 2 advance letter and £5 incentive they will have recently received

For most people this will be enough. They will be happy to make an appointment and all you will have to do is explain what your visit will cover and what you want them to do. Others will be reluctant and need further persuading. Build on what has gone before. Be prepared to answer questions about the survey. Some participants may have forgotten what the interviewer told them about the survey’s purpose or about what your visit involves, especially since there is a fairly long gap between interviewer and nurse fieldwork. You may also need to answer questions about how the household was sampled. Some points you might need to cover are shown in the box later in this chapter.

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 participant.

10.2 “Selling the nurse stage...”

Most people will be looking forward to your visit and will be keen to help. But some may have become reluctant to co-operate, perhaps because they have become nervous. You will need to use your powers of persuasion to reassure and re-motivate such people. It is important that they take part.

Be careful to avoid calling your visit a "health check". One of the most common reasons given for participants 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 participant to help with a survey.

Tokens of appreciation. Remember that participants will receive tokens of appreciation for taking part in the 24 hour urine part of the study (a £10 high street gift card) and for providing a blood sample (a £15 high street gift card). This should **not** be seen as 'payment' for urine and blood, but as a way of saying thank you for taking part in the various elements of the study.

“You won’t want to test me....”. Some people think that they are not typical (they are old, they are ill, they are young and healthy, and so on) and that it is therefore not worthwhile (from both your and their point of view) to take part in the survey. You will have to explain how important they are. The survey must reflect the whole population, young and old, well and ill. We need information from all types of people, whatever their situation. If someone suggests that you see someone else instead of them, explain that you cannot do this as it would distort the results. Our target is to interview and measure all eligible participants. The measurements carried out by the nurse are an integral part of the survey data and without them the interview data, although very useful, cannot be fully utilised.

Diet and nutrition is interesting and important. People are interested in diet and nutrition and are concerned about it. This is a high profile survey on topical issues, such as diet, salt intake, obesity, smoking, drinking, and high blood pressure. Survey reports receive wide press coverage. It is also of immense interest in the media (with programmes such as Jamie’s School Dinners) BUT take care in emphasising this too much, we need to get complete representation from those with good and poor dietary habits.

Participants are not patients

Your previous contact with the public as a nurse will normally have been in a clinical capacity. In that relationship, the patient needs the help of the professional. Your contacts with people in the course of this survey will be quite different. Instead of being patients, they will be people who are giving up their leisure time to help us with this survey. You need their help to complete your task. The way you deal with them should reflect this difference.

They are under no obligation to take part, and can decline to do so. They can also agree, but then decline to answer particular questions or provide particular measurements. But of course we want as few as possible to decline, and we rely on your skills to persuade them to participate.

Tailor your visit to specific needs

Sometimes a participant may want the nurse visit carried out in a particular way. For example, an older person may want a family member to be present during the nurse visit, or they may prefer a male nurse or female a nurse to take their measurements. The interviewer will usually have collected this information when introducing the nurse visit, and informed you of the special requirement. We want our participants to take part in the nurse visit, so as far as possible please try to meet the requests of the participant. Usually a bit of reassurance from you is all that is needed, but if there is something else you need, for example a chaperone, please call your supervisor.

10.3 Being persuasive

It is essential to persuade reluctant people to take part, if at all possible.

What you might mention when persuading someone to take part in the survey:

If the participant is unsure about the measurements:

- You will ask for their permission before taking each measurement and sample.
- The participant 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 participant 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.

11 CONTACTING PARTICIPANTS

11.1 Making appointments

A personal visit to arrange an appointment is preferable because it is easier for participants to refuse over the telephone than face-to-face. However we realise this won't always be possible and so if the household has provided a telephone number (this will be provided on the participant information sheet) you could try to make an appointment over the telephone. You can then arrange an appointment date that is convenient to you both.

Remember to be clear in your mind whether a participant has said 'yes' to a nurse contacting them or that they were 'unsure'. This is essential so that you can tailor your doorstep approach.

Key points to cover in your introduction:

- *Who you are working for – NatCen 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 and the Department of Health)
- *Why the survey is being carried out* (see Section 4)
- *What you are going to do* (see Section 6)
- *How the participant 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).

11.2 Broken appointments

If someone is out when you arrive for an appointment, 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. You may also try telephoning them if you feel this is appropriate.

11.3 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 participants that are difficult to contact. If you fail to make contact you should try again but let the office 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 1 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.

12 CARRYING OUT THE INTERVIEW

12.1 Feed-forward data

Information recorded by the interviewer is transmitted back to the office, by the interviewer. On the first date of your fieldwork period, the relevant information from the interview is available as feed-forward data to load onto your machine.

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 at the start of your assignment to pick up your work.
- Before you go to a household check that the feed-forward data **for each participant** is on your laptop, by entering the household serial number. 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 you cannot access the feed-forward data because of a technical problem you will need to contact the help desk for assistance.

12.2 The nurse interview documents

The nurse questionnaire is on computer (CAPI). As well as the computer schedule, you will use other documents during the interview itself. The CAPI program will prompt you when to use certain information leaflets and sections of the consent form.

Nurse interview documents include:

- the Stage 2 information leaflets
- the office consent booklet
- the personal consent booklet
- the urine information leaflets
- the PABA information sheet
- the Ametop information leaflet
- the Cryogesic information leaflet
- the 'why give blood?' leaflet
- the coding prescribed medications booklet
- measurement record card

Please see Appendix B for a full list of survey documents.

Immediately before you start to carry out measurements on a participant, complete the first half of page 1 of both Consent Booklets. Never do this before your visit to the household (you need to check that the details recorded are correct).

12.3 Organising the interview

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.

12.4 Getting into the nurse schedule (CAPI)

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 **P8125** and the relevant point number 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 participant’s home.

12.5 Household information instructions

The household information should be checked **before** making the visit.

OpenDisp

This will be one of the first screens you see. Note that it will only display information about fully-productive individuals who were interviewed by the interviewer (as these are the only individuals who *you* can interview). 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.

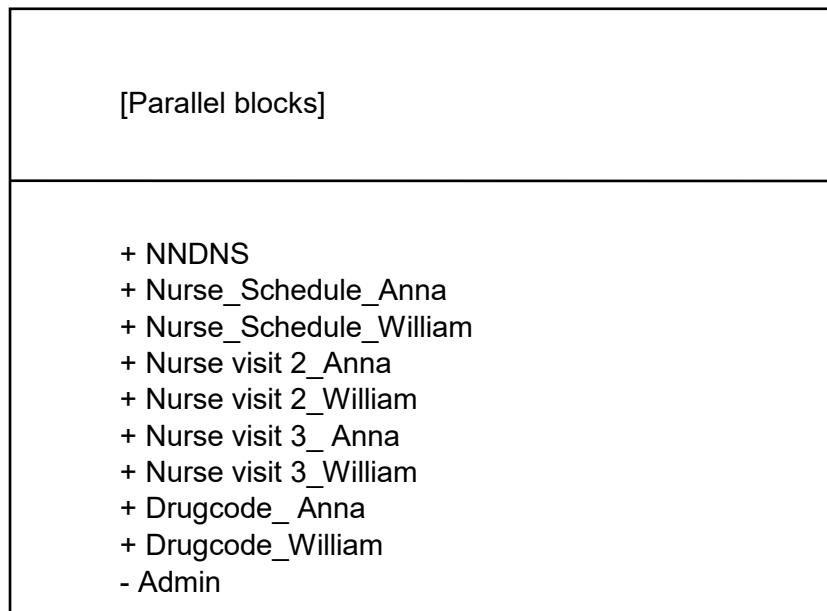
12.6 Parallel blocks

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:



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 are two eligible participants). 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 Anna and William, but not the admin block.

12.7 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.

12.8 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 or someone has become pregnant since the interviewer 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 participants. The computer will then terminate the interview at the appropriate point.

12.9 Prescribed medications (all participants)

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. Participants 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 participants. 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 – it will give you the chance to query any hard-to-find drugs and to ask a participant 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 <Ctrl+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 [Anna]' that person's drug coding block will be called 'DrugCode[Anna]'. 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 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 participant 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 **March 2011 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 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 participant takes aspirin, record the dosage as this can vary.

13 INTRODUCING YOUR MEASUREMENT TASK

13.1 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 participants 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 participants that every stage is optional.

If the participant 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).

13.2 The Stage 2 leaflet

A copy of the interviewer Stage 2 leaflet will be given by the interviewer at the interview stage. This will tell participants 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 participants, you should ask participants if they have read their copy of the interviewer Stage 2 leaflet. Remember to also give participants the nurse Stage 2 leaflets, which provide participants with more detailed information than the interviewer versions. Participants **must** read the nurse version of the leaflet 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. 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 also a nurse version of the **child and young person** Stage 2 leaflet, for use with younger participants who may find the adult leaflet difficult to understand.

14 THE CONSENT BOOKLET

14.1 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 participant/parent of participant 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 (16+).
- a sample of blood to be taken, results sent to participant/GP, sample for storage.
- 24hr urine sample including separate consents for: 1) Use of PABA; 2) Lab analysis, and; 3) Storage.

Consent booklet format

There are two consent booklets: a participant copy and an office copy.

The procedure for obtaining consent is the same for both booklets. The participant 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. Always make sure participants **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 participant at the end of the visit. This is their legal record of what they have consented to.

The office consent booklet must be filled out for **every** participant 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 participant 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 participant. 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 both 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 participant's consent for the following samples or measurements:

9.	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 participant	17	18

By the end of all nurse visits, every participant should have **nine** codes ringed at Item 9 (either a 'yes' or a 'no' for each of items a-j).

The last few pages of the office consent booklet are despatch notes for blood samples and urine samples. These are to be sent to Addenbrookes laboratory, the field laboratories and HNR. These despatch notes are tear off sheets to go with the blood and urine samples to the respective labs. There is also a despatch note (on the back page) for you to record blood and urine details for the office. The office despatch note is to be completed and returned to the office with the rest of the booklet. Again, it is essential that the information on these despatch notes is accurate. The Addenbrookes research analysis request (despatch) forms are carbonised three times so you will only need to fill in the top copy – please make sure you do this in **black biro** and press hard enough so that the information transfers properly to the two other forms. **All three** copies need to be completed and labelled accurately and sent back to Addenbrookes (inside the postal packs).

14.1.1 Participant signatures

Use a black pen when completing the booklets, and ensure that signatures are always in pen, not pencil. Each participant must **initial** each box if they have consented to the measurement or sample to be taken. It is very important they initial not tick. The participant must also sign and print their name on each consent form. Do not erase any of the personal information. If necessary, cross out errors and rewrite so that any corrections can be seen.

Without signed and initialled consents we cannot use the samples.

14.1.2 Child Assent

For children aged 4 and over, nurses should attempt to get a countersigned signature from the child on the office and participant 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.

15 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 participant but you do not need parental consent to interview someone of this age. If the participant 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 is recorded on the participant information sheet 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 participant information sheet as having legal parental responsibility.

It is only the person(s) listed on the participant information as being a parent/having legal parental responsibility that can give verbal consent to interview and verbal/written consent to measure someone aged 1.5 to 15 years. So, if for example, a grandparent, other relative or childminder is looking after the child participant when you call (and is acting in 'loco parentis' while providing child care) they cannot give consent to interview or for any of the measurements,

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.

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/person with legal responsibility for the child (named on the participant information sheet) 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.

16 PROTOCOLS MANUAL

There is a protocols manual to be used on all NatCen Surveys involving nurse work. You should refer to the manual and follow the protocols for all Year 5 measurements and samples. These include:

- Infant length measurement (under 2 years)
- Mid-Upper Arm Circumference (aged 2-15)
- 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 samples, for NDNS specifically, and about the 24-hour urine samples. Information is also provided about the despatch of these samples.

17 BLOOD SAMPLING PROTOCOL

17.1 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, or for bacterial infections, nor will they be used for genetic testing.

17.2 Eligibility Criteria

Participants are eligible for this measurement if they are aged 1.5 years and over. Participants aged 4 years and over may only give a fasting blood sample. Participants aged less than 4 years may give a non-fasting sample. 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.

17.2.1 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. You will provide reassurance about this, but if the participant remains anxious a non-fasting sample can be taken.

Acceptable procedures according to medication:

- Participants on oral hypoglycaemic medication should be able to fast without complications
- Participants 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.
- Participants on insulin alone can also provide a fasting sample, but should be given special consideration. They should postpone 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 participants under the age of 4. Blood should not be taken from participants who are willing to provide a sample but are not prepared to fast.

17.3 Overview of blood collection 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 years and over) and only one attempt with children.

The volume of blood taken will vary according to the age of the participant, as follows:

Age	Volume	No. of specimen tubes to be filled
Adult 16+yrs	35.1 mL	8
Child 7-15yrs	21.1 mL	6
Child 1.5-6yrs	10.9 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 all nurses from participants aged 11 years and over.

Nurses who **did not take up the extended role** (i.e. taking blood from participants aged 6-10 years) for participants 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 the paediatric phlebotomist during the visit to the participant's home.

Nurses who **did take up the extended role** of taking blood from participants aged 6-10 years, you will be able to take blood from participants aged 6yrs upwards within your allocated addresses. You will still need to engage the services of the current Paediatric Phlebotomists on Panel for those children aged 1.5-5 yrs (inc.). If you know an extended role nurse in your area, arrange with them directly and give the Logistics Nurse Unit the details. Otherwise, this would need to be arranged via the Logistics Nurse Unit itself. Extended role nurses will now only need to contact a paediatric phlebotomist for children aged 1.5-5 years.

Some blood samples will be posted to Addenbrooke's 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.

17.4 Taking blood from children

If the NDNS nurse is not an extended role nurse or trained paediatric phlebotomist, bloods from those aged 6-10 years will be taken by an extended role nurse or a trained paediatric phlebotomist. Bloods from those aged 1.5-5 years 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.

Please note that if the child has turned 11 since the interviewer visit and is 11 years of age when you are gaining agreement for blood sampling, you, the nurse, should take the blood from this child. Likewise, if the child has turned 6 since the interviewer visit, if you're an extended role nurse you should take the blood from this child. This is the only scenario where you should base age on actual, current age rather than the age set at the interviewer visit. CAPI will prompt you to arrange to take blood if the child has turned 11 years of age since the interviewer stage.

17.5 Scheduling appointments

Due to restrictions on when laboratories can process samples and the fact that the vast majority of participants 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 minimise the number of visits, if a household contains two participants you should schedule appointments for when both participants are available.

When a household contains a participant aged 10 or younger, you also need to schedule the blood taking appointment to fit in with the availability of your extended role nurse (if this isn't you) or paediatric phlebotomist partner.

17.6 Liaison with the extended role nurse or paediatric phlebotomist

Blood from young children, aged 10 years or younger, will be taken from someone with the necessary and relevant phlebotomy skills.. If this is not you, you will be allocated an extended role nurse (for children aged 6-10) or a paediatric phlebotomist (for children aged 1.5-10) partner who will accompany you on visits to take blood from young children.

The earlier you know whether you have a child aged 18 months to 10 years, the better. This means both you and the phlebotomist or extended role nurse, 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 Nurse Unit on: 01277 690061

The Nurse Unit have a list of paediatric phlebotomists and extended role nurses 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 or extended role nurse.

You should then call the phlebotomist or extended role nurse 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. When you have an agreed time and date, please let the Nurse Unit know so they have a record of the visit taking place and can deal with the relevant paperwork.

During the first visit when willingness to give a blood sample is ascertained, you can call the phlebotomist or extended role nurse to arrange the follow-up visit whilst you are still in the household. Ideally, you will have their 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 or extended role nurse:

- ◆ The NDNS nurse is responsible for providing and taking all equipment, including tubes, labels, and needles to the participant'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 phlebotomist or extended role nurse 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 phlebotomist or extended role nurse will take the blood sample only – the NDNS nurse does everything else.

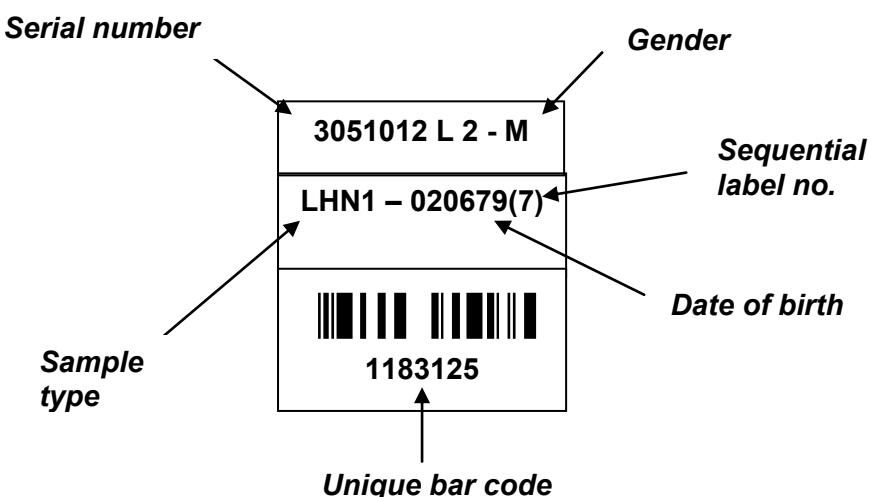
17.7 Equipment and Consumables

17.7.1 Labels

You will be provided with a set of labels for labelling specimen tubes and documents. You will receive a set of labels for each participant that has agreed or said they are unsure about a nurse visit. All possible labels are pre-printed for a particular participant. This means that you will receive labels that will not be used if the participant does not provide a blood sample. These can be disposed of.

On each label there will be:

- The serial number, followed by a check letter
- The participants' gender
- The sample type
- The sequential label number
- The participants' date of birth
- A unique barcode number (for HNR's use).



CAPI will guide you through which labels are to be used for each participant, and which should be affixed to which tube or sent onto the laboratory. The table in section 17.7.2 also outlines which label should be used for each blood tube.

It is recommended that where labels will not be used that you cross through the top two lines of each label. This will help to reduce the likelihood of a label being used by mistake. When crossing through

the label it is best to leave the barcode intact, in case of an error, in which case the label may still be used.

Also, please note that it is your responsibility to label Monovette tubes for all participants, even when blood is being taken from young children by a paediatric phlebotomist.

17.7.2 Blood tubes

Blood will be collected using the Sarstedt Monovette blood collection system. The following table details the number and type of blood tubes that must be collected for each age group, the destination for each tube and which label should be used. It also shows the priority order in which the tubes should be taken:

Tube:	Goes to:	Label:
<i>Participants aged 16+ years</i>		
1. 2.6mL EDTA (red top) 2. 4.7mL serum gel (brown top) 3. 4.5mL serum (white top) 4. 7.5mL Li Hep TM (orange top) 5. 7.5mL Li Hep TM (orange top) 6. 1.2mL Fluoride (yellow top) 7. 4.5mL Li Hep (orange top) 8. 2.6mL EDTA (red top)	Addenbrooke's Addenbrooke's Field Lab Field Lab Field Lab Field Lab Field Lab Field Lab	EN1 (3) SEN1 (5) SEN2 (6) LHN1 (7) LHN2 (8) FN1 (10) LHN3 (9) EN2 (4)
<i>Participants aged 7-15 years</i>		
1. 2.6mL EDTA (red top) 2. 7.5mL Li Hep TM (orange top) 3. 2.6mL serum gel (brown top) 4. 4.5mL serum (white top) 5. 2.7mL Li Hep (orange top) 6. 1.2mL Fluoride (yellow top)	Addenbrooke's Field Lab Addenbrooke's Field Lab Field Lab Field Lab	EN1 (3) LHN1 (7) SEN1 (5) SEN2 (6) LHN2 (8) FN1 (10)
<i>Participants aged 1.5 to 6 years</i>		
1. 2.6mL EDTA (red top) 2. 4.5mL Li Hep (orange top) 3. 1.1mL serum gel (brown top) 4. 2.7mL serum (white top)	Addenbrooke's Field Lab Addenbrooke's Field Lab	EN1 (3) LHN1 (7) SEN1 (5) SEN2 (6)

17.7.3 Equipment

You will be provided with the following equipment for blood taking:

- Monovettes for blood specimen collection:
- Tournistrips
- Disinfectant gel
- Alcohol swabs/cotton wool balls or gauze swabs/plasters
- Micropore tape
- Adhesive dressing
- Cryogesic spray
- Ametop gel & tegaderm dressing
- Disposable vinyl gloves
- Sarstedt multifly needles: 21G with 60mm or 200mm tube length and 23G with 60mm tube length
- Sarstedt fixed needles: 21G and 22G

- 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
- Pulp 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)

17.8 Blood consent

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 participant (or parent/guardian of child participants)
- Storage of blood sample.

There are three variants of the blood sampling consent forms in the consent booklets:

- Consent sheet CF (A2) is for participants aged 16+
- CF (C2) is for participants aged 4-15 years
- CF (YC1) is for participants 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 participant and the form should be given to the participant to read. After the participant (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 participant (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 participant/parent consented to give a blood sample with or without the use of Cryogesic Spray or Ametop gel. **Please ensure the appropriate box is ticked.**

You must check that all appropriate boxes are **initialled** and signatures collected. If a participant 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 participant (or parent/guardian of a child participant) 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.

17.9 Blood sampling procedure

Before taking blood, check that the participant 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:

17.9.1 Collecting the blood sample:

1. Check one last time if the participant has a bleeding or clotting disorder, is on anticoagulant drugs or has ever had a fit (for 16 years and under) / has had a fit in the last 5 years (for 16 years and over). If such a problem is identified then do not attempt to obtain a blood sample.
2. Follow appropriate protocols if participant is diabetic
3. Explain the purpose and procedures for taking blood
4. If aged 4 years and over, check not had anything to eat or drink for 8hours. If not fasted, ask to make a new appointment if participant still willing to provide a fasting blood sample
5. If participant is aged under 16 years, explain the option of using Cryogesic Spray or Ametop gel
6. Obtain necessary written consents
7. Prepare the phlebotomy items required, for ready accessibility
8. Make sure that the participant is at ease and seated comfortably or reclining for the phlebotomy procedure and ensure they cannot hurt themselves if they should faint.
9. Ask the participant 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.
10. The antecubital fossae may then be inspected. It may be necessary to inspect both arms for a suitable choice to be made, and the participant may have to be repositioned accordingly. Do **not** ask the participant to clench his/her fist.
11. Select a suitable vein (please see section 17.10 and 17.11 for use of Cryogesic or Ametop gel) and apply the tournistrip around the participant's arm, using minimal pressure and for the shortest duration of time. Do not leave the tournistrip in place for longer than 2 minutes.
12. Ask the participant to keep his/her arm as still as possible during the procedure.
13. Put on your gloves at this point.
14. Clean the venepuncture site gently with an alcohol swab. Allow the area to dry completely before the sample is drawn.
15. 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.
16. 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.

17. Collect the blood samples according to priority by placing the specimen tubes in the correct order in the sample tray provided. The tubes should be collected in the order given in the table in section 3.2. This table is also reproduced in CAPI and as a laminated colour-coded guide in each monovette pack.
18. 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 Multify before insertion into the vein: this ensures a ‘flash’ of blood when the needle enters the vein.
19. Check for plaster allergies before applying a plaster. If allergic, use a cotton ball secured with micropore tape.
20. Ask the participant to press afterwards on the bleeding point with their arm slightly raised, which helps reduce bruising.
21. Mix all tubes by gentle inversion five times except for the white and brown topped serum tubes (which do not need to be inverted).
22. Record details in CAPI.

17.9.2 Labelling the blood monovettes:

23. Label the monovette tubes with the serial ID labels as follows depending on the age group of the participant:

Tube:	Goes to:	Label:
<i>Participants aged 16+ years</i>		
1. 2.6mL EDTA (red top) 2. 4.7mL serum gel (brown top) 3. 4.5mL serum (white top) 4. 7.5mL Li Hep TM (orange top) 5. 7.5mL Li Hep TM (orange top) 6. 1.2mL Fluoride (yellow top) 7. 4.5mL Li Hep (orange top) 8. 2.6mL EDTA (red top)	Addenbrooke's Addenbrooke's Field Lab Field Lab Field Lab Field Lab Field Lab Field Lab	EN1 (3) SEN1 (5) SEN2 (6) LHN1 (7) LHN2 (8) FN1 (10) LHN3 (9) EN2 (4)
<i>Participants aged 7-15 years</i>		
1. 2.6mL EDTA (red top) 2. 7.5mL Li Hep TM (orange top) 3. 2.6mL serum gel (brown top) 4. 4.5mL serum (white top) 5. 2.7mL Li Hep (orange top) 6. 1.2mL Fluoride (yellow top)	Addenbrooke's Field Lab Addenbrooke's Field Lab Field Lab Field Lab	EN1 (3) LHN1 (7) SEN1 (5) SEN2 (6) LHN2 (8) FN1 (10)
<i>Participants aged 1.5 to 6 years</i>		
1. 2.6mL EDTA (red top) 2. 4.5mL Li Hep (orange top) 3. 1.1mL serum gel (brown top) 4. 2.7mL serum (white top)	Addenbrooke's Field Lab Addenbrooke's Field Lab	EN1 (3) LHN1 (7) SEN1 (5) SEN2 (6)

This guide is reproduced in CAPI and is also provided as a laminated colour-coded guide in each blood monovette pack.

24. Ensure that the correct labels go on the correct tube. Be sure to check that the date of birth and gender on the labels matches the participant's.

25. The tubes should be labelled as follows: line up the top of the serial ID label with the top of the label on the monovette. The clear area on the labels must be aligned with the clear area on the monovettes. This is to assist the lab in processing the sample.

It is very important that the correct labels are used for each participant. If incorrect serial numbers/labels are used there is a risk of matching the blood results to the wrong participant. The participant's GP could therefore be sent the wrong results, possibly leading to unnecessary worry or a problem not being picked up.

17.9.3 Despatching blood tubes to Addenbrooke's

26. 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 Addenbrooke's Hospital, Cambridge. **It is absolutely crucial that tubes are delivered to the correct destination.**
27. The type of blood tubes to be posted to Addenbrooke's depends on the age of the participant and is summarised in the table below.

Tube:	No of tubes:	Goes to:	Label:
<i>Participants aged 16+ years</i>			
2.6mL EDTA blood tube (red top)	1	Addenbrooke's	EN1 (3)
4.7mL serum gel blood tube (brown top)	1	Addenbrooke's	SEN1 (5)
<i>Participants aged 7-15 years</i>			
2.6mL EDTA blood tube (red top)	1	Addenbrooke's	EN1 (3)
2.6mL serum gel blood tube (brown top)	1	Addenbrooke's	SEN1 (5)
<i>Participants aged 1.5-6 years</i>			
2.6mL EDTA blood tube (red top)	1	Addenbrooke's	EN1 (3)
1.1mL serum gel blood tube (brown top)	1	Addenbrooke's	SEN1 (5)

28. The Office Consent booklet contains 3 carbonised copies of the Addenbrooke's research analysis request form (Research Analysis Request -952), **all of which must be sent with the samples posted to Addenbrooke's.**
29. You should clearly and legibly complete the following information in the **top section** of the first copy of the Addenbrooke's research analysis request form (the bottom section of the form will be completed by the laboratory):
- The participant's date of birth.
 - Whether the participant is male or female.
 - Whether the participant 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.

The Addenbrooke's research analysis request forms are carbonised, but please ensure that the information you have written has transferred through to each of the three copies.

30. You should then affix the following labels onto the three copies of the Addenbrooke's research analysis request form:

- **FIRST COPY:** Affix serial number label **Adx1 (11)** in the specified box.
- **SECOND COPY:** Affix serial number label **Adx2 (12)** in the specified box.
- **THIRD COPY:** Affix serial number label **Adx3 (13)** in the specified box.

31. Labels FOL1 (33) and FOL2 (34) are used by the Addenbrooke's laboratory staff for labelling blood sub-sample tubes. These 2 labels should be cut from the middle of the label strip, attached to the 3 carbonised copies of the Addenbrooke's research analysis request form with a paperclip and enclosed with blood samples sent to Addenbrooke's.
32. The labelled red-topped EDTA tube and the labelled brown-topped serum gel tube should be placed in the green-topped rigid tubes with absorbent lining and then placed inside the video box-style postal container.
33. Include the labelled and completed Addenbrooke's research analysis request form in the video box-style postal container and place the whole box into the pre-addressed envelope.
34. The postal pack containing the blood tubes should be posted on the way to the local laboratory. Be sure to check that the post box has a same day collection.

17.9.4 Despatching the blood samples to the field laboratory:

35. The remaining blood tubes should be taken by you to the local laboratory **within 2 hours of venepuncture**. The number of blood tubes to be taken to the local laboratory depends on the age of the participant and is summarised in the table below.

Tube:	Goes to:	Label:
<i>Participants aged 16+ years</i>		
4.5mL serum (white top)	Field Lab	SEN2 (6)
7.5mL Li Hep TM (orange top)	Field Lab	LHN1 (7)
7.5mL Li Hep TM (orange top)	Field Lab	LHN2 (8)
1.2mL Fluoride (yellow top)	Field Lab	FN1 (10)
4.5mL Li Hep (orange top)	Field Lab	LHN3 (9)
2.6mL EDTA (red top)	Field Lab	EN2 (4)
<i>Participants aged 7-15 years</i>		
7.5mL Li Hep TM (orange top)	Field Lab	LHN1 (7)
4.5mL serum (white top)	Field Lab	SEN2 (6)
2.7mL Li Hep (orange top)	Field Lab	LHN2 (8)
1.2mL Fluoride (yellow top)	Field Lab	FN1 (10)
<i>Participants aged 1.5 to 6 years</i>		
4.5mL Li Hep (orange top)	Field Lab	LHN1 (7)
2.7mL serum (white top)	Field Lab	SEN2 (6)

36. The Office Consent booklet contains three different types of field laboratory despatch note, FL2.1, FL2.2 FL2.3 for adults, 7-15 year olds and 1.5-6 year olds, respectively. One of these forms should be delivered to the local laboratory along with the samples.
37. You should label the appropriate despatch note for the age of your participant, using label FL2 (14) on the front and label Blank (32) on the back, clearly and legibly complete all parts of section A. The remainder of the form will be completed by the laboratory staff.
38. 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 participant should be put in a plastic bag and placed in the cool box so they stay upright during transportation. If two

participants (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.

39. Upon arriving at the laboratory reception, ask for your main contact and hand the blood tubes, despatch note, microtube pack and field laboratory labels (labels 15-31 on the label strip) over to them.

Please remember to fill in the time of delivery on the field laboratory despatch note before handing it over to the laboratory staff.

17.10 Cryogesic spray

All children (aged 15 years and younger) who consent to give a blood sample will be offered Cryogesic spray® (Ethyl chloride). Cryogesic is a vapo-coolant and provides targeted pain relief when sprayed onto the skin prior to venepuncture. It has no anaesthetic properties but because of the coolant effect on the skin as the ethyl chloride evaporates, it reduces the sensitivity of the skin to pain. Cryogesic® takes effect within seconds of being sprayed onto the skin. Cryogesic cannot be used on open wounds, eczematous skin, or if the participant has had an allergic reaction to Ethyl Chloride.

The effect wears off quickly as the skin warms back up and is therefore a useful alternative to the topical anaesthetic gels Ametop®, which requires application to the venepuncture site 30 minutes prior to the procedure. It is also useful for children who are allergic to Ametop® gel.

The Spray causes a white film on skin when sprayed and has a pungent, ether-like odour. The respondent will have a feeling of cold on the skin where the spray comes into contact. Some respondents feel this as a numbness rather than coldness. It should be noted that the vapo-cooling effect **lasts 30 – 45 seconds** depending on the skin type. The skin quickly re-warms and as it does so the skin often reddens red a short while.

There is a question in CAPI asking about allergy to Ethyl Chloride / Cryogesic. We recognise that most people will not have heard of Ethyl Chloride or Cryogesic, although there is no other way in which we can describe the product. As such, if a respondent answers 'Don't know' to the cryogesic/ethyl chloride allergy question, they will still be allowed to use it (if they want to), on the assumption people who are genuinely allergic / intolerant are likely to know.

17.10.1 Storing Cryogesic spray

Store upright at room temperature (19 - 25°C), away from direct flame, heat or sunlight. (Best stored in the Pilot Bag provided for NatCen Nurse work).

Discard after canister empty or if past expiry date, according to the Household Waste guidance for disposal of pressurised containers (i.e. do not pierce or burn).

17.10.2 Applying Cryogesic spray

You will be supplied with the following equipment:

- 1x100ml canister of ('in date') Cryogesic® Spray
- 2 x Gauze swabs

- Venepuncture equipment and gloves to hand as per NatCen Venepuncture and Project Blood Sampling protocols

The procedure is detailed below.

Written consent must have been gained before these steps followed.

1. Once sampling vein identified, prepare tournistrip and equipment ready for venepuncture (as the needle needs to be inserted within 30 seconds of the vapo-coolant working). Put on gloves.
2. Depending on the age of the child, enlist the parent / legal guardian to gently steady the child's arm. Hold the canister 2 – 3 inches above the area to be cooled.
3. Press the nozzle gently for a maximum of 5 seconds, to allow a fine spray to coat the skin, which on contact turns to a white film on the skin, and which feels cold to the child.
4. Using a gauze swab, immediately but gently wipe the white film from the skin surface in one swipe – in direction of shoulder to wrist, in order to visualise the vein again.
5. Check with the child that their skin feels cold and they are happy to proceed.
6. Apply tournistrip and then insert needle to take blood sample as per Venepuncture and Project Blood Sampling protocols.
7. On completion of the blood sampling activity, the use of Cryogesic® Spray must be recorded by the Nurse into the CAPI and within the appropriate consent booklet against the respondent's study number and name.

Respondents, especially very young children, may prefer to have the Cryogesic Spray applied to a gauze swab first before immediately placing the soaked swab onto the area to be cooled. This is because they may feel startled by the force and / or sound of the spray as it covers the skin. Using a gauze swab reduces this potential startle.

If the child doesn't want to use Cryogesic spray, or is allergic to it, they will then be offered the use of Ametop gel.

17.11 Ametop gel

17.11.1 Use of Ametop gel

As stated above, if the child doesn't want to use Cryogesic spray or is allergic to it, they will be offered the use of Ametop gel, a local anaesthetic. Ametop gel cannot be used on open wounds, eczematous skin, or if the participant has had an allergic reaction to any local or general anaesthetic. This means that you may not take a blood sample from these participants, 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 participant 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 at the doctor, the dentist or in hospital?

Use a new Ametop tube for each participant 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.

17.11.2 Storing Ametop gel

Ametop gel should be stored between 2-8°C (i.e. in a fridge) prior to use, to ensure the shelf life stamped on the product. The Ametop gel should not be frozen nor exposed to heat as this reduces the shelf life rapidly.

17.11.3 The pros and cons of using Ametop gel

The advantages of Ametop gel 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.

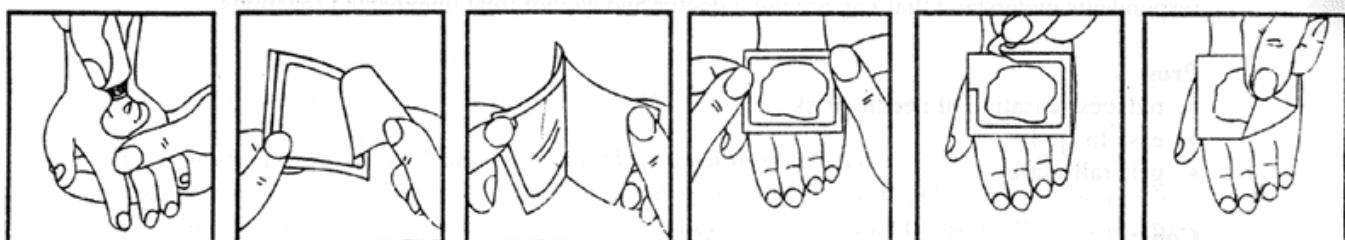
None of the local skin side-effects (if they occur) requires treatment. The reddening will disappear by itself over a period of hours. A local allergic reaction may involve itching, but is unlikely to require treatment. In the very rare instance of a blister forming, remove the Ametop gel immediately.

You will need to explain the pros and cons of using Ametop gel to each participant and parent, in addition to giving them the leaflet to read. It is important that participants understand that you are not a doctor and cannot treat unexpected reactions.

17.11.4 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 gel 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. NatCen policy is to only take blood samples from the arm.**



- | | | | | | |
|---|--|---|--|--|---|
| 1. Squeeze $\frac{3}{4}$ of a tube in a mound on the area to anaesthetised. | 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. | 6. After 30 minutes (max. 60mins), remove the dressing. Wipe off the Ametop. Clean entire area with alcohol and begin occlusive dressing. |
|---|--|---|--|--|---|
- Do not rub in.**

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 PARTICIPANT 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 PARTICIPANT BEFORE YOU ARE PROMPTED TO DO SO IN THE CAPI SCHEDULE.

17.12 Blood sampling token of appreciation

Participants of all ages will receive a £15 high street gift card as a thank you for providing a blood sample. Remember this should **not** be presented as 'payment' but as a token of appreciation. Gift cards will be sent out from the office but you will need to complete the **yellow** promissory note and leave it with the participant.

17.13 Cancellation of blood sampling appointments – what to do in CAPI

If a participant agrees to give a blood sample, but the appointment is subsequently cancelled for whatever reason (and **not** rearranged), you **must** do the following to ensure the case is signed off properly:

1. Using View/Amend, enter the CAPI program for the relevant address.
2. Using the parallel blocks, select either visit 2 or visit 3 (depending on what other visits you have already made to the household).
3. Confirm the date given by CAPI .
4. At SumV2/SumV3, enter code 1 – that you are going to 'Take blood sample only'.
5. Go through the usual blood eligibility questions, answering 'No' at each one.
6. Code 'No' at TBSWill.
7. At TRefBSC, code the relevant reason for the blood sampling appointment not taking place – e.g. if the participant says they've changed their mind because they no longer have time, code 8 'Too busy'; if the participant is under the age of 11 and it wasn't possible to arrange for a paediatric phlebotomist to take the sample, code 6 'No paediatric phlebotomist available'.
8. Circle the relevant codes on the office consent booklet, as specified at TBSSStop.
9. Press 1+enter at ThankV2/ThankV3.
10. If there is no more work to do at the address, complete the Admin block as normal and transmit back to the office.

Please note, the above instructions should be used if you have an appointment JUST to take blood. If you have an appointment to take blood AND sub-sample the participant's urine collection, you will need to use 'Live interviewing' as you will be at the participant's home. You should then follow steps 2-8 above, but enter code 3 'Collect 24 hour urine AND take blood sample' at SumV2/SumV3 (step 4). The program will then allow you to proceed with taking the participant's urine collection. If you are in any doubt about what to do when a blood taking appointment is cancelled (and **not** rearranged), please contact the office.

17.14 Other important points

Please refer to the Nurse Protocols for important information regarding:

- Venepuncture checklist
- Fainting participants
- Needle stick injuries

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 participants 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.

18 24-HOUR URINE SAMPLES

18.1 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.

Participants will receive a £10 high street gift card as a thank you for taking part in the 24 hour urine part of the study.

18.2 Eligibility criteria

All participants aged 4 years and over are eligible to provide a 24 hour urine sample, with the exception of children aged 4 and over who are not fully potty trained (i.e. those that wear nappies or training nappies during the day or at night). Also eligible are:

- 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
- Participants who refuse to take PABA (para-aminobenzoic acid) tablets but are willing to carry out the 24 hour urine collection **are** eligible
- Participants 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

18.3 Overview of 24 hour urine procedures

Participants 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 the Nurse Protocol document for further information about PABA.

During the period of collection, the participant will be asked to pass all urine into the plastic jug provided. They will then pour it into the large 5 litre 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. Participants 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.

18.4 Scheduling urine appointments

In order to minimise the number of visits, if a household contains two participants you should, as far as possible, schedule appointments for when both participants are available. If the participant 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.

You should discuss with the participant when to collect their 24 hour urine sample. It is 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 participants willing to collect on a weekday should be encouraged to do so. It is recommended that children collect on non-school days. Females should be instructed to collect urine on non-period days.

18.5 Equipment and consumables

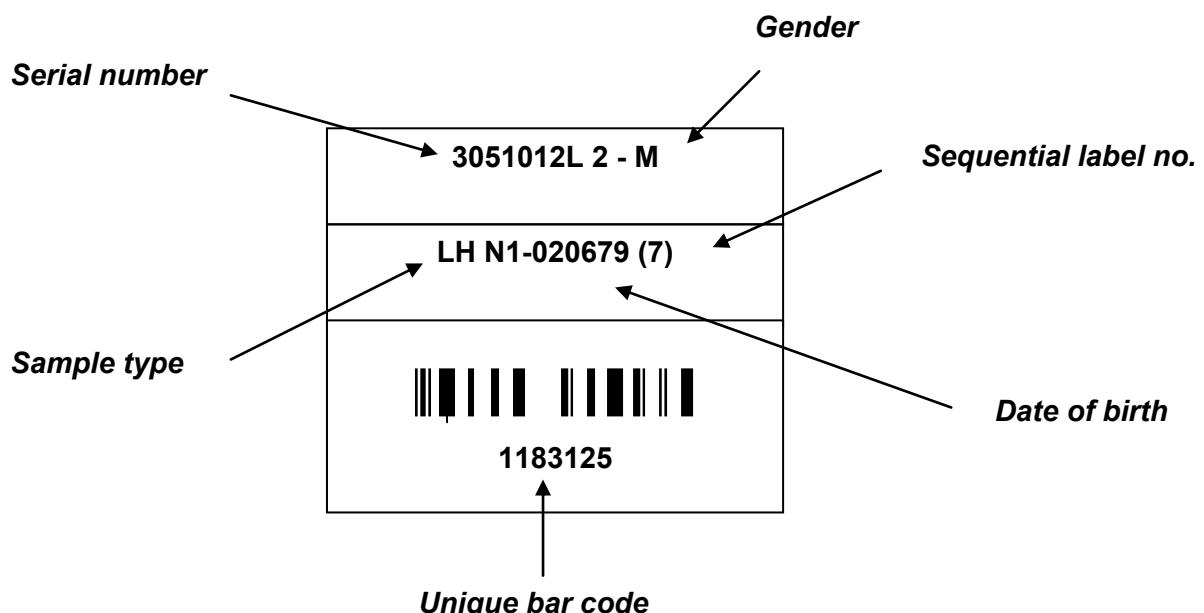
You will be provided with the following equipment for the 24 hour urine collection:

18.5.1 Labels

You will be provided with a set of labels for labelling specimen tubes and documents. You will receive a set of labels for each participant that has agreed or said they are unsure about a nurse visit. All possible labels are pre-printed for a particular participant. This means that you will receive labels that will not be used if the participant does not provide a urine sample. These can be disposed of.

On each label there will be:

- The serial number, followed by a check letter
- The participants' gender
- The sample type
- The sequential label number
- The participants' date of birth
- A unique barcode number (for HNR's use).



You will have the following labels for labelling the urine monovettes and documents:

- **UCOLL (35)** – urine collection record sheet label
- **UDESP (36)** – urine despatch note label
- **U1 (37)** – urine monovette label
- **U2 (38)** – urine monovette label
- **U3 (39)** – urine monovette label
- **U4 (40)** – urine monovette label

CAPI will guide you through which labels are to be used for each participant, and which should be affixed to which tube and document.

18.5.2 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 collection sheet

18.5.3 Sub-sampling visit:

- Urine 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)

18.6 Urine collection procedure

An outline of the 24 hour urine collection protocol and tasks carried out at each visit are listed below:

18.6.1 During the first nurse visit:

1. Assess the participant's eligibility for the 24 hour urine collection
2. Give the participant the 24 hour urine leaflet and explain procedure in detail and answer any questions they may have
3. Obtain the participant's written consent 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
4. The appropriate 24 hour urine consent form must be signed at the visit at which 24 hour urine collection is agreed
5. Agree a day for the 24 hour collection with the participant and arrange an appointment with participant to return to collect the urine sample and despatch. This should be on the same day the collection is completed or, at the latest, the day after the collection is complete

6. Label the urine collection record with label UCOLL(35) and complete the first part of form. The remainder of the form should be completed by the participant
7. Give the participant their equipment
8. If there are 2 participants, use yellow coloured sticky dots on equipment and urine record sheet for children so that there is no risk of participants mixing up their collection equipment
9. Record relevant details in CAPI

18.6.2 The 24 hour urine sample collection:

10. Participants collect all of the urine that they pass from the second urine pass of the morning until the first pass of the second morning.
11. Eligible participants will take 3 PABA tablets over the course of the 24-hour urine collection period. Please refer to Nurse Protocol Section 17.4.1 for more information about PABA.
12. Participants should record the following information on the 24-hour urine collection record sheet:
 - Date and time of start of collection
 - Date and time of end of collection
 - Date and time that each PABA tablet was taken
13. Participants should pass all urine into the 1 litre plastic jug and then pour into the 5 litre collection container using the funnel. Please warn participants that the 5 litre plastic bottle contains preservative and could cause skin or eye irritations by contact, or could cause stomach upset if swallowed. They should therefore not pass urine directly into the 5 litre container.
14. Participants should use the 2 litre container when away from the home and/or to store urine if the 5 litre bottle is filled to capacity.
15. Please instruct participants to store their collection in a cool dry place until you arrive to collect the sample.

18.6.3 During the sub-sampling visit:

16. Explain that you are there to sub-sample their 24 hour urine sample and ask to work in their bathroom.
17. Check that the participant has completed their urine collection record sheet and assist them in filling in any missing details.
18. Enter the details from the participant's urine collection record sheet in to CAPI.
19. Obtain the PABA tablet packaging from the participant so that it may be returned to the HNR along with the urine samples.
20. In the participant's bathroom, weigh the urine container using the scales provided, ensuring that the scale display reads zero before weighing. Record the weight of the container on the urine despatch note (in the Office Consent booklet). Weigh the bottle a second time and record the 2nd weight on the urine despatch note. If the first and second weights differ by more than 0.02kg, weigh the bottle a third time and record the result.

21. Check that the lid of the urine container is on tightly and mix the urine thoroughly by rotating the bottle at least 20 times. Be careful not to shake the bottle as this will cause the urine to froth and make sub-sampling difficult.
22. Pour a small amount of the urine in to the 1L jug and collect 4 samples of urine using the monovette syringes provided as follows:
 - Remove the small yellow cap from the end of the urine monovette
 - Place a yellow extension tube over the tip of the monovette
 - Place the end of the tube in to the urine
 - Slowly retract the syringe
 - Snap off the syringe
 - Replace the cap tightly
23. You should sub-sample from the 5 litre bottle of urine, as this is the bottle that contains the boric acid. If the participant has also collected urine in the 2 litre bottle, weigh both bottles separately before mixing the contents together to sub sample the urine. If 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.
24. Label the urine monovettes using labels U1 (37), U2 (38), U3 (39) and U4 (40) on the label strip. The top of the label should be placed on the tube and the label wrapped horizontally around the tube, avoiding any creases.
25. Complete the urine despatch note and label it with label UDESCP (36)
26. Place each of the monovettes in to the green-lidded rigid outer tube and replace the lid. Then place the tubes in to the video box-style postal container.
27. The postal container should be placed in to the pre-addressed envelope, along with the fully completed and labelled urine collection record sheet and urine despatch note.
28. Leave the £10 24-hour urine collection promissory note with participant.

18.6.4 Immediately after the visit:

29. Post the packaged samples, urine collection record form, urine despatch note and PABA packaging to HNR immediately. If the sub-sampling visit takes place on a Saturday, the samples should be posted on Monday morning. Store the samples in a cool dry place between the urine sub-sampling visit and postage.

18.7 Token of appreciation

Participants of all ages will receive a £10 high street gift card 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. Gift cards will be sent out from the office but you will need to complete the grey promissory note, and leave it with the participant.

18.8 Cancellation of 24 hour urine sub-sampling appointments – what to do in CAPI

If a participant agrees to provide a 24 hour urine sample, but subsequently changes their mind, for whatever reason, and does not provide the sample, you **must** do the following to ensure the case is signed off properly:

1. Using View/Amend, enter the CAPI program for the relevant address.

2. Using the parallel blocks, select either visit 2 or visit 3 (depending on what other visits you have already made to the household).
3. Confirm the date given by CAPI .
4. At SumV2/SumV3, enter code 2 – that you are going to ‘Collect 24 hour urine only’.
5. Press 1+enter at UrCInt.
6. Code ‘No’ at UrColl.
7. Press 1+enter at ThankV2/ThankV3.
8. If there is no more work to do at the address, complete the Admin block as normal and transmit back to the office.

Please note, the above instructions should be used if you have an appointment JUST to sub-sample the urine collection. If you have an appointment to sub-sample AND take blood, you will need to use ‘Live interviewing’ as you will be at the participant’s home. You should then follow steps 2-6 above, but enter code 3 ‘Collect 24 hour urine AND take blood sample’ at SumV2/SumV3 (step 4). The program will then allow you to proceed with taking the participant’s blood sample.

If you are in any doubt about what to do when a participant changes their mind about providing a 24 hour urine sample, please contact the office.

18.9 Other important points

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
- Participant procedure for collecting the sample
- Nurse procedure for collecting sub-samples

19 RETURN OF WORK

19.1 Nurse Record Form

Recording the outcome of your attempts to interview and measure

You should complete sections 2 to 5 of the Nurse Record Form (NRF) to report to the office the outcome of your attempts to interview persons in the households in your sample.

Question 1 Record all attempts to make contact with the household. Note all personal visits and telephone calls, even if there was no reply.

Question 2 Complete a column for each participant in the household (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 Participant Number and first name at the head of the column. Enter them in the order listed on the participant information sheet. 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 who refused at the interviewer stage does not change their mind when you visit. There is nothing for you to do.
- Use code 810 if you went through the whole schedule with the participant and completed all the relevant questions. This code applies even if the participant 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 participant 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 3: Complete this for each participant who refused to allow you to interview them (ie those you coded 830-840 at Question 6).

Question 4: Complete this for each participant coded 850-890 at Question 6.

Question 5: Always enter the number of consent booklets obtained. The office need to know this so they know the number to expect back.

19.2 Returning work to the office

If you are measuring both participants 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 as soon as you have completed your task there. Referral back to GPs and participants, 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 completed and serial numbered. 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 and urine samples that you have worked so hard to get, just because we don't receive the consent booklet. Your fees will cover up to **4** visits to the post office and you should claim for this by submitting a paper claims form.
- **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.

19.3 Returning documents and equipment to the office

As soon as you have finished an assignment, please return all left over documents and equipment to the office in Brentwood so that we can re-use them for other work packs. This is particularly important for blood monovettes – these are very expensive and have a use-by date so it is much better if we can re-use them for subsequent work packs, where at all possible.

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 18 months - 2 years	Rollameter baby measure mat. Infant Frankfort place card. Kitchen roll.
Blood pressure	High blood pressure risk factor for cardiovascular disease	Sending blood pressure readings to GP	Pregnant women (should have been screened out early on)	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 participant: <ul style="list-style-type: none">• is chair bound• has a colostomy / ileostomy• is pregnant (should have been screened out early on)	Aged 11 and over	Insertion tape (with metal buckle at one end if used).
Demi-span	Proxy measure of participant's height	None	Is participant is unable to straighten either arm	<ul style="list-style-type: none">• All participants 65+• Participants 16-64 if interviewer obtained valid weight but not valid height	Thin retractable demi-span tape with hook at one end. Skin marker pen.
Mid-upper arm circumference (MUAC)	Provides information on muscle mass and subcutaneous fat – key indicator of nutritional status in children	None	None	Aged 2-15	'Lasso' MUAC tape. Skin marker pen.

Fasting Blood sample	Total cholesterol HDL cholesterol Glycated haemoglobin	<ul style="list-style-type: none"> • Taking blood sample • Storing blood for future analysis • Sending clinically relevant blood results to GP • Sending clinically relevant blood results to participant • Use of Cryogesic spray or Ametop gel (if <16) 	<p>If participant:</p> <ul style="list-style-type: none"> • has a clotting or bleeding disorder • is taking anticoagulant drugs • has ever had a fit (<16) • has had a fit in the last 5 years (16+) • is not willing to give written consent • is aged 4 and over, not diabetic and not willing to fast. • is diabetic and not willing to fast 	Aged 4 and over	Blood collection materials – see section 17.5, Appendix C and Nurse Protocols Manual + CPG
Non-Fasting Blood sample	Total cholesterol HDL cholesterol Glycated haemoglobin	<ul style="list-style-type: none"> • Taking blood sample • Storing blood for future analysis • Sending clinically relevant blood results to GP • Sending clinically relevant blood results to participant • Use of Cryogesic spray or Ametop gel (if <16) 	<p>If participant:</p> <ul style="list-style-type: none"> • has a clotting or bleeding disorder • is taking anticoagulant drugs • has ever had a fit (<16) • has had a fit in the last 5 years (16+) • is not willing to give written consent 	<ul style="list-style-type: none"> • Aged 1.5-3 • Aged 4+, diabetic and not willing to fast 	Blood collection materials – see section 17.7, Appendix C and Nurse Protocols Manual + CPG

24-hour urine sample	<ul style="list-style-type: none">• Taking PABA tablets• Anaysing urine• Storing urine for future analysis	If participant: <ul style="list-style-type: none">• is not fully out of nappies (aged 4-6)• is not willing to give written consent for lab analyses.	Aged 4 and over	24hour urine collection materials – see section 19 and Appendix C.
----------------------	--	---	-----------------	--

APPENDIX B NURSE DOCUMENTS

Name of Document	Year 5 colour	Use
Sample cover sheet	White	The list of addresses in a nurses sample point.
Example nurse advance letters: Adult	DH/NatCen headed paper	Example copies of the adult version of the advance letter, in case participants have lost the letter that was sent to them.
Example nurse advance letters: Child	DH/NatCen headed paper	Example copies of the child version of the advance letter, in case participants have lost the letter that was sent to them.
Nurse Record Form (NRF)	Blue	Nurse Record Form showing the household address and for nurses to record details of visits made to an address and the outcome of the visits.
Participant information sheet	White	Information about each participant to be interviewed at an address (attached to NRF).
Broken appointment card	Pale lime green	Used for missed appointments – can write message and time of next visit.
Appointment card (for 2 nd or 3 rd visit)	Lilac	Used for noting down the date and time of the 2 nd and/or 3 rd nurse visits.
Measurement record card (MRC)	White	A card with space for you to record participant measurements. Includes a space for height and weight measurements in case participants have lost their interviewer MRC.
Incident report sheet	White	To be filled in should any serious incident occur during a nurse visit.
Laminated infant Frankfort plane card	Pale yellow	For use when taking an infant length measurement.
Stage 2 leaflet (Adult)	White	Interviewers will leave a copy of the interviewer version of the Stage 2 leaflet with participants. The nurse version of the leaflet provides more information about the nurse visit, including more detail about what measurements will be taken and option to send results to GPs.
Stage 2 leaflet (Child & young person)	White	Interviewers will leave a copy of the interviewer version of the Stage 2 leaflet with participants. The nurse version of the leaflet provides more information about the nurse visit, including more detail about what measurements will be taken and option to send results to GPs.

Name of Document	Year 5 colour	Use
'Why provide a blood sample?' leaflet	White	A leaflet specifically about the importance of giving a blood sample. Can be used for all ages but may be particularly useful for parents.
Standard NatCen venepuncture leaflet	White	A standard, NatCen leaflet in FAQ format, designed to answer questions specifically about venepuncture.
Consent booklet (participant copy)	Lilac	Before blood samples are taken and 24 hour urine is collected - nurses <u>must</u> obtain written consent in the participant copy of the consent booklet. The booklet <u>must</u> be left with the participant.
Consent booklet (office copy)	Silver grey	Before blood samples are taken and 24 hour urine is collected - nurses <u>must</u> obtain written consent in the office copy of the consent booklet. The booklet includes despatch notes for the labs and office. The booklet <u>must</u> be returned to the office in Brentwood.
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 (above).
Cryogesic spray leaflet	White	For participants under the age of 16.
Ametop gel leaflet	Salmon	For participants under the age of 16.
Bravery Certificate	White	For children who provide a blood sample.
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 participant collection sheet	Peach	Participants 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!

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.

APPENDIX C NURSE EQUIPMENT**Pilot bag****British National Formulary (BNF 61), March 2011 version****OMRON HEM-907****Blood collection materials:**

- Monovettes for blood specimen collection:
 - Bag of 8 tubes for participants aged 16+
 - Bag of 6 tubes for participants age 7-15
 - Bag of 4 tubes for participants aged 18 months-6 years
- Pulp tray for specimen tubes
- Tournistrips
- Disinfectant gel
- Alcohol swabs/cotton wool balls or gauze swabs/plasters
- Micropore tape
- Adhesive dressing
- Cryogesic spray
- Ametop gel & tegaderm dressing
- Disposable vinyl gloves
- Sarstedt multify needles: 21G with 60mm or 200mm tube length and 23G with 60mm tube length
- Sarstedt fixed needle: 21G and 22G
- Milton wipes
- Scissors
- Pen (permanent marker)
- Biohazard sharps box
- Biohazard labelled mini-grip bag
- Pre-packed empty micro tubes (to be delivered to local lab)
- Cool box
- Cold packs
- Instant cold packs
- Postal container and packing material
- Pre-printed labels for all tubes, including those to be passed on to the laboratory

24-hour collection materials:

- 3 PABA tablets
- 5 litre container (containing boric acid)
- 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
- 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 D COMPLETED DESPATCH NOTES

Nurses are only required to complete section 1 of the office despatch note. The pages that follow show examples of the information that needs to be given on:

- 1) The despatch note to Addenbrookes
- 2) The Field Despatch note
- 3) The Urine Despatch note

Example 1: The carbonised despatch note to Addenbrookes – Biochemistry request form

RESEARCH ANALYSIS REQUEST				(v4) 952																						
Nurses - fill in sections in bold only																										
Volunteer Details <p>Surname HNR (use top 9 digit number of label) Firstname P952 DOB 15/01/1968 dd/mm/yyyy Sex Male 1 circle as appropriate Female 2 Meditech COHD: SEN1 (use 7 digit number at bottom of SEN1 label) EN1 (use 7 digit number at bottom of EN1 label)</p>			Affix serial number label Adx1(11) or Adx2 (12) or Adx3 (13)	Study Details <p>Consultant JMHNR Location NDNS Title NDNS Contact Sonja Nicholson 01223 437574 Priti Mistry 01223 437616 Contact OOH Dr Jennifer Mindell 020 7679 1269</p>																						
Sample Details <p>Date 22/07/2012 dd/mm/yyyy Volunteer Fasted Yes 1 circle as appropriate Time 07:45 24hr clock No 2</p> <table border="1"> <thead> <tr> <th>Sample Tube</th> <th>Tests</th> <th>Lab order</th> <th>Lab barcode</th> <th>Lab processing</th> </tr> </thead> <tbody> <tr> <td>Serum</td> <td> Full <small>circle as appropriate</small> </td> <td>Creatinine CRP Lipid Profile TSH Free T4 Free T3</td> <td rowspan="2">CP952</td> <td>BIOCHEM BARCODE</td> </tr> <tr> <td>SEN1 brown</td> <td> Partial <small>circle as appropriate</small> </td> <td>HbA1c Red Cell Folate</td> <td>EDTA sample must be labelled with both biochem & haem barcodes</td> </tr> <tr> <td>EDTA</td> <td> Full <small>circle as appropriate</small> </td> <td>FBC</td> <td rowspan="2">HA952</td> <td rowspan="2">Pass to Endo Staff for division of EDTA - instructions below</td> </tr> <tr> <td>EN1 red</td> <td> Partial <small>circle as appropriate</small> </td> <td></td> </tr> </tbody> </table>					Sample Tube	Tests	Lab order	Lab barcode	Lab processing	Serum	Full <small>circle as appropriate</small>	Creatinine CRP Lipid Profile TSH Free T4 Free T3	CP952	BIOCHEM BARCODE	SEN1 brown	Partial <small>circle as appropriate</small>	HbA1c Red Cell Folate	EDTA sample must be labelled with both biochem & haem barcodes	EDTA	Full <small>circle as appropriate</small>	FBC	HA952	Pass to Endo Staff for division of EDTA - instructions below	EN1 red	Partial <small>circle as appropriate</small>	
Sample Tube	Tests	Lab order	Lab barcode	Lab processing																						
Serum	Full <small>circle as appropriate</small>	Creatinine CRP Lipid Profile TSH Free T4 Free T3	CP952	BIOCHEM BARCODE																						
SEN1 brown	Partial <small>circle as appropriate</small>	HbA1c Red Cell Folate		EDTA sample must be labelled with both biochem & haem barcodes																						
EDTA	Full <small>circle as appropriate</small>	FBC	HA952	Pass to Endo Staff for division of EDTA - instructions below																						
EN1 red	Partial <small>circle as appropriate</small>																									
EDTA separation Depending on sample volume split the whole blood in the following priority																										
FBC Minimum volume required is 1ml – there will be three options: <ul style="list-style-type: none"> - Volume less than 1ml (e.g. partial sample) proceed to folate aliquoting and add Meditech comment HAZINS against the haem barcode - Volume very close to 1ml send primary tube to Haem with the pink duplicate request form, add Meditech comment CCOM and free text against the biochem barcode - Volume more than ~1.7ml proceed to aliquoting whole blood for folate then primary tube to Haem with the pink duplicate request form 																										
Folate Take 2x 2ml tubes of ascorbic acid from the bottom half of the -80°C Protect freezer and defrost. Each contains 1ml ascorbic acid – check it has not expired Print patient biochem barcodes (screen 66) Label 2x defrosted 2ml ascorbic acid tubes with HNR barcode labels (FOL1 & FOL2) supplied in the delivery pack, then label with patient biochem barcodes. DO NOT COVER HNR BARCODE WITH BIOCHEM BARCODE Invert the primary EDTA tube a few times to re-suspend the contents Transfer exactly 100µl from primary EDTA tube into each tube containing 1ml ascorbic acid and invert to mix Store in the -80°C Protect freezer If there is sufficient volume proceed to aliquoting whole blood for A1c If there is insufficient volume left for A1c add a Meditech comment CCOM and free text against the biochem barcode																										
HbA1c Label 1x 2ml secondary tube with patient biochem barcode and write A1c Invert the primary EDTA tube a few times to re-suspend the contents Transfer 0.5ml from primary EDTA tube into secondary tube Place secondary tube in A1c skip in office																										
Cambridge University Hospitals NHS Foundation Trust Laboratory Projects Office 01223 216925 / 01223 257148																										

Example 2: The despatch note to Field Labs

BLOOD SAMPLE DESPATCH NOTE – FIELD LAB 1 (16+)

DESP FL 2.1

SECTION 1: NURSE complete all sections CLEARLY & LEGIBLY. Enclose with samples to Field Lab

1. Participant Details

Please affix serial
number label here

label FL2 (14)

2. Record participants sex:

Male: 1
Female: 2

3. Was the participant:

Fasted 1
Non-fasted 2

4. Date sample taken:

Day	2	2	Month	0	7	Year	2	0	1	2
-----	---	---	-------	---	---	------	---	---	---	---

24 hr clock

5. Time sample taken:

0	7	:	4	5
---	---	---	---	---

6. Time sample delivered to lab:

24 hr clock

0	9	:	1	5
---	---	---	---	---

7. Nurse Number

1	2	3	4	5	6
---	---	---	---	---	---

Example 3: Urine Despatch notes**24 HOUR URINE SAMPLE DESPATCH NOTE****DESP URINE****To be completed by the nurse****Nurse Name**

Philippa Gibson

Nurse Number

1	2	3	4	5	6
---	---	---	---	---	---

1. Participant detailsPlease affix
serial number
label herelabel UDESCP
(36)**Please complete one record for each participant.****Q1** Did the participant consent to taking PABA tablets?

Yes

No

Q2 Did the participant keep the PABA tablet packaging?

Yes Send the packaging, including any remaining tablets, to HNR in the postal pack provided

No

Q3 Did the participant consent to the storage of any remaining urine?

Yes

No

Q4 Was there any urine inside the 2L bottle?

Yes Weigh BOTH the 2L and 5L bottles separately BEFORE mixing together (if possible) to sub sample the urine. Record 5 litre weights at **Q4** and 2 litre weights at **Q5**.

No Weigh the 5L bottle only. Record weights below (**Q4**).

Q5 Type of container: **5.0L jerry can**

- Weigh the urine a **first time**, on the digital scales provided, and record the weight in **kilograms** of the 5L bottle containing the urine:

4	7	5
---	---	---

kg

- Weigh the urine a **second time** and record the weight in **kilograms** of the 5L bottle containing the urine:

4	7	9	kg
---	---	---	----

- If the first and second weights differ by more than 0.02kg weigh the urine a **third time** and record the weight in **kilograms** of the 5L bottle containing the urine:

4	7	7	kg
---	---	---	----

If no urine in 2L bottle: mix the urine and take **4 sub-samples** and discard the remaining urine and equipment as per instructions provided. **If any urine in 2L bottle: go to Q5.**

Q6. Type of container: **2.0L jerry can**

- Weigh the urine a **first time**, on the digital scales provided, and record the weight in **kilograms** of the 2L bottle containing the urine:

1	0	9	kg
---	---	---	----

- Weigh the urine a **second time** and record the weight in **kilograms** of the 2L bottle containing the urine:

1	0	8	kg
---	---	---	----

- If the first and second weights differ by more than 0.02kg weigh the urine a **third time** and record the weight in **kilograms** of the 2L bottle containing the urine:

			kg
--	--	--	----

Q7. Can all urine in the 2L bottle be transferred into the 5L bottle?

Yes Go to Q7
No Go to Q8

Q8. Weigh first, then transfer urine from 2L bottle to 5L bottle. Mix urine before sub-sampling from 5L bottle only: mix the urine and take **4 sub-samples and discard the remaining urine and equipment as per instructions provided.**

Q9. If urine collected in 2L bottle will not fit in 5L bottle, do not transfer. Note the weight of the 2L bottle above but only sub-sample from 5L bottle: mix the urine and take **4 sub-samples and discard the remaining urine and equipment as per instructions provided.**

Please use the packaging provided to send the following items to HNR:

- one copy of the participant 24-hour urine collection sheet**
- the completed urine volume and dispatch sheet**
- and the urine sub-samples**

*Please post the packet of samples as soon as possible in a post-box;
check for same day collection.*

APPENDIX E**ORGANISING AND TIMING NURSE VISITS**

There are a number of potential visits a nurse could make to a household to collect all measures as part of NDNS. These can be summarised as:

Nurse visit 1: Collect all measures except blood and urine.

Introduce blood sample.

Introduce 24 hour Urine sample.

Nurse visit 2: Collect Urine sample and/or take blood sample

Nurse visit 3: Collect urine sample and/or take blood (if not done already, for whatever reason).

There are a number of limitations about when a nurse visit 2 and 3 can be scheduled. This depends on the age of the participant, what they have agreed to and how many people there are in the household. Potential scenarios and optimum times to schedule appointments are summarised in the table below. (People living in the same household should have their visits at the same time).

Age group	Measures agreed to	Timing appointments	Considerations
Age 18mth – 3 years	Agrees blood (not eligible for urine)	◆ Appointment to be scheduled before midday, Monday – Thursday only.	◆ For these participants, nurses will need to be accompanied by a paediatric phlebotomist.
All aged 4 and over	Agrees blood only	◆ Appointment to be scheduled before 10 am, Monday - Thursday only.	◆ For those age 4-10, nurses will need to be accompanied by a paediatric phlebotomist.
Age 4 – 15	Agrees urine only	◆ Urine only to be collected on a non-school day (typically Sat/Sun).	◆ Urine ideally sub-sampled on same day as participant finishes collection (i.e. Sunday or Monday). ◆ Otherwise, sample must be collected the following day and put in a “same day collection” post.
Age 4 – 15	Agrees blood and urine	◆ Urine only to be collected on a non-school day (typically Sat/Sun). ◆ Blood taking appointments to be scheduled before 10 am, Monday - Thursday only.	◆ Participant can start urine collection on Saturday and finish on Sunday morning OR start on Sunday and finish on Monday morning. If participant starts urine collection on a Saturday: ◆ Best way to combine these visits is to schedule 1 appointment before 10am on Monday morning to complete the urine sub-sampling and take the blood sample. ◆ If this can't be done, urine should be collected ideally on the Sunday (or Monday morning at the very latest) and a blood visit arranged for another day, before 10am, Monday – Thursday. If participant starts urine collection on a Sunday: ◆ Best way to combine these visits is to schedule 1 appointment before 10am on Tuesday morning to complete the urine sub-sampling and take the blood sample. ◆ If this can't be done, urine should be collected on the Monday and a blood visit arranged for another day, before 10am, Monday – Thursday.

Age group	Measures agreed to	Timing appointments	Considerations
Aged 16 +	Agrees blood and urine	<ul style="list-style-type: none"> ◆ Urine can be collected on any day EXCEPT THURSDAY/FRIDAY ◆ (in reality collection likely to be at the weekend for most of adult / working population). ◆ Blood taking appointment to be scheduled before 10am, Monday - Thursday only. 	<ul style="list-style-type: none"> ◆ Best way to combine these visits is to schedule 1 appointment (before 10am) on the day <i>after</i> the participant has stopped collecting their urine (providing this is Monday – Thursday). Then, in one visit, you can complete the urine sub-sampling and take the blood sample. ◆ If this can't be done, urine should ideally be collected on same day as the participant finishes collection and a blood visit arranged for another day, before 10am, Monday – Thursday.
Age 16 and over	Agrees Urine only	<ul style="list-style-type: none"> ◆ Urine can be collected on any day EXCEPT THURSDAY/FRIDAY ◆ (in reality likely to be a weekend for most of adult/working population). 	<ul style="list-style-type: none"> ◆ Urine ideally collected on same day as the participant finishes their collection. ◆ Otherwise, urine must be collected the following day and put in a "same day collection" post.

APPENDIX F 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 participant's glycaemic status. High levels are indicative of diabetes.
Haemoglobin, ferritin, and transferrin receptors	Haemoglobin, ferritin, and transferrin 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.

APPENDIX G GUIDE TO LABELS

For each potential participant in your assignment, you have been provided with a set of 40 labels.

The table below shows what each label is to be used for:

Label Reference:	Sequence number (on strip):	Purpose:
NCON	1	Stick to front page of Office Consent Booklet
OFFDESP	2	Stick to Office Despatch Note (last page of Office Consent Booklet)
EN1	3	Stick to 1st EDTA tube
EN2	4	Stick to 2nd EDTA tube (age 16+ only)
SEN1	5	Stick to Serum gel tube (brown lid)
SEN2	6	Stick to Serum tube (white lid)
LHN1	7	Stick to 1st Li Hep tube
LHN2	8	Stick to 2nd Li Hep tube (age 7+ only)
LHN3	9	Stick to 3rd Li Hep tube (age 16+ only)
FN1	10	Stick to Fluoride tube (age 7+ only)
Adx1	11	Stick to Addenbrookes Research Analysis Request form (in Office Consent Booklet)
Adx2	12	Stick to Addenbrookes Research Analysis Request form (in Office Consent Booklet)
Adx3	13	Stick to Addenbrookes Research Analysis Request form (in Office Consent Booklet)
FL2	14	Stick to Field Lab Despatch Note (in Office Consent Booklet)
LHWB	15	
E1	16	
LH1	17	
LH2	18	
LHVC	19	
LH3	20	
LH4	21	
LH5	22	
LH6	23	Give to field lab
LH7	24	
LH8	25	
LH9	26	
SE1	27	
SE2	28	
SE3	29	
SE4	30	
F1	31	
Blank	32	Stick to reverse of Field Lab Despatch Note (in Office Consent Booklet)
FOL1	33	Paperclip to Addenbrookes Research Analysis Request form and send to Addenbrookes with 1st EDTA tube (EN1) and Serum gel tube (SEN1)
FOL2	34	Paperclip to Addenbrookes Research Analysis Request form and send to Addenbrookes with 1st EDTA tube (EN1) and Serum gel tube (SEN1)
UCOLL	35	Stick to Urine Despatch Note (in Office Consent Booklet)
UDESP	36	Stick to Urine Record Sheet
U1	37	Stick to 1 st urine sub sample tube
U2	38	Stick to 2 nd urine sub sample tube
U3	39	Stick to 3 rd urine sub sample tube
U4	40	Stick to 4 th urine sub sample tube



NDNS INTERVIEWER AND NURSE PROTOCOLS

SURVEY YEARS 5 AND 6

1 INFANT LENGTH MEASUREMENT

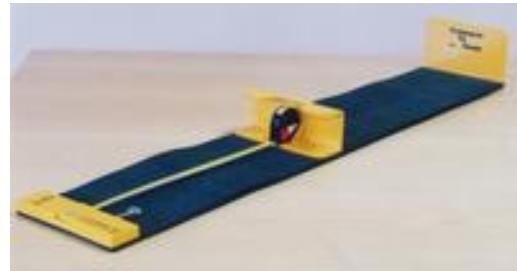
1.1 Introduction

The infant length measurement, when taken in conjunction with other growth parameters, can be used as an indicator of an infant's nutritional status. Taking this measurement across many years allows trends in infant length to be monitored and provides a means for the evaluation of current policies, interventions and treatments relating to infant health and nutrition. The measurement is taken for children aged six weeks or more and under two years.

1.2 Equipment

You will need:

- A Rollameter baby measure mat
- A Frankfort Plane card
- Milton wipes
- Kitchen roll



1.3 Preparing the participant

Explain to the parent or legal guardian of the infant the reason for taking the length measurement. Further explain that you will need their assistance in taking this measure and how they can help.

1.4 Procedure

1. Ask the parent to remove any bulky clothing or shoes that the infant is wearing as it may result in an inaccurate measurement. 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, preferably the 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 is not appropriate. If the carpet is too thick, take the measurement in another uncarpeted room, e.g. kitchen or bathroom.
3. Wipe the surface of the Rollameter with a Milton Wipe and allow to dry for 30 secs. For hygiene purposes, lay one square of kitchen roll at head end of the mat
4. The measurement can be taken with the infant on a Rollameter on a raised surface, e.g. a table, ONLY if the baby is held by an adult at all times, even if the baby has never previously rolled over.

4. Place the child on the foam bed of the Rollameter with his/her head touching the headpiece on which the name Rollameter is printed.
5. Move the child's head so that Frankfort Plane is in a position at right angles to the floor/table. 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 Figure 1). This position is important if an accurate reading is to be obtained. Ask the parent to hold the child in this position and make sure their head is in contact with the headpiece.

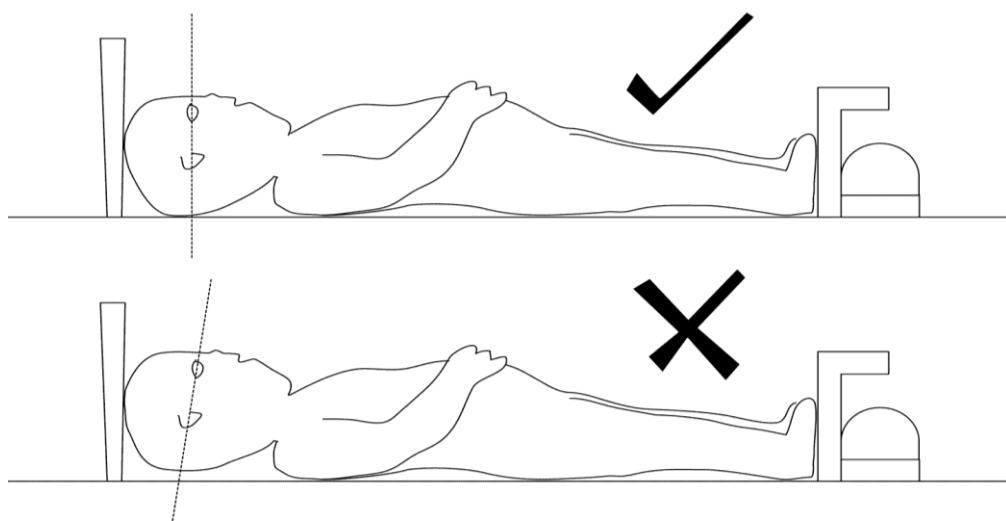


Figure 1 The infant Frankfort Plane

6. Straighten the child's legs by holding the legs by the ankles with one hand and applying a gentle downward pressure.
7. 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.
8. 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** (see section 2.4)
9. Wipe Rollamat with Milton wipe before placing back into carry pot.

2 HEIGHT MEASUREMENT INCLUDING SITTING HEIGHT

2.1 Introduction

The height measurement is a measure of anthropometry, which provides information on the size and proportions of the human body. When taken in conjunction with other anthropometric measures it is an indicator of, and can predict, the nutritional status, performance, health and survival of a population and can thus be used to determine public health policies. Moreover, height is often used as an indicator of people's quality of life. This is based on evidence that final height is a combination of genetic and environmental factors, where a taller population is indicative of a better quality of life due to access to health services and nutrition.

2.2 Exclusion criteria

Participants are excluded from the height measurement if:

- They are pregnant
- They are too stooped to obtain a reliable measurement
- After a discussion with the participant it becomes clear that they are too unsteady on their feet
- They are chairbound
- If the participant finds it painful to stand or sit up straight

2.3 Equipment

You will need:

- A portable stadiometer (see figure 2 below) (base plate, upright rods, head plate and stabilisers)
- A Frankfort Plane card.
- Milton wipes



Figure 2 The stadiometer

2.3.1 Caring for the stadiometer

The stadiometer will be sent to you in a 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. You may also request a wheeled holdall from the Equipment Supervisor at Brentwood to transport the stadiometer and weighing scales.

The rods

There are four plastic connecting rods marked with a measuring scale divided into centimetres and then further subdivided into millimetres. They should be put together in the correct order with the same coloured markings running along each side. The rods are made of plastic and are susceptible to bending if any pressure is put on them. Be 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 to damage the corners of the base plate as this could lead to a loss of accuracy in the measurements.

Protruding from the base plate is a socket into which you attach the rods in order to assemble the stadiometer. Damage to the corners of this socket 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

The head plate is made up of the blade and the cuff. The blade is the part that rests on the participant'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 head plate up or down the rods, this will prevent any unnecessary pressure being applied to the blade which may cause it to break.



2.3.2 Assembling the stadiometer

Practise assembling your stadiometer before you visit a participant's home.

You will receive your stadiometer with the four rods stored into the base plate and the head plate attached to the base plate so that the blade lies flat against the base plate. Once working you should store the head plate in the jiffy bag given to you to protect it further – as this is the component likely to break first with use.

Note that the rods are numbered/have symbols to guide you through the stages of assembly. (There is also an asset number identified on the base plate, this is the serial number of the stadiometer which is logged out to you). The stages of assembly are as follows:

1. Lie the base plate flat on the floor area where you are to conduct the measurements. It should be as flat as possible, ideally on an uncarpeted floor or with a thin carpet; you should avoid a deep pile carpet or rug if at all possible.
2. Take the rod marked with the arrows showing it's position into the base plate. Making sure the measuring scale is on the right hand side of the rod as you look at the stadiometer face on, place rod into the base plate socket. It should fit snugly without you having to use force.
3. Place one of the two stabilisers over the first, ensuring that the stabiliser faces the wall / door frame or other upright surface being used to measure against. The stabilisers ensure that the rod is as perpendicular as possible to enable accurate measurement.
4. Take the rod marked *. Again make sure that the measuring scale connects with the scale on first rod and that the symbols match at each rod connection / junction. (If they do not, check that you have the correct rod).
5. Take the remaining two rods and put them together in order (matching the connecting symbols). Place the second stabiliser on the 3rd rod, but not at the level that the participant height might be measured at.
6. Wipe the head plate and base plate with a Milton wipe and allow to dry for 30 secs.

2.3.3 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.
3. Wipe the head plate and base plate with a Milton wipe and allow to dry for 30 secs. Before packing rods back into the base plate and head plate into the jiffy bag.

2.4 Procedure for adults

1. Ask the participant to remove their shoes and loosen any hair accessory if possible (e.g. large hair grips; head bangs, pony tail holders etc).

2. Assemble the stadiometer, near a wall if possible, and raise the headplate to allow sufficient room for the participant to stand underneath it. Double check that you have assembled the stadiometer correctly.
3. Ask the participant to stand with their feet flat on the centre of the base plate, feet together and heels against the back of the base plate as this helps people to 'be at their highest'. The participant'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 participant'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 Figure 3). 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.

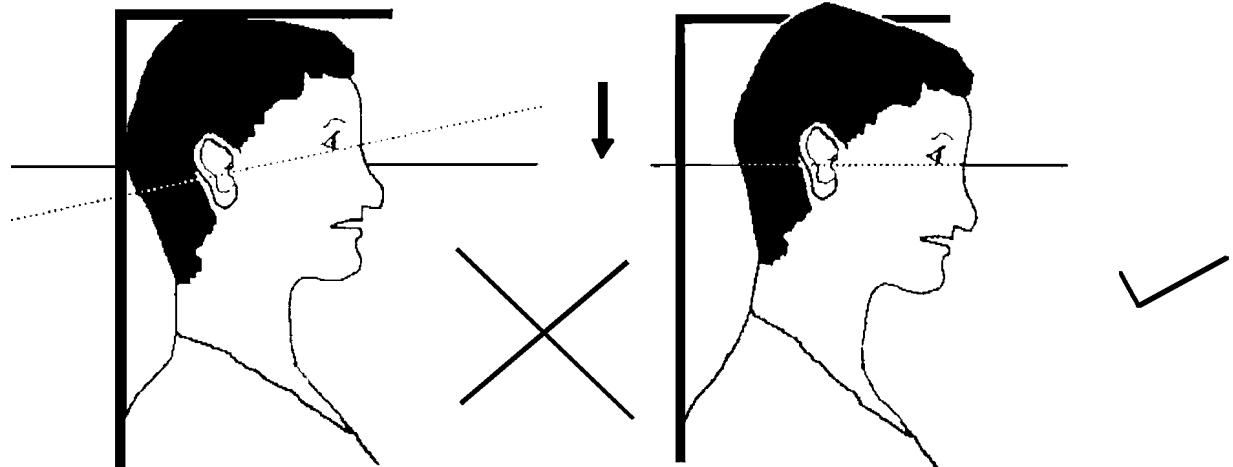


Figure 3 The Frankfort Plane

5. Instruct the participant to keep their eyes focused on a point straight ahead, and without moving their head position, to breathe in deeply and stretch to their fullest height. Bring the head plate gently down onto the participant's head. If after stretching up the participant's head is no longer horizontal, repeat the procedure. It can be difficult to determine whether the stadiometer head plate is resting on the participant's head. If so, ask the participant to tell you when s/he feels it touching their head.
6. Once the head plate is in place tell the participant to relax and ask them to step forwards away from the Stadiometer. If the measurement has been done correctly the participant will be able to step off the stadiometer without ducking their head. Make sure that the head plate does not move when the participant does this.

7. Look at the middle of the head plate cuff. There is a red or black arrowhead pointing to the measuring scale. Take the reading from this point and record the participant's height in centimetres and millimetres. If a measurement falls between two millimetres, it should be recorded to the **nearest even millimetre** (see section 2.4).



8. If the participant wishes, record their height onto the measurement record card.
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. Once you have finished measuring everyone, lower the head plate to its lowest position, ready for dismantling.

2.5 Procedure for children

The procedure for measuring children aged 2-15 differs slightly from 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, as children are 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.

1. Explain to the parent and child what you will be doing, and ensure that both are happy with the procedure.
2. In addition to removing their shoes, children should remove their socks as well to ensure that they do not slip on the base of the stadiometer, and so that you can easily check their feet are flat on the base plate, not on tiptoes.
3. Assemble the stadiometer and raise the head plate to allow sufficient room for the child to stand underneath it.
4. Ask the child to 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.
5. Place the measuring arm just above the child's head.
6. Move the child's head so that the Frankfort Plane is in a horizontal position (see Figure 3). 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. 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 tiptoes. Ask them to look straight ahead.

7. 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 Figure 4).

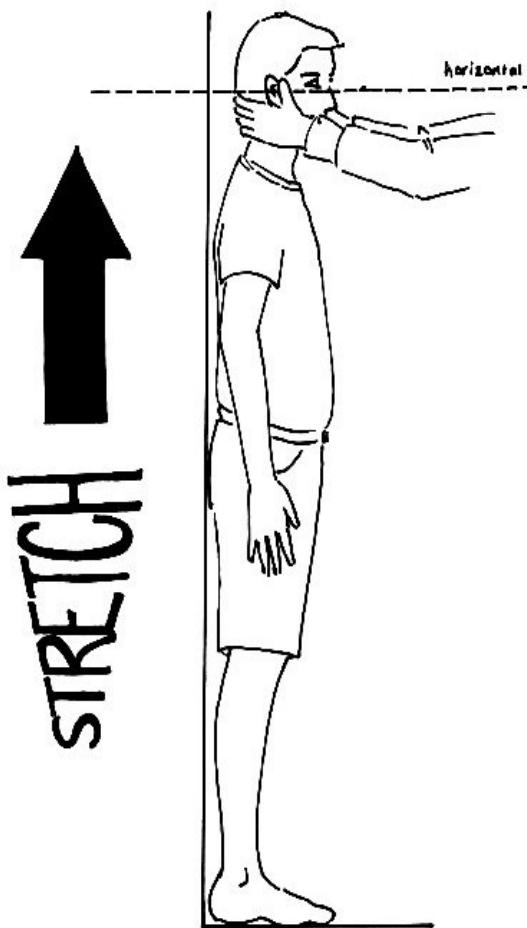


Figure 4 The child stretch

8. Ask the child to breathe in. Firmly but gently, apply upward pressure lifting the child's head upward towards the stadiometer head plate 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.
9. Ask the household member who is helping you to lower the head plate down gently onto the child's head. Make sure that the plate touches the skull and that it is not pressing down too hard.
10. Still holding the child's head, relieve traction and allow the child to stand relaxed and breathe out. 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.

11. Read the height value in metric units to the **nearest even millimetre** (see section 2.4) and enter the reading into CAPI.
12. If the participant wishes, record the reading on the child's measurement record card.
13. Push the head plate high enough to avoid any member of the household hitting their head against it when getting ready to be measured.

2.6 Additional points

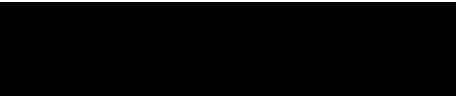
- Some surveys require the participant to be measured more than once, this will be stated in the project specific instructions. The protocol for taking the additional height measurements remains the same. Both measurements are to be recorded in CAPI and if they differ significantly CAPI will instruct you to take a third measurement.
- If the participant 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.
- If the participant has a hair style which stands well above the top of their head, or is wearing a religious head dress, with their permission, bring the head plate down until it touches the hair/head dress. You should never ask someone to remove a religious head dress. With some hairstyles you can compress the hair to touch the head. If you cannot lower the head plate to touch the head and think that this will lead to an unreliable measure, record this on CAPI. If it is a possible that can be altered e.g. a bun, if possible ask the participant to change/undo it.
- If the participant 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.
- You may need to tip the stadiometer to read the height of tall participants.
- If the participant has long hair then they may need to tuck it behind their ear in order for the head to be positioned properly. Always ask the participant to tuck their hair behind their ears.

2.7 Sitting height

Sitting height may also be measured, as well as standing height, to get an idea of body proportions, i.e. the length of the legs relative to the body trunk. Although both trunk and leg length reflect conditions in childhood as well as genetic factors, the length of the leg is thought to be a better indication of early life conditions (nutrition) affecting growth.

2.7.1 Procedure

1. Remove the top 1 or 2 sections of the measuring rod.
2. Find a hard chair with as flat a seat as possible. Place the base of the stadiometer on the chair with the measuring rod at the back.

- 
3. Ask the participant to sit on the base plate with his/her back to the rod. Instruct the participant to sit as far back and as upright and straight as possible, while ensuring that they do not lean on the rods of the stadiometer.
 4. Position the head in the Frankfort Plane (see Figure 3). Bring the head plate down until it gently rests on the highest part of the participant's head.
 5. Take the height reading indicated by the arrowhead. Read the height value in metric units to the **nearest even millimetre** (see section 2.4) and enter the reading into CAPI.
 6. If the participant wishes, record the reading on their measurement record card.

For the sitting height measurement, if there isn't a suitable chair it might be possible to use stairs (if the stair tread is deep enough).

As a last resort, measure sitting height with the participant sitting on the floor. In this situation you would place the base of the stadiometer on the floor with the rod against a wall. Ask the participant to sit on the base plate with their back against the rod and their legs as straight as possible lying in front of them. Take care that the participant is sitting upright. Continue as described in 4.7.1. Only use this as a last resort and if both you and the participant are comfortable with this.

3 WEIGHT MEASUREMENT

3.1 Introduction

Similar to the height measurement, the weight measurement is an indicator of and can predict the nutritional status and health of a population. When used in conjunction with the height measurement it can be used to derive the Body Mass Index, a statistical measure used to determine if an individual's weight falls within a healthy range.

3.2 Exclusion criteria

Participants are excluded from this measurement if they are:

- Pregnant
If the woman wishes to be weighed, you can but do not enter the results into the computer.
- Too frail or unable to stand upright
If you are concerned that being on the scales may cause them to be too unsteady on their feet then do not weigh them. Alternatively you can place the scales next to something that they can steady themselves on.
- Over 130kg (20 ½ stone) in weight as the maximum weight registering accurately on the scales is 130kg. **NB** the SECA 877 scales can measure accurately to 200kg (31 ½ stone) in weight. However, If you think that the Participant exceed the limit for the scales you are using, then code it appropriately in CAPI and follow the prompts. Do not attempt to weigh them.

3.3 Equipment

There are different sets of scales in circulation on NatCen projects. Depending on the project requirements you will be provided with either:

- **Tanita THD-305 scales**

The weight is displayed in a window on the scales. The scales are switched on by pressing the button on the bottom right hand corner of the scales. They are battery operated and require four 1.5v AA batteries, which should be sent with the scales. They may be packed separately or one of the batteries may be turned around, to prevent the batteries from going flat, as there is no on/off switch. Ensure that you have spare batteries, just in case you need them.



- **Seca 877 scales**

The weight is displayed in a window on the scales. The scales are 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 a fixed battery which cannot be removed.



- **Tanita BF522 weight and body fat scales**

The weight is displayed in a window on a connected hand held unit. The scales are switched on by pressing either of the buttons on the hand held unit – either the yellow button (for body fat and weight measuring) or the red button for weight only mode. They are battery operated and require four 1.5v AA batteries, which should be sent with the scales. They may be packed separately or one of the batteries may be turned around, to prevent the batteries from going flat. The Unit also has a battery saving mechanism and turns itself off after approx 10 - 15 seconds after use. Ensure that you have spare batteries, just in case you need them.

Please see Protocol 5A for specific instructions on using this type.



Please check which scales you have been provided with and make sure that you are familiar with how they operate.

You will also need a pack of Milton antibacterial wipes.

3.3.1 Calibrating the scales

The scales will need to be sent to Brentwood at regular intervals to be recalibrated to ensure that they provide accurate measurements. **On each set of scales there is a label with a date that they need to be recalibrated by, ensure that they have been sent to Brentwood by this date.**

3.3.2 Technical faults

Please refer to Table 1 overleaf when experiencing technical difficulties with the scales.

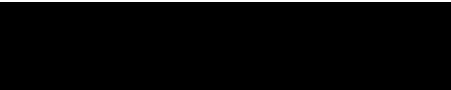
Table 1 Troubleshooting for the scales

Fault	Action
Tanita THD 305 scales	
No row of 8s when turned on or will not turn on	<ul style="list-style-type: none"> • Replace batteries • If not solved, report to Manager/Brentwood
Inconsistent readings	<ul style="list-style-type: none"> • Make sure on hard flooring • Ensure 0.0 on display when Participant steps on scales • Replace batteries • If not solved, report to manager/Brentwood
Seca 870 scales	
No '1888' when turned on or will not turn on	<ul style="list-style-type: none"> • Insufficient light to operate solar cell • If not solved, report to manager/Brentwood
Inconsistent readings	<ul style="list-style-type: none"> • Make sure on hard flooring • Ensure 0.0 on display when Participant steps on scales • Insufficient light to operate solar cell • If not solved, report to manager / Brentwood
Tanita BF522 scales	
No '0.0kg' when turned on or will not turn on	<ul style="list-style-type: none"> • Replace batteries • If not solved, report to Manager/Brentwood
Inconsistent readings	<ul style="list-style-type: none"> • Make sure on hard flooring • Ensure 0.0 on display when Participant steps on scales • Replace batteries • If not solved, report to manager / Brentwood
A line of '-----' when measuring body fat	<ul style="list-style-type: none"> • Bioimpedance mechanism not working – ensure: <ul style="list-style-type: none"> • Participant in bare feet • Participant's feet are in contact with heel and toes silver pads on both feet • Participant may need to wipe feet if they have recently applied cream or oil to the soles of their feet • If not solved, report to manager / Brentwood

3.4 Procedure for adults

NB – see Protocol 5A for weight with body fat measurement procedure

1. Weigh the Participant on a hard and even surface if possible. Carpets may affect measurements.
2. Ask the Participant to remove shoes, heavy outer garments such as jackets and cardigans, heavy jewellery, and to empty their pockets of all items.

- 
3. Switch on the scales and wait for 888.8 (for the Tanita scales) or 1888 (for the Seca scales) to be momentarily displayed in the window. Do not attempt to weigh anyone at this point.
 4. When the display reads 0.0, ask the Participant to stand with their feet together in the centre and their heels against the back edge of the scales. Their arms should be hanging loosely at their sides and their head should be facing forward. Having the Participant stand in this position means that the most accurate weight measurement can be obtained. Ensure that they keep looking ahead – it may be tempting for the Participant 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.
 5. The scales will need to stabilise. The weight reading will flash on and off when it has stabilised. If the Participant moves excessively while the scales are stabilising you may get a false reading. If you think this is the case reweigh the Participant.
 6. The scales are calibrated in kilograms and 100 gram units (0.1 kg). Record the reading in CAPI before the Participant steps off the scales.
 7. If the Participant wishes, record the reading on their measurement record card.
 8. The scales should switch off automatically a few seconds after the Participant steps off them.
 9. Before packing the scales away ensure the footplate is wiped again to reduce potential cross infection between households.

3.5 Procedure for children

1. 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.
2. Children who wear nappies should be dry. 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.
3. Weigh the child, following the same procedure for adults. Encourage the child to ‘Be as still as a statue’ for an accurate reading. If you think that the results are inaccurate, code this in CAPI.

For very young children who are unable to stand unaided or small children who find this difficult follow the procedure below you will need to ask for the assistance of an adult as the following procedure requires you to measure the adult and then the adult holding the child:

1. Explain to the adult what you are going to do and the reasons why.
2. Code in CAPI the procedure used to measure the weight of the child.



3. Weigh the adult as normal following the protocol as set out above. Enter this weight into CAPI.
4. Weigh the adult and child together and enter this into CAPI. CAPI will calculate the difference between the two weights to get the child's weight.
5. If the Participant wishes record this reading on their measurement record card.
6. Before packing the scales away ensure the footplate is wiped again to reduce potential cross infection between households.

4 WAIST AND HIP CIRCUMFERENCES

4.1 Introduction

There has been increasing interest in the distribution of body fat as an important indicator of increased risk of cardiovascular disease. The waist and hip circumferences are measures of the distribution of body fat (both subcutaneous and intra-abdominal). Analyses suggest that waist circumference and waist-hip ratio are predictors of health risk like the body mass index (weight relative to height).

4.2 Exclusion criteria

Participants are excluded from the waist and hip circumference measurement if they:

- Are pregnant
- Are chairbound
- Have a colostomy / ileostomy

4.3 Equipment

You will need:

- An 'Easy Check Circumference Measurement' tape calibrated in millimetres
- Milton wipes

4.3.1 *Using the Circumference Measurement tape*

The tape is passed around the circumference and click the press button in place at the back of the plastic slider (**See Protocol 8A**). To check the tape is horizontal you have to position the tape on the right flank and look 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 Participant. When taking the reading, be sure not to lift the tape, hold it flat against the body otherwise you will get an inaccurate measurement.

4.4 Preparing the Participant

The Participant needs to be wearing light clothing. Explain to the Participant the importance of this measurement and that clothing can substantially affect the reading. If possible the Participant needs to remove:

- 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/underwear
- Belts

Pockets should be emptied and if possible ask the Participant to empty their bladder before taking the measurement. If a urine sample is to be collected, this would be a good time to ask the Participant to provide it.

Explain to the Participant that the waist and hip measurements taken on NatCen surveys are taken at different points to where the Participant might think their waist and hips are. Therefore measurements may differ to those taken for clothing purposes.

Some Participants may be wearing religious or other symbols which they cannot remove and which may affect the measurement. Do not embarrass or offend the Participant by asking them to remove such items. Record in CAPI if the measurement is likely to be affected by this.

4.5 Procedure

Steps 1-3 apply to both waist measurement (section 8.5.1) and hip measurement (section 8.5.2).

1. Ensure that the Participant 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. This position will provide the most accurate measurement of both the waist and the hip, and will allow for them to be measured easily.
2. If possible, kneel or sit on a chair to the side of the Participant.
3. With assistance from the Participant pass the tape around the Participant's body, or if they are able to, get them to pass the tape around themselves and check that it is not twisted. Click the press button in place at the back of the plastic slider.

4.5.1 Measuring waist circumference

4. The Participant's waist is located midway between the iliac crest and the costal margin (lower rib). To locate the levels of the costal margin and the iliac crest, ask the Participant if you can touch them, and use the fingers of your right hand held straight and pointing in front of the participant to slide upward over the iliac crest.
5. Position the tape at the Participant's waist, ensuring that it is horizontal.
6. Ask the Participant to breathe out gently and to look straight ahead. This is to prevent the Participant from contracting their muscles or holding their breath.
7. Take the measurement at the end of a normal expiration by holding the slider flat against the body and read the measurement from the red line.
8. Record the measurement in CAPI in centimetres and millimetres. Always record to a one decimal place. If the result falls between two millimetres, record to the **nearest even millimetre** (see section 2.4).
9. Repeat steps 1-8 to record a second measurement. If the second reading differs significantly from the first, CAPI will report an error message. At this point check that you have entered the results into CAPI correctly. Otherwise take a third

measurement, following the procedure above. Enter this result into CAPI, the computer will know which two results to use.

4.5.2 Measuring hip circumference

9. The Participant's hip circumference is the widest circumference over the buttocks and below the iliac crest.
10. Position the tape in this area ensuring that the Participant is looking straight ahead and not contracting their gluteal muscles. Ensure the tape is horizontal.
11. Measure the circumference at several positions over the Participant's buttocks, by holding the slider flat against the body and read the measurement from the red line.
12. Record the widest circumference in CAPI. Always record to one decimal place. Report in centimetres and millimetres. If the result falls between two millimetres, record to the **nearest even millimetre** (see section 2.4).
13. Repeat steps 1-3 and 9-12 to record a second measurement. If the second reading differs substantially from the first, CAPI will report an error message. At this point check that you have entered the results into CAPI correctly. Otherwise take a third measurement, following the procedure above. Enter this result into CAPI, the computer will know which two results to use.
14. If the Participant wishes, record the waist and hip measurement on their measurement record card.

4.6 Additional points

- If you have problems palpating the rib, ask the Participant to breathe in very deeply. Locate the rib and as the Participant breathes out, follow the rib as it moves down with your finger.
- The tape should be tight enough so that it doesn't slip but not tight enough to indent clothing.
- If the Participant is large, ask him/her to pass the tape around rather than 'hug' them. Remember to check that the tape is correctly placed to take the measurement and horizontal all the way around.
- Some Participants will be wearing clothing where the waistband of the trousers/skirt sits on the waist. Do not attempt to move the clothing or take the measurement at a different position. Measure the waist circumference over the waistband and make a note of this in CAPI. If the waistband is not horizontal all the way around the body i.e. it may be lower at the front, always ensure that the tape is horizontal which may mean that it passes over the waist band in some places and not in others. If there are belt loops, thread the tape through the loops so that they don't add to the measurement.
- 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

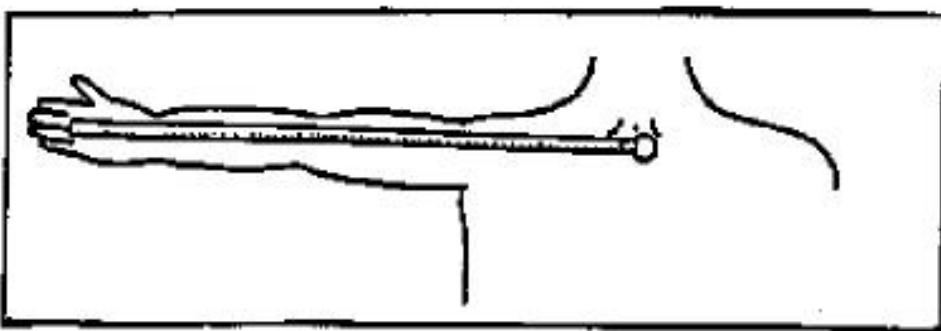
[REDACTED]
record a problem if you feel it affected the measurements by more than 0.5cm.
We particularly want to know if waist and hip are affected differently.

- Before packing the tape away ensure the length of tape is wiped to reduce potential cross infection between households.

5 DEMISPAN PROTOCOL (FOR 65+ OR 16-64 WHERE THE INTERVIEWER COLLECTED A VALID WEIGHT MEASUREMENT BUT WAS NOT ABLE TO COLLECT A VALID HEIGHT MEASUREMENT)

5.1 Purpose

The demispan measurement is an alternative measure of height. It is the distance between the midline of the sternal notch and the base of the fingers between the middle and ring fingers, with the arm out-stretched laterally (see Figure below).



The demispan measurement is taken when it is difficult to measure height accurately. For example if the respondent cannot stand straight or is unsteady on their feet as is quite often in the case of the elderly and some disabled people. It is used as a proxy for a height measurement as there is a relationship between demispan and 'true height'. Additionally, height decreases with age to a varying degree depending on individuals, and thus the standard measure of height may be less useful for some older respondents. The long bones in the arm do not get shorter however, and thus can be used to estimate accurately a respondent's 'true height'.

5.2 Eligibility

Demispan measurements will be carried out on respondents **aged 65 and over**. Demispan measurements will be carried out on those aged 16-64 where the interviewer collected a valid weight measurement but was not able to collect a valid height measurement.

5.3 Exclusion criteria

Respondents are excluded from the demispan measurement if:

- They cannot straighten either arm without pain or discomfort.

5.4 Equipment

You will need:

- A thin retractable demispan tape calibrated in cm and mm

- A skin marker pencil
- Micropore tape
- Alcohol and non-alcohol swab

5.4.1 Using the demispan tape

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. 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 placing the tape against the sternal notch, do not press into the sternal notch so much that the tape kinks.

5.5 Preparing the respondent

Explain to the respondent the purpose of conducting the demispan measurement and explain the procedure. Further explain that the measurement requires minimal undressing because certain items may affect the accuracy of the measurement. The items of clothing

that will need to be removed 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, record that the measurement was not reliable in CAPI.

For the purpose of consistency, where possible the **right arm** should always be used. If this is not possible, carry out the measure on the left arm and make a note of this in CAPI.

5.6 Procedure

1. Locate a wall where there is room for the respondent to stretch his/her arm. They need to stand with their back to the wall but not support themselves on it, standing approximately 3 inches (7cm) from the wall.
2. Ask the respondent to stand with weight evenly distributed on both feet, head facing forward.
3. Have them raise their **right arm** and extend it horizontally to their side until it is parallel with the floor. 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 in the correct position, mark the skin at the centre of the sternal notch using the skin marker pencil. This mark must be made when the respondent is standing in the correct position. Explain to the respondent that the mark will wash off afterwards.
5. If clothing, jewellery or subcutaneous fat obscures the sternal notch, use a piece of micropore tape on the clothing or jewellery. If the respondent refuses to the use of

the marker pen or the tape, proceed with the measurement but record it as unreliable in CAPI.

6. Ask the respondent to relax while you get the demispan tape.
7. Place the hook between the middle and ring fingers of the respondent so that the tape runs smoothly across the arm.
8. Ask the respondent to get into the position they were in previously, with their arm raised horizontally, the wrist in neutral flexion and rotation. Check they are in the correct position.
9. Extend the tape to the sternal notch. If no mark was made, feel for the correct position and extend the tape to this point.
10. Ask the respondent to stretch his/her arm checking that they remain in the same position, the hook has not moved on their fingers and that the respondent is not leaning on the wall or bending at the waist.
11. Record the measurement in CAPI, in centimetres and millimetres. Always report to one decimal place. If the length lies halfway between 2 millimetres, then round to the **nearest even millimetre** (see section 2.4).
12. Ask the respondent to relax and loosen up the right arm by shaking it gently.
13. Repeat steps 2-11. Explain to the respondent that the measure needs to be taken again for accuracy. If the second measure is significantly different to the first, CAPI will give you an error message. At this point you can check to make sure that you have entered the readings correctly or take a third measure if there is another reason for the measurements being different. This is to be taken in the same way as the previous two. CAPI will work out which two of the three readings to use.
14. If the respondent wishes, record the results on their measurement record card. You can use the conversion chart on your showcards to convert the results into inches.
15. If the skin marker is used, offer the alcohol or non alcohol wipe to the respondent to wipe the skin mark off.

5.7 Additional points

- 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. If a respondent is unable to sit or stand, the measurement can be taken when the respondent is lying down. In both cases still try to support the arm if possible. You may need to sit or kneel to take the reading.
- Record in CAPI how the measurement was taken (i.e.. with respondent standing, sitting, etc).
- If there is no wall available for the respondent to stand in front of and extend their arm horizontally, have them stand in front of any other flat surface e.g. in front of a cupboard or window, ensuring that they are not supporting their body weight on this surface.
- 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 is, 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.
- Before packing the tape away ensure the hand hook and length of tape is wiped to reduce potential cross infection between households.

6 MID UPPER ARM CIRCUMFERENCE

6.1 Introduction

Mid upper arm circumference is an anthropometric measure providing information on muscle mass and subcutaneous fat. Changes in arm circumference are relatively easy to detect and as such the mid upper arm circumference is a key indicator of the nutritional status of children and adults. The measure is reduced substantially in the undernourished and substantially increased in people who are overweight. Like other anthropometric measures it can be used as a tool to examine the effectiveness of public health policies, particularly with regards to child nourishment.

6.2 Equipment

You will need:

- A 'Lasso-o' MUAC tape measure
One end of the tape is broad and on it you will see the words 'READ HERE' with a small arrow. This is the start of the tape.
- A skin marker pen
- An Alcohol and non alcohol swab
- Milton wipes

6.3 Preparing the respondent

The respondent must have a bare arm and shoulder for this measurement. When the nurse appointment is made (by either the nurse or the interviewer), if a child is to be measured, the child will be asked to wear a sleeveless garment for the visit. Make sure that you explain to the respondent (and their parent if appropriate) the importance of accuracy when taking the measure and that clothing can result in an inaccurate result. If the child is wearing a sleeved garment, ask them to slip their arm out of the garment or to change into something more suitable.

If the respondent is a child, ensure that the parent is with you at all times whilst the measurement is being taken as you are asking them to expose their bare arm.

The **non dominant** arm is to be used to measure mid upper arm circumference. If the respondent is not displaying arm dominance e.g. in the case of small children, the right arm should be used and a note of this to be made in CAPI. Additionally if, for any reason, the non dominant arm cannot be measured, use the alternative arm and record this in CAPI.

6.4 Procedure

1. Ask the respondent if they are left or right handed and explain that the non dominant arm is going to be measured as it provides a more accurate indication of nutrition.

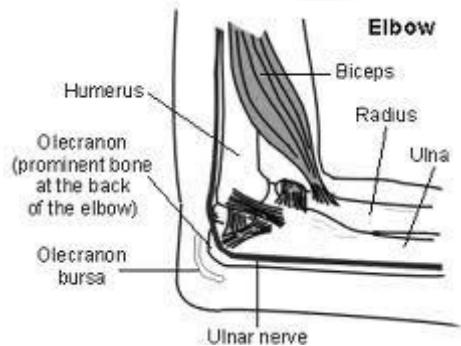
6.4.1 Measuring the length of the upper arm

2. The respondent should be standing with the arm to be measured across their body and held at a right angle at the elbow.

3. Using the skin marker pen, mark the process of the **Acromium**; this is the tip of the shoulder.



4. Mark the process of the **Olecranon** of the respondent; this is the tip of the elbow.



5. Using the tape, measure the distance between the two points marked. Divide this measurement in half. This is the mid point of the upper arm.

6. Mark this using the fine point of the skin marker pen.

6.4.2 Measuring the arm circumference

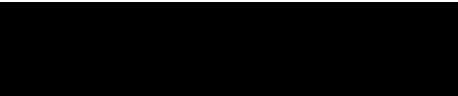
7. Let the non dominant arm hang loosely by the side, just away from the body. Thread the tape through and slip it up the respondents arm, to the mid point that you have marked. The tape should lie on top of the mark, covering it.

8. Check that the tape is passing **horizontally** around 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.

9. Read off the measurement where the 'READ HERE' arrow appears on the tape.



10. Enter the measurement into CAPI in centimetres and millimetres. Always report to one decimal place. If the arrow falls between two millimetres always give to the **nearest even millimetre**

- 
11. Repeat steps 2-10 to obtain a second measurement. DO NOT use the same markings as you did in the first measurement, remark them. Explain to the respondent that the second measurement is required for accuracy.
 12. If there is a significant difference between the two readings, CAPI will report an error message. At this point you should check to ensure that you have entered the results correctly or take a third measurement according to the procedure above. Enter this result into CAPI and it will work out which two readings to use.
 13. If the respondent wishes, record the results on their measurement record card. You can use the conversion charts to report the measurements in inches.
 14. If the skin marker is used, offer the alcohol or non alcohol wipe to the respondent, or respondent's parent (if a young child), to wipe the skin mark off.
 15. Before packing the tape away ensure the length of tape is wiped to reduce potential cross infection between households.

7 BLOOD PRESSURE

7.1 Introduction

Blood pressure is the exertion that the blood applies to the arterial walls as it is pumped through the circulatory system by the heart. Having a high blood pressure is a contributory risk factor for cardiovascular disease and stroke. The exact cause of high blood pressure is not completely known; however some factors known to affect blood pressure are smoking, family history, physical fitness and diet. It is important that we examine blood pressure using a standard method to see the distribution of blood pressure measurements across the population. This is vital for monitoring change over time.

7.2 Exclusion criteria

Participants are excluded from the blood pressure measure if they are:

- Aged 4 years and below
- Pregnant

If a pregnant woman wishes to have her blood pressure measured, you may do so, but do not record the readings in CAPI.

7.3 Consent

In addition to the verbal consent required to conduct all NatCen procedures (refer to section 2.1), written consent is required for the results to be sent to the participant's GP. The appropriate form must be signed and dated by the participant.

7.4 Equipment

You will need:

- An 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)
- An AC adapter (for putting Monitor on charge at home)

Please note you will not get all of the cuff sizes in some of the studies, this is dependent on the sample involved in the individual surveys.

You should also ensure that the monitor surfaces are cleaned periodically with Milton wipes to reduce risks of cross infection and to ensure the cuffs are also cleaned with wipes. Should cuffs become soiled or damaged then the Equipment store at Brentwood should be informed for a new set to be sent out to you. The soiled set should be disposed of in your household waste route.

7.4.1 Using the Omron HEM 907

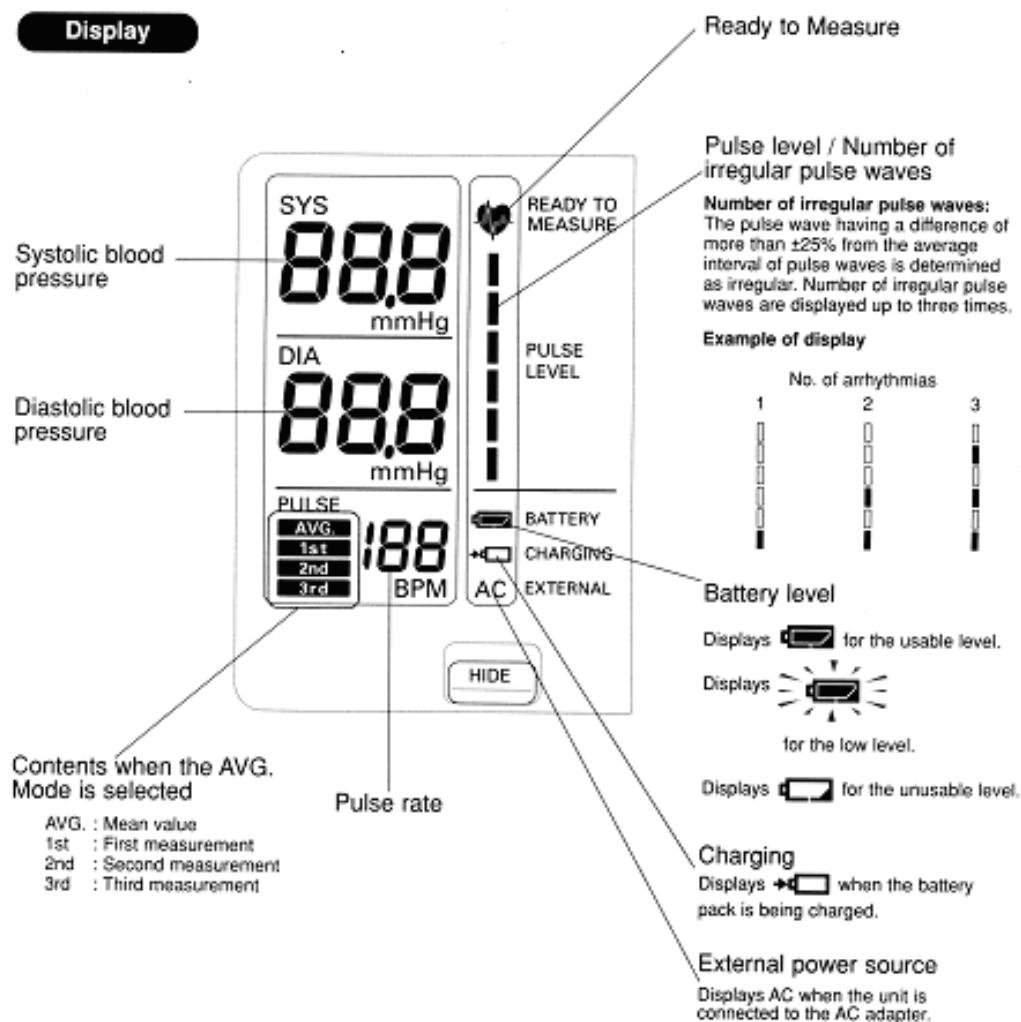


Figure 7 shows the monitor of the Omron

Figure 5 The Omron HEM 907 monitor

1. Switch the monitor on by pressing the ON/OFF button. Wait for the READY TO MEASURE symbol to light, indicating the monitor is ready to start the measurement (approximately 2 seconds).
2. Check that the MODE selector is set to AVG (average) and P-SET Volume (pressure setting) is set to auto.
3. Press the start button to begin the measurement. The cuff will start to inflate and take the first measurement. When the first measurement is complete, the LCD screen will show the systolic pressure, diastolic pressure and pulse rate. It will continue to do this at one minute intervals.
4. Press the ON/OFF button to turn it off.
5. If at any stage while you are taking the measurement you need to stop the monitor, press STOP and start the procedure again, as described in section 11.6.

7.4.2 Charging the battery

The Omron HEM 907 is equipped with a rechargeable battery, which is usable for approximately 300 measurements when fully charged.

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.

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 approximately 12 hours.

Connect the AC adapter to the DC jack of the main unit and the electric outlet.

NOTE: when the AC adapter is connected and the unit is turned off, the AC adapter charges the installed rechargeable battery. 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.



Figure 8 Charging the battery

7.4.3 Technical faults/error readings

Refer to table 4 when error readings appear on the LCD screen.

Table 4 Troubleshooting for the Omron HEM 907

Error No.	Action
Er1, Er2	<ul style="list-style-type: none">• Check that the tube connecting the cuff to the monitor is properly inserted and is not bent• Check that the cuff is properly wrapped around the arm• Repeat the measure
Er3	<ul style="list-style-type: none">• Check that the tube connecting the cuff to the monitor is not bent• Repeat the measure

Er4	<ul style="list-style-type: none"> • Ask the participant to sit as still as possible • Repeat the measure • If it persists, it may be because the participant has very high blood pressure • Reset the P-SET Volume to 260 and repeat the measure.
Er5, Er6	<ul style="list-style-type: none"> • Check that the cuff is properly wrapped around the arm • Repeat the measure
Er7, Er8	<ul style="list-style-type: none"> • Ask the participant to sit as still as possible • Repeat the measure • If it persists, it may be because the participant's pulse is irregular, record that it wasn't possible and explain that this sometimes happens.
Er9	<ul style="list-style-type: none"> • Technical fault – Contact Brentwood and report that fault

7.5 Preparing the participant

During the initial interview, the participant would have been informed not to eat, smoke, drink alcohol or participate in vigorous exercise 30 minutes before the nurse visit as this can cause blood pressure to be higher than normal. Before the procedure ask to see if they have carried out any of these activities and note their response in CAPI.

Select the right arm unless this is impossible. Ask the participant to remove outer garment (e.g. jumper, cardigan, jacket) and expose their upper right arm by rolling up their sleeve. If the sleeve constricts the arm, restricting the circulation of blood, ask the participant if they would mind taking their arm out of the sleeve for the measurement.

7.5.1 Selecting the correct cuff

Adults

Do **not** measure the upper arm circumference to determine which cuff size to use. 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 participant falls within this overlap range then use the **standard** cuff where possible.

Children

It is important to select the correct cuff size to obtain an accurate reading and avoid injuring the child. 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.

7.6 Procedure

1. Check that the monitor is working.

- [REDACTED]
2. Use the right arm, unless this is impossible. If the left arm is used, record this in CAPI.
 3. Get the participant to sit in a comfortable chair with a suitable support so that the **right arm** is resting at a level to bring the antecubital fossa (elbow) to approximately heart level. They should be seated in a comfortable position with legs uncrossed and feet flat on the floor.
 4. Wrap the correct sized cuff round the upper **right arm** and check that the index line falls within the range lines. Do not put the cuff on too tightly as bruising may occur on inflation. Ideally it should be possible to insert two fingers between the cuff and the arm.
 5. 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).
 6. Explain to the participant that you need them to sit quietly for five minutes and that during that time they cannot eat, drink or smoke.
 7. During this 'quiet time' follow the procedure for taking ambient air temperature (section 9) and just before taking the blood pressure reading, make a note of the air temperature (this is not applicable for all surveys, refer to the project specific instructions).
 8. After five minutes explain that you are starting the measurement, also explain that the cuff will inflate three times and each time they will feel some pressure on their arm. Ask them to relax, be seated in the position detailed in step 3 and not to speak until the measurement has been completed, as it may affect their reading.
 9. Press start on the Omron HEM 907 to start the measurement. When the first measurement is complete it will be displayed on the LCD screen. Record this.
 10. The unit will produce readings at one minute intervals thereafter; record the next two so you have three sets of readings in total. To check the readings press the 'Deflation' button. It is important that the three readings are recorded as the first reading is usually higher, and thus less accurate, than the other two readings as the participant may be feeling nervous.
 11. Press ON/OFF on the Omron to switch the unit off and remove the cuff from the participant's arm.
 12. If the participant wishes, you should record details of their readings on the measurement record card.

7.7 Participant feedback

When answering queries about a participant's blood pressure it is very important to remember that it is NOT the purpose of the survey to provide participants with medical advice, nor are you in a position to do so as you do not have the participant's full medical history.

What you may say in each situation has been agreed with the Survey Doctor and CAPI will instruct you to read out the appropriate interpretations of the participant's

[REDACTED]

results. It is very important that the agreed script in the CAPI is read word for word and that personal interpretation is never offered.

The participant feedback protocol should 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 GP if the measurements indicate that blood pressure is raised.

7.7.1 Child participants

Do not comment on a child's blood pressure readings to the child or parents. If they seek comment, state that you are not 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 markedly abnormal, the Survey Doctor will get in touch with them or their GP and advise them to get it checked. This rule applies for all readings you obtain.

7.7.2 Adult participants

As stated previously we have a duty to inform people that they need to see their GP if their blood pressure is high. It is important that the instructions below are carefully read and guidelines always followed precisely.

The computer tells you which readings your advice should be based on. This will be based on the **lowest** systolic and **lowest** diastolic reading from the last two readings (this is a change from previous practice when the highest readings were used). 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. Furthermore if the lowest systolic reading falls in one category and the lowest diastolic reading falls in another category, the higher of the two categories will be used to trigger the advice to participants. For example the lowest systolic reading is 138 (normal) and the lowest diastolic is 96 (mildly raised) then the advice given will be based on a mildly raised reading. If the first reading is higher than the other two it should be explained that the first reading can be high because people are nervous of having their pressure taken.

Definitions of raised blood pressure differ slightly. The Survey Doctor has recommended the blood pressure ratings given below based on the most recent guidelines from the British Hypertension Society. It is important that you adhere to these definitions, so that all participants are treated in an identical manner. These are shown in table 5.

Table 5 Definition of blood pressure ratings

ADULTS ONLY			
SURVEY DEFINITION OF BLOOD PRESSURE RATINGS			
For men and women aged 16+			
<u>Rating</u>	<u>Systolic</u>	and	<u>Diastolic</u>
Normal	<140		<90
Mildly raised	140 - 159	or	90 – 99
Raised	160 - 179	or	100 – 114
Considerably raised	180 or more	or	115 or more

Points to make to a participant 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 one-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 one-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 one-off finding or not.'

(For all of the above points, you can also advise the participant to see their practice nurse, if this is who they would typically see in relation to their blood pressure.)

Note: If the participant 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 participant unduly. It is however important that they do contact their GP about the reading within 7 to 10 days. In the meantime, contact the Survey Doctor who will inform the participant's GP of their result, providing the participant has given their permission (refer to table 6).

7.8 Action to be taken by the nurse after the visit

If you need to contact the Survey Doctor, unless there is a hypertensive crisis, do not do this from the participant's home - you may cause unnecessary distress.

7.8.1 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.

7.8.2 Adults

Table 6 summarises what action to take based on the readings you have obtained for a participant. For this purpose you should only take into account the last two of the three readings you take, as the first reading is prone to error.

Table 6 Nurse action due to blood pressure readings

BLOOD PRESSURE	ACTION
Normal/mildly raised/raised BP	No further action necessary
Systolic less than 180 mmHg and Diastolic less than 115 mmHg	If you feel that the circumstances demand further action, inform the Survey Doctor who will then inform the participant's GP immediately if she deems it necessary.*
Considerably raised BP	Contact the Survey Doctor at the earliest opportunity and she will inform the participant's GP if written consent has been given, or the participant if not.*
Systolic at or greater than 180 mmHg or Diastolic at or greater than 115 mmHg	If the participant has any symptoms of a hypertensive crisis** contact the survey doctor immediately or call an ambulance. The Survey Doctor must be informed as soon as possible.

* You must still contact the Survey Doctor even if participants tell you that their GP knows about their raised BP.

** 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.

The Survey Doctor will look at all high or unusual readings when they reach the office. If the reading is high, then the Survey Doctor will contact the participant directly. The Survey Doctor will also routinely check fast and slow pulse rates so no further action is necessary regarding these.

Contact details for your Survey Doctor can be find in the project instructions. The Survey Doctor is generally available from 8.00-22.00. Calls outside these hours are either unnecessary or an emergency, in which case, the survey doctor is unlikely to be in a position to do anything practical and you should be using your professional judgement whether to call an ambulance or seek other urgent advice.

8 - 24 HOUR URINE (YEAR 5 ONLY)

8.1 Introduction

A 24 hour urine sample gives a comprehensive overview of a participant's nutrition and diet that cannot be obtained from a spot sample.

8.2 Exclusion criteria

All participants with the following exceptions are able to give urine:

- Women who are pregnant or breastfeeding

Women who have their period will be asked to collect the urine on non period days. To test for the completeness of a sample, participants might be asked to take p-aminobenzoic acid (PABA) tablets.

Some surveys will exclude participants if they are unwilling or unable (due to medications they are currently taking or allergies) to take these tablets, other surveys will include them even if they cannot/will not take PABA. Please refer to project specific instructions for further information regarding this.

8.3 Consent

There is a separate consent form for the urine sample. This must be signed and dated by the participant or by the parent/legal guardian in the case of participants aged 15 years and below. Please make it clear to participants that they will not receive results regarding their urine sample.

There are two nurse visits in the 24 hour urine protocol. The first requires the nurse to introduce and explain to the participant how to collect the sample over the allocated 24 hour period. The second visit requires the nurse to take sub samples from the urine that the participant has collected. Both of these visits are outlined below.

8.4 Nurse visit one

8.4.1 Equipment

To collect the urine sample the participant will need:

- A 5 litre capacity screw cap (or jerry can) 24 hour container to serve as the collection container for urine. This contains a small amount of the preservative boric acid (powder).
- A 2 litre capacity screw cap collection container for collections made away from the home
- A 1 litre capacity plastic jug to be kept inside a re-sealable plastic bag when not used
- A funnel to be kept inside a re-sealable plastic bag when not used
- Plastic carrier bags for transporting the equipment away from home

- An *aide memoire* safety pin for the participant to pin the under and outer garments together during the period of the collection to remind that the specimen of urine about to be passed should be collected.
- Three PABA tablets

What is PABA?

To test for the completeness of the urine sample, three p-aminobenzoic acid (PABA) tablets need to be taken by the participant (also see section 17.2). PABA is an intermediate in the synthesis of folic acid in bacteria. It is consumed in small amounts as part of our usual diet and is found, for example, in liver, kidney, brewer's yeast, molasses, whole grains, mushrooms and spinach and can be made by intestinal bacteria. Larger amounts of PABA are found in some vitamin preparations.

Following ingestion, PABA is passively absorbed mainly from the small intestine. From there it enters the portal circulatory system. Some metabolism of PABA occurs in the liver and PABA and its metabolites are mainly excreted in the urine.

The PABA tablet is very small and best swallowed whole. It is not recommended to dissolve it in water or any other drink. If crushed between the teeth PABA tastes acidic and is unpleasant but there is no long lasting after taste.

Some medicines, such as paracetemol, interfere with the test used for PABA and PABA itself may interfere with the functioning of sulphonamide based antibiotics (however it will not cause the participant direct harm if they are taking sulphonamide based antibiotics). People will be excluded from taking PABA if they are on sulphonamide based antibiotics. Other reasons why people are excluded from taking PABA include those who are allergic to vitamin preparations, hair dyes or sunscreen lotions and those who have lactose intolerance.

8.4.2 Preparing the participant

- Using CAPI, check the participants eligibility to take part in the measurement
- Introduce and explain the 24 hour urine sample to the participant, explaining the instructions for collection (sections 17.4.3 and 17.4.4) in detail.
- Provide the participant with any written instructions and the equipment that they will need.

8.4.3 Procedure for taking PABA

Please explain this procedure to the participants:

1. Each participant will have three PABA tablets which are to be taken at evenly spaced intervals throughout the waking day.
2. The first tablet should be taken just before the urine collection starts, i.e. after the first morning void that is not collected.
3. The second PABA tablet should be taken 4-6 hours after the first tablet and the final tablet 4-6 hours after the 2nd.
4. If participants forget to take the morning PABA tablet they should take it as soon as they remember and no later than midday. If participants forget the midday tablet they should take it as soon as they remember and no later than 4pm. PABA

should not be taken after 10pm because approximately 8 hours are needed for PABA clearance through the kidneys to ensure that all PABA is excreted by the time the participant collects their final sample, the first morning void.

8.4.4 Participant procedure for collecting the sample

Please explain this procedure to the participant:

1. The 24 hour collection should start with the second morning void. The 24 hour period will last throughout the night and will include the first morning void on the following day e.g. if the participant starts the 24 hour collection with the second morning void on a Tuesday then they stop collecting after their first morning void on Wednesday. During this time period all urine that is passed is to be collected.
2. Participants are to pass urine into the plastic jug. Using the funnel provided, the participant needs to pour the urine into the 5 litre collection container. It is extremely important that all urine produced over the 24 hour period is included in the collection
3. If, during the 24 hour period, the participant is away from home, they have the option to take the 2 litre storage container to store the urine in until they get home. They must still pass the urine into the 1 litre jug and then use the funnel to transfer it into the 2 litre container. When participants get home the urine collected in the 2 litre container must be transferred into the 5 litre container.
4. Instruct the participant to store the 5 litre collection container in a cool, dry place until it is collected.

8.5 Nurse visit two

8.5.1 Equipment

To collect sub samples of the 24 hour urine collection, the nurse will need:

- Salter Electron hand held scales for weighing the urine collection container
- 10ml Sarstedt Urine syringe, (for instructions on use, refer to Appendix A), as many as is required for each survey e.g. the survey asks for five aliquots you will need five Sarstedt syringes per participant.
- Extension tubes for monovettes (as many as required for each survey)
- Plastic urine cup
- Disposable gloves
- Disposable work mat
- Disposable apron

8.5.2 How to use the scales

- Attach handle to the scales with the hook pointing upwards. Position the loop at the top of the scales in the notch until loop is flat against the back of the notch. Lift the handle slightly so the scales are hanging from the hook of the handle. Press the on/zero button to turn the scales on
- Ensure the lid of the 5 litre container is securely fastened
- Check the scales are tared to zero

- Place the 5 litre container on the middle of the hook on the scale
- Stand and hold the scale handles in both hands with palms facing down. Extend your arms slightly, making sure the handles of the scale are at chest level. Bend elbows and hold the scale and urine approximately 18 inches from your chest, it is critical that the container remain completely still
- Hold scale and container still in position for a minimum of five seconds
- Record weight and repeat the process
- The same steps should be followed if there is urine in the 2 litre container which cannot be transferred into the 5 litre container
- Clean scales with Milton wipe before storing

8.5.3 Nurse procedure for collecting the sub samples

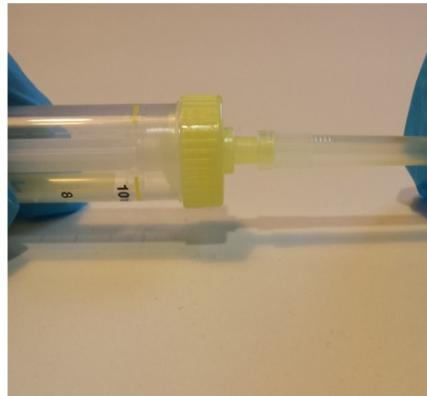
1. Check if there is any urine in the 2L container. If there is, transfer the urine in the 2L container into the 5L container if possible. If you think that only SOME of the urine will fit inside the 5L container then DO NOT TRANSFER
2. Collect the urine sample in the 5 litre collection container from the participant so that it can be weighed.
2. Assemble the scales, turn them on and wait for the display to read 0.00. Holding the handle in the middle, place the sample on the hook at the bottom of the scales.
3. Record the weight in CAPI and on the despatch sheet. The weight must be recorded on the despatch sheet as it helps the lab to identify if the sample is complete or not.
4. Remove the sample and reset the display to zero by pressing 'On/Zero'. Weigh the sample for a second time according to steps 2 and 3.
5. If the two recorded weights differ by more than 0.2kg, weigh the sample for a third time and record this reading in CAPI and on the despatch note.
6. After the container has been weighed, invert it and rotate the sample 20 times to ensure that the urine is thoroughly mixed but without becoming frothy.
7. Lay out the disposable working mat and, wearing gloves and the apron, transfer some of the urine from the 5 litre collection container into the 1 litre jug or plastic urine cup.
8. Still wearing gloves and apron, use the Sarstedt syringe(s) to collect as many sub samples from the jug as required (specified in the project specific instructions). For instruction on how to use the Sarstedt syringe refer to Appendix A.
9. Label the sub samples as you take them and prepare them for despatch as described in the project specific instructions.
10. After collecting the sub samples, dispose of the rest of the urine sample in the 5 litre collection container and what is remaining in the 1 litre jug or plastic cup by pouring it in the toilet (you or the participant can do this).

- 
11. Rinse any containers that have been used and ask the participant to dispose of them with the household waste.
 12. Some surveys will also require the participant to complete a sheet which records if any urine samples were missed during the 24 hour period. If this is the case, you will need to go through this sheet with the participant to check that it is complete.

APPENDIX A. Sub-sampling 24-hr urine



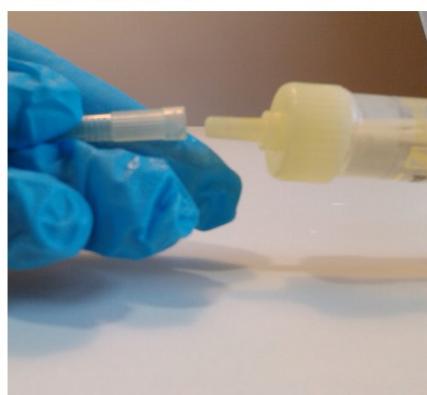
1. Remove the small push cap.



2. Push the extension tube on the urine monovette nozzle.



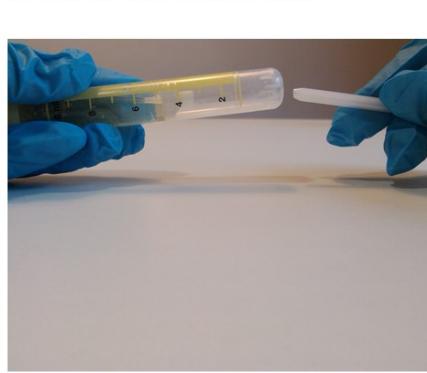
3. To fill the urine monovette, pull back the plunger until you hear the click .



4. Remove the extension tube.



5. Replace the cap.



6. Break off the stalk of the plunger

9 BLOOD SAMPLING (NON FASTING AND FASTING)

The protocol for taking blood samples set out below is written in accordance with the Clinical Procedure Guidelines: Venepuncture. All nurses are to read this document before carrying out any venepuncture procedure.

9.1 Introduction

Blood samples are taken from participants as they provide information on various analytes, giving a detailed description of the health of an individual. They are integral to the research NatCen undertakes as they give a comprehensive representation of the health of the population that cannot be obtained from any other source.

Each study is interested in different analytes and the ones to be analysed for each survey can be found in the project specific instructions. Table 8 shows information regarding the different analytes and what they measure.

Table 2 Blood analytes

ANALYTE	WHAT IT MEASURES
Apolipoprotein E	This is involved in the transport of cholesterol and plays a protective role.
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.
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 found in individuals with kidney insufficiency and failure.
Fibrinogen	Fibrinogen is a major determinant of platelet aggregation and blood viscosity. It is a major independent risk factor for cardiovascular disease (CVD) and may interact with lipids to promote CVD risk.
Folic acid (folate)	Folic acid is a B vitamin. It is used in the body to make new cells and helps to prevent anaemia and birth defects of the brain and spinal cord.
Genetics	Genetic factors are associated with some common diseases such as diabetes and heart disease and relate to general biological aspects of the ageing process.
Glycated Haemoglobin	Glycated haemoglobin is a measure of the participant's longer term glycaemic status. High levels are indicative of poor control of, or undiagnosed diabetes.

Haemoglobin, ferritin and transferrin receptors	Haemoglobin carries oxygen around the body to cells. It is too low in people with anaemia. Ferritin and transferrin receptors are indicators of iron stores: ferritin is reduced and soluble and transferrin receptor levels are increased if there is iron-deficiency, e.g. an inadequate iron supply in the diet.
Mean corpuscular (cell) volume	A measure of the average red blood cell volume. Mainly used in the classification of anaemia.
Minerals Se and Zn	Selenium (Se) is a component of some of the enzymes which protect the body against damage due to oxidation. It is also necessary for the use of iodine in thyroid hormone production and for immune system function. Zinc (Zn) is present in many enzymes and is essential for cell division and therefore growth and tissue repair. It is also necessary for normal reproductive development. Zinc is required for the functioning of the immune system and in the structure and function of the skin and thus wound healing.
Serum Albumin	Albumin is a blood plasma protein which is essential in maintaining fluid pressure in the body. It also plays a role in transporting fatty acids around the body. It is analysed in blood samples as an indicator of liver disease and kidney disorders.
Total, LDL and HDL cholesterol	Total cholesterol and LDL cholesterol increase the risk of atherosclerosis ('furring' of the arteries). Raised levels are associated with higher risks of heart attacks, while HDL cholesterol has a protective role.
Triglycerides	Together with total and HDL cholesterol, they provide a lipid (fat) profile which can give information on the risk of CVD.
Vitamin A and carotenoids	Vitamin A is essential to the normal structure and function of the skin and mucous membranes. It is also required for cell differentiation and therefore normal growth and development, and for normal vision and the immune system. Some carotenoids have provitamin A activity, thus acting as antioxidants to protect cells against oxidative damage.
Vitamin B1 (thiamin)	Vitamin B1 is required for energy production and carbohydrate metabolism. It is also involved in the normal functioning 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 the 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 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, meat and fortified foods.

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. Thus it is involved in the healing process as well as the normal structure and function of blood vessels and neurological function. Vitamin C also contributes to the absorption of iron from some foods, in particular plant foods.
Vitamin D	Vitamin D is formed by the action of ultra violet light on the skin. This is the most important source as few foods contain significant amounts of vitamin D, e.g. eggs, oily fish and meat. Vitamin D undergoes changes in both the liver and the kidneys before working as a hormone in controlling the amount of calcium absorbed by the intestine. It is also essential for the absorption of phosphorous 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 tocopherols is the most active. It acts as an antioxidant and is required to protect cells against oxidative damage by free radicals.
White blood cells	White blood cells are made by bone marrow and help the body fight infection and other diseases. There are various types of white blood cells.

The blood will **not** be tested for any viruses, such as HIV (AIDS).

9.2 Exclusion criteria

All participants with the following exceptions are eligible to give blood:

- Pregnant women
- Participants who are HIV positive or who have hepatitis B or C (see section 9.8.6)
- People with clotting or bleeding disorder
By clotting or bleeding disorders we mean conditions such as haemophilia and low platelets, i.e. thrombocytopenia. There are many different types of bleeding/clotting disorders but they are all quite rare. The reason these participants are excluded from blood sampling is that:
 - a) the integrity of their veins is extremely precious
 - b) we do not wish to cause prolonged blood loss

For the purposes of blood sampling, those who have had, for example, a past history of thrombophlebitis, a deep venous thrombosis, a stroke caused by a clot, a myocardial infarction or an embolus are NOT considered to have clotting disorders.

- Those aged 16 and over who have had a fit (e.g. epileptic fit or convulsion) in the **last 5 years** should not be asked to provide a blood sample. Children, those aged 15 and under, who have **ever** had a fit should not be asked to provide a blood sample, even if the fit occurred some years ago.
- People who are **currently** on anticoagulant drugs, e.g. Warfarin therapy

Check if the participant has a clotting or bleeding disorder or is on anticoagulant drugs, such as Warfarin, and record this in CAPI. These are very uncommon. If you find someone with these problems, do not attempt to take blood, even if the disorder is controlled.

Aspirin therapy is **not** a contraindication to blood sampling. If you are uncertain whether a condition constitutes a contraindication to blood sampling, the Survey Doctor will be happy to answer your queries.

- Adults who are not willing or able to give their consent in writing or children whose parent/guardian is unwilling or unable to give consent in writing.

Additional exclusions for fasting blood:

- Diabetic participants, who are on any form of medication, will not be asked to fast.
- People who have eaten or drunk something (except water) in the last eight hours (**or** in the period of time specified by the specific project instructions)
- Children under the age of 4 will not be asked to fast.
- Adults aged 80yrs and over will also not be asked to fast.

9.3 Consent

As blood sampling is an invasive procedure we need to ensure that fully informed written consent is obtained from each participant. Information on what they are consenting to is mainly given in the Stage 2 leaflet, and the participant confirms that they have been provided with this information on the consent form.

The leaflet 'Giving a blood sample' also provides useful information about the risks around giving a sample and after-care. This is information that you should be giving verbally in any case, and you therefore do not need to ensure that the participant has read this leaflet in advance as long as you make sure you have covered all the points yourself.

On **no** account should you ever take blood before you have obtained written consent to do so from the participant.

There are two further written consents we wish to obtain in **most** surveys in respect to blood sampling:

- a. Consent to send the results to the GP (verbal consent only is required for results to be sent back to the participant)
- b. Consent to store a small amount of the blood, anonymously, for future research purposes

You should seek to obtain all of the required consents before you take any blood.

Small quantities of blood are being stored in special freezers for further analysis in the future. Stored blood will only be analysed in future studies if permission for that particular study is obtained from the Health and Social Care Information Centre and from a Research Ethics Committee. Any future analysis will be unlinked which means

[REDACTED]

that the researcher doing the analysis will not be able to link it back to the participant. Participants will therefore not receive the results of any tests done on their blood in the future.

The questions on the CAPI questionnaire will take you step by step through all the procedures for obtaining consents. Make sure you follow these carefully - recording consent codes as instructed and giving reasons for refusals, if applicable.

In summary:

- Ask the participant if they would be willing to have a blood sample taken. Try to reassure participants about the process, and be prepared to answer their concerns. You will need to explain the importance of written consent to the participant
- Obtain written consents on the appropriate consent form (including initials **and full signature** where required).
- Remember to enter their name or serial number on each page of the form before asking the participant to sign.
- Remember to enter your name in the qualified nurse space provided on each form.
- Check that you have circled the correct consent codes on the front of the consent booklet, and that this corresponds with the CAPI instructions on screen.

9.4 Equipment

The equipment required is listed in the Clinical Practice Guideline for Venepuncture (CPG). Any additional equipment, specific to a project, will be listed in the project instructions.

9.5 Preparing the participant

Protocol on preparing the participant can be found in the Venepuncture CPG.

Further points to note include:

- Ask the participant to remove any jackets, thick garments and/or roll their sleeves up.
- Instruct the participant to remain as still as possible

9.6 Procedure

The procedure for taking the blood sample can be found in the Venepuncture CPG. This procedure is to be followed. It is to be used in conjunction with CAPI which will guide you through the blood sampling process.

Some surveys will use a different system for taking blood samples e.g. the monovette system. Refer to project specific instructions for how to use the specific equipment and take the blood sample. In all surveys the Venepuncture CPG should be referred to for principles of evidence based best practice.

Additional points to note include:

- Ametop Gel®, a local anaesthetic, can only be used in some projects (refer to the specific project instructions). There is a CPG on use of Ametop which must be followed.

- Cryogesic Spray®, a vaso-coolant short acting pain relieving spray, can only be used in some projects (refer to the specific project instructions). There is a CPG on use of Cryogesic Spray which must be followed.
- The vacutainers and monovette blood tubes should be filled to the specified capacity in turn (according to the order of draw specified in the project instructions) and inverted gently 5 times on removal to ensure complete mixing of blood and preservatives (in some surveys not all tubes will need to be inverted, refer to project specific instructions).

IMPORTANT WARNING – PREVENTING NEEDLESTICK INJURY

Never re-sheath a needle after use

Do not allow the sharps disposal box to become overfull as this can present a potential hazard

9.7 Labelling & packaging the sample(s)

Label the tubes according to your CAPI instructions, immediately after completing the venepuncture procedure. Refer to the project specific instructions for further guidance about labelling and packaging the blood samples.

It cannot be stressed enough the importance of correctly labelling each tube with the correct serial number for the person from whom the blood was obtained. Apart from the risk of matching up the blood analyses to the wrong person's data, we will be sending the GP the wrong results. Imagine the implications of an abnormal result being reported to the wrong participant.

Some projects provide participant specific barcode labels. You must therefore take great care to ensure the right labels are used on the right blood samples prior to packing and dispatching the samples!

9.8 Other important points

9.8.1 ‘Giving a blood sample’ leaflet

We need to be sure that each participant is left with information about giving a blood sample, including information about who to contact should they experience any side effects as a result of the blood sample.

To provide them with this information, leave the participant with the leaflet ‘**Giving a blood sample**’. The leaflet includes information on any possible side effects they may experience such as pain and bruising, and how to care for the puncture site. It is also a useful leaflet to leave behind to reassure the friends and family of the participant of the procedure used should they have any concerns after your visit.

9.8.2 Venepuncture check questions

Always complete the Venepuncture checklist on CAPI for every participant from whom you attempt to take blood. This shows that you have followed the correct procedure, and noted, where applicable, any abnormalities, and the action you took. The checklist is usually towards the end of the CAPI.

Please remember to check the participant's venepuncture site just before you leave and note any changes in their physical appearance in CAPI.

9.8.3 Fainting participants

If a participant looks or feels faint during the venepuncture procedure, it should be discontinued. The participant should be asked to lie down with feet elevated.

If they agree for the test to be continued after a suitable length of time, the procedure should be performed with the participant lying down and the circumstances should be recorded in CAPI.

If a participant fully faints, then you should apply the principles of first aid by:

- Calling for help / assistance, if there is another adult relative within the house
- Ensure the participant is supported safely and eased into a position lying down on their side, where they can recover. Loosen tight clothing and elevate the legs.
- Remain with the participant until they come round and feel able to slowly move to a sitting position.
- Discontinue the interview unless, in your professional opinion you and the participant feels it is safe to continue.
- Ensure you submit a Special Report Form to the Freelance Resources Unit detailing what happened, what course of action you took and how the participant appeared when leaving.
- **NB: - Should a participant not recover as quickly as expected from a fainting episode then the course of action is to phone the Emergency Services and hand over the situation to them.**

9.8.4 Fitting participants

It is rare for a participant to experience a fit or experience a convulsion during the venepuncture procedure, especially as those with a declared history of fitting or convulsion within the previous 5 yrs will have been excluded. However, there is always a first time.....

If a participant appears to have an episode of fitting or convulsion during or immediately after venepuncture procedure, then you should apply the principles of first aid by:

- Calling for help / assistance, if there is another adult relative within the house. **If there isn't any other person in the household to support / assist you, then you should call the emergency services.**
- Ensure the participant is supported safely and eased into a position lying down on their side, with their airway supported open and where they can recover safely
- Remain with the participant until they come round, monitor their level of response, pulse and breathing.

- Ensure you submit a Special Report Form to the Freelance Resources Unit detailing what happened, what course of action you took and how the participant appeared when leaving.

9.8.5 Handling & disposal of needles and other materials

Safe disposal of needles is required to control the risk of injury from the disposed sharps. Without the safe disposal of needles there is an increased risk of needle stick injuries and/or psychological trauma due to fear of potential infection. NatCen's policy is that only safety sharps will be provided for use on projects and therefore the safety sharps should be used as a matter of course, within a nurse's field work.

Precautions

- Wear gloves at all times when performing the venepuncture procedure to reduce blood 'transmission load' if a needlestick injury occurs
- Sharps should be disposed of at the point of use
- Do not carry sharps unnecessarily
- Handling must be kept to a minimum
- Needles must not be passed directly from hand to hand
- Needles must not be bent or broken prior to use
- Needles should not be resheathed by hand
- Never lay sharps down on beds or work surfaces, or leave lying amongst paper towels or linen
- Never hand sharps to anyone

Disposal

Do's:

- Continue to wear gloves when disposing of sharps and related contaminated waste
- Sharps must always be disposed of in the approved orange top 1L 'sharps bins' provided by NatCen immediately after use
- A Sharps bin should be available beside you before opening and using the sharp
- Dispose of the sharp bin when the manufacturer's marked line has been reached or when it is three quarters full (see Sharps Disposal Policy)
- Check to ensure that the sharps bin lid is securely closed and sealed as per Sharps Disposal Policy

Don'ts:

- Overfill sharps bins
- Fill sharps containers above the manufacturer's marked line
- Dispose of sharps with other clinical waste
- Put your hands into sharps bins
- Never return any used sharps bins by post or courier to the Operations Department or other member of the freelance nurse or interviewer panel by a postal / courier service.

[REDACTED]

Any non sharps venepuncture waste (e.g. gauze swab, gloves, plaster covering etc) can be disposed of in the participant's household waste.

Needle stick injury

In the event of a Needlestick injury (by participant or nurse) – follow NatCen's specific needlestick injury protocol.

9.8.6 Participants who are HIV or Hepatitis B / C positive

If a participant volunteers that they are HIV, Hepatitis B or Hepatitis C positive, **do not** take a blood sample. Record this as the reason for not taking a blood sample in the CAPI. You should never, of course, seek this information.

9.8.7 Participants who declare they are HIV or Hepatitis B positive during or after venepuncture procedure

If a participant volunteers this information whilst blood is actively being taken – then inform the participant politely that you must stop the procedure, at that point, as any blood taken for research purposes cannot be sent to the laboratory for processing. Dispose of the tubes already filled into the sharps bin and once all sharps are within the bin, the bin should be fully sealed and advice should be sought from the office as soon after the visit as possible to ensure the contaminated sharps, bottles and materials are disposed of according to the current contaminated waste and sharp disposal procedure.

Record the relevant information into the CAPI – including completion of the venepuncture check questions.

Ensure you submit a Special Report Form to the Freelance Resources Unit detailing the situation, what course of action you took and how the participant appeared when leaving.

9.9 Participant feedback

Results from some blood tests (though not necessarily all) can be sent to the participant. If the participant gives written consent for the results of their blood sample to be sent to their GP then they are able to get feedback on the results.





**National Diet and Nutrition Survey
(Year 5)**

National Centre for Social Research

Editor's Code Book – Interviewer CAPI

May 2012

More information about the coding?

These instructions contain information about the coding task. However, if you need further information or clarification, please contact the research team in London or the Data team in Brentwood

Contents

<u>1</u>	<u>INTRODUCTION</u>	5
<u>2</u>	<u>FACTSHEET DEFINITION FOR CAPI EDITING</u>	6
<u>3</u>	<u>ADDITIONAL CAPI EDITS</u>	7
3.1	Proxy interviews	7
3.2	Age/Date of birth	7
3.3	National identity	8
3.4	Other ethnic groups – NATCEN edit	9
3.5	Other ethnic groups – NORTHERN IRELAND edit	10
3.6	Long standing illnesses	11
3.7	Restrictive illness or injury	12
3.8	Other alcoholic drinks	13
3.9	Coding of beer bottle sizes	14
3.10	Bottled lager/cider/beer codeframe	15
3.11	Height and weight	16
<u>4</u>	<u>LONGSTANDING ILLNESS CODEFRAME</u>	17
<u>5</u>	<u>DRUG CODING</u>	23
<u>6</u>	<u>CAPI CODEFRAMES</u>	24

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
soc2010	Code as standard	Occupational coding	
sic2007	Code as standard	Industry type coding	

Indiv Qure – CAPI 1

NbotL7	Code to L7NCodEq	Brand of bottled lager (7 days)	Page 14
SbotL7	Code to L7SCodEq	Brand of bottled lager (7 days)	Page 14
OthL7TA,B,C	N/A	Other alcoholic drinks (7 days)	Page 13
HealT	Code to LimLi	Limiting long standing illness	Page 11
CutMatt	Code to CutIll	Restrictive illness or injury	Page 12

Indiv Qure – Measures

OHiNRel	Back code into HiNRel	Unreliable height measurement	Page 16
NoHitCO	Back code into NoHtBC	Reasons for refusing height	Page 16
NoWatCO	Back code into NoWtBC	Reasons for refusing weight	Page 16

Nurse Qure

MedBl	N/A	Drug coding	CAPI page 6
OthNLth	Back code to NoAttL	Reason for no infant length measurement	CAPI page 4
OthWH	Back code to WHPNABM	Other reasons for not attempting waist-hip measurements	CAPI page 23
OthNBP	Back code to NAttBPD	Other reason not obtained blood pressure	CAPI page 16
OthDifBP	Back code to DifBPC	Other reason difficulty obtaining BP	CAPI page 16
OthRefC	Back code to GPRefC	Other reasons refusing to allow BP measurements to be sent to GP	CAPI page 16
OthAttM	Back code to NotAttM	Other reason why no demi-span measured	CAPI page 20
OthRefBS	Back code to RefBSC	Other reasons for refusing blood sample	CAPI page 25
OthSam	Back code to SenSac	Other reasons for not wanting blood sample results sent to GP	CAPI page 28
VpOther	Back code to VpProb	Other abnormality noted after 5 minutes (blood sampling)	CAPI page 36
OthBDif	Back code to SamDifC	Other problems taking blood sample	CAPI page 38
OthNoBSM	Back code to NoBSM	Other reasons why blood sample not taken	CAPI page 38

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 Northern Irish
- 5 British

If the case is from a NI point then back code 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 – NATCEN edit

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. Irish

Include Southern Irish, Irish.

3. Gypsy or Irish Traveller

Include Gypsy/Romany.

4. Any other white background

Include Cypriot, Former USSR, Baltic States, Former Yugoslavia, Other European, White South African, American, Australian, New Zealander, Mixed White

5. Mixed – White and Black Caribbean

6. Mixed – White and Black African

7. Mixed – White and Asian

8. Any other mixed background

9. Asian or Asian British - Indian

Include Punjabi

10. Asian and Asian British – Pakistani

Include Kashmiri

11. Asian and Asian British – Bangladeshi

12. 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).

13. Black or Black British – Caribbean

Include Caribbean and West Indian islands (and also Guyana).

Do not include Puerto Rican, Dominican and Cuban, which are Latin American

14. Black or Black British – African

Include Nigerian, Somali, Kenyan, Black South African, Other Black African countries

15. Any other Black/Black British background

Include Black American, Mixed Black

16. Chinese

Include Hong Kong

17. Arab

18. 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, 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 Other ethnic groups – NORTHERN IRELAND edit

Other Other ethnic group. To be coded back to **EthGrpNI**.

If you are editing a Northern Ireland case and 'Other ethnic group' has been recorded, please contact Stuart Bennett [Stuart.Bennett@dfpni.gov.uk] from NISRA with the details of the 'other ethnic group' and ask him which code he would like it to be back coded into in EthGrpNI from the following options:

- 1. White**
- 2. Irish traveler**
- 3. Mixed**
- 4. Indian**
- 5. Pakistani**
- 6. Bangladeshi**
- 7. Other Asian**
- 8. Black Caribbean**
- 9. Black African**
- 10. Other Black**
- 11. Chinese**
- 12. Other ethnic group**

3.6 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 4. 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.

3.7 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 4. 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.

3.8 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. If unsure of the % alcohol volume, look up the drink on the internet.

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, Lager or Cider 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, Gin, 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, After Shock.

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, Crabbies, MudShake, Red Square, Vodka Reef, Shotts, Txv, VK Vodka kick, Vodkat Classic, WKD ('Wicked'), Alcoholic Irn Bru, Thickhead, Woody's, any mention of 'alcoholic lemonade, cola, orangeade, cream soda' etc or any 'Ready to Drink' beverage.

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]**.

3.9 Coding of beer bottle sizes

NBotL7/ 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.

For beers or ciders where it is not clear as to the size of bottle, please use the internet to clarify.

Bottled beers or ciders 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.

3.10 Bottled lager/cider/beer codeframe

Abbot Ale	0.58	Kronenbourg (1664)	0.44 or 0.58
Amstel	0.58	Labatts	0.58
Asahi	0.58	Labatt's Ice	0.58
Banks (Mild only)	0.97	Leffe	0.58 or 0.77
Banks Old Ale (nips)	0.32	London Pride	0.97
Bass (pint bottle)	1.00	Lowenbrau	0.58
Becks	0.48 or 0.58	Mackeson	0.88
Bishops Finger	0.88	Marston's Pedigree	0.88
Black Sheep Ale	0.88	McEwans 80 or 90 shilling	0.97
Boddingtons (Export draught only)	0.58	Merrydowns	0.58
Bombardier	0.88	Michelob	0.58
Brahma	0.58	Miller (Draught not Pils)	0.58
Brandenburg	0.58	Molson	0.58
Budvar	0.88	Murphys	0.88
Budweiser/Bud Ice	0.58	Newcastle Brown Ale	0.97
Bulmers/Magners	0.58, 0.88 or 1.00	Olde English	0.88
Carling	0.48	Old Peculiar	0.88
Carlsberg	0.58	Old Speckled Hen	0.88
Castle	0.58	Oranjeboom	0.58
Cobra	0.58	Peroni lager (Nastro Azzuri)	0.58
Coors	0.58	Pils (unspecified)	0.58
Corona	0.58	Pivovar Czech Lager	0.88
Crest Lager (Export)	0.44	Red Rock	0.58
Diamond (Blush, White or Zest)	0.48	Red Stripe	0.58
Dragon (Stout)	0.50	Rolling Rock	0.58
Elephant (Lager)	0.48 or 0.58	Royal Dutch	0.58
ESB (Fuller's ESB)	0.88	Ruddles	0.58
Export 33	0.44	Sam Smiths (Old Brewery Strong Ale)	0.97
Foster's (Unspecified)	0.77	San Miguel	0.58
Foster's Export	0.77	Scrumpy Jack	0.58
Foster's Ice	0.58	Singha beer	0.58
Frosty Jack Cider	0.88	Skol	0.58
Fuller's (London Pride)	0.97	Sol	0.58
Grolsch	0.58 or 0.77	Spitfire	0.88
Guinness Extra Stout	0.58	Stella Artois (dry or regular)	0.44, 0.48 or 0.58
Guinness Original	0.58 or 0.88	Stinger	0.58
Heineken (Export)	0.58	Strongbow (Blackthorn)	0.48 or 0.58
Hoegaarden (bier blonde)	0.58	Thatchers cider	0.88
Holsten Pils (bottle)	0.58	Theakstons	0.97
Home made	0.58	Tiger beer	0.58
Ice Dragon	0.48	Tsingtao	0.58
John Smiths	0.77	Vault	0.58
K. Cider	0.48	Victoria Bitter	0.58
Kanterbrau	0.58	Wadworth Export	0.88
Kingfisher	0.58	Woodpecker	0.48
Kirin	0.58 or 0.88		

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

3.11 Height and weight

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**.

4 Longstanding illness codeframe

01	Cancer (neoplasm) including lumps, masses, tumours and growths and benign (non-malignant) lumps and cysts	Mental, behavioural and personality disorders
	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	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
		<i>Alzheimer's disease, degenerative brain disease = code 08</i>
02	Diabetes Incl. Hyperglycaemia	05 Mental handicap Incl. Down's syndrome, Mongol Mentally retarded, subnormal
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.*

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
Bupthalmos
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

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)

NB *Haemorrhage behind eye = code 10*

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

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

29 Complaints of teeth/mouth/tongue

Cleft palate, hare lip
Impacted wisdom tooth, gingivitis
No sense of taste
Ulcers on tongue, mouth ulcers

Musculo-skeletal - complaints of bones/joints /muscles

34 Arthritis/rheumatism/fibrosis

Arthritis as result of broken limb
 Arthritis/rheumatism in any part of the body
 Gout (*previously code 03*)
 Osteoarthritis, rheumatoid arthritis, polymyalgia rheumatica
 Polyarteritis Nodoso (*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 intervertebral 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
 Chondrolystrophy
 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
 Chicken Pox
 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 Thrombocytopenic Purpura (ITP)
 Immunodeficiencies
 Polycythaemia (blood thickening), blood to thick
 Purpura (nes)
 Removal of spleen
 Sarcoidosis (*previously code 37*)
 Sickle cell anaemia/disease
 Thalassaemia
 Thrombocythaemia
 Vonwillebrand disease

Leukaemia - code 01

39 Skin complaints

abscess in groin
 acne
 birth mark
 burned arm (nes)
 Bowens disease
 carbuncles, boils, warts, verruca
 cellulitis (nes)
 chilblains
 corns, calluses
 dermatitis
 Eczema
 epidermolysis, bullosa
 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)
ipinotalgia
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

5 Drug Coding

MEDBI

All drugs are to be coded to the six digit BNF using the Coding Prescribed Medicine booklet or the BNF (Number 61 March 2011). 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.

Some drug sections that have only two section numbers in the BNF (eg 4.10 and 2.12) have been divided into two or three groups, to separate the types of drugs. Where this is the case, all of the drugs listed under the relevant sections in the BNF are listed in this booklet.

Lipid-lowering drugs, formerly coded as 02.12.00

Statins.....02.12.01

Other lipid-lowering drugs.....02.12.02

Some have been split into two or three constituent sections, using the BNF sub-section numbers (eg : 2.5.5.1, 2.5.5.2, 2.5.5.3). Where this is the case, all of the drugs listed under the relevant sections in the BNF are listed in this booklet.

Antihypertensives formerly coded as 02.05.05

Angiotensin-converting enzyme (ACE) inhibitors.....02.05.51

Angiotensin II receptor antagonists.....02.05.52

Renin inhibitors.....02.05.53

Antidiabetic drugs formerly coded as 06.01.02

Sulphonylureas.....06.01.21

Biguanides (e.g. Metformin).....06.01.22

Others.....06.01.23

Use the drug coding booklet for a list of codes.

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

6 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
-

Checks for length in the edit program reject extremely unusual measurements as a safeguard against very unlikely results. Contact research staff if the length check is activated.

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 **NAttBPD2**.

-
- 0 Problems with PC
 - 1 Respondent upset/anxious/nervous
 - 2 'Error 844' reading
 - 3 Too shy (*respondents aged 15 and under only*)
 - 4 Child would not sit still long enough (*respondents aged 15 and under only*)
 - 5 Other
 - 6 Problems with Cuff fitting/painful
 - 7 Problems with Omron readings (zeros, no readings)
-

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
 - 4 Other
 - 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
 - 6 No paediatric phlebotomist available
 - 7 Parent doesn't agree with it/thinks child too young
 - 8 Too busy
 - 9 Time constraints (i.e. appointment timings not convenient)
-

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
-

VpOther Other abnormalities noted after 5 minutes (blood sampling).
To be back coded to **VpProb**.

- 1 Sensory deficit
 - 2 Haematoma
 - 3 Swelling
-

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
-