P2905

NATIONAL INFANT DIET AND HEALTH STUDY

INTERVIEWER PROJECT INSTRUCTIONS

NIDHS Quick Reference Sheet

Operations Dept	Blue Team
Survey number	P2905 for visits 1,2 & 3; P3905 for visit 4
Sample	Named sample (from child benefit records) of children aged 4 months to 17 months. You will have 21 addresses in your assignments. In field prioritise those aged 17 months otherwise if delay they could become 18 months and ineligible. Likewise prioritise those aged 4 months. If we delay with those they will turn 5 months and we will have too few infants in sample aged 4 months.
Movers	Trace any movers.
Proxy Interviews	Proxy interviews are not allowed - but a translator within the household can be used.
Survey overview	Stage 1 **1.** Face-to-face interview with mother only and measure child; leave 4 day child nutrition diary. **2**. Reminder visit prior to collecting diary. **3**. Diary collection and introduce clinic visit. Stage 2 **4**. After clinic visit collect urine bottles if (you will be contacted in advance by (text / telephone) and sent a Urine Collection pack).

Mainstage - Key Dates (stage 1 to diary collection only):

Wave 1 field period:	*Stage 1:* 5th January -15th February 2011 (6 weeks) *Stage 2:* Urine collection deadline of 1st June 2011
Wave 2 field period:	*Stage 1*: 28th March - 9th May 2011 (6 weeks) *Stage 2:* Urine collection deadline of 30th August 2011

SURVEY ELEMENTS

P2905	**National Infant Diet and Health Study (NIDHS)**
Before 1st visit	Office sends out opt-out/advance letter to each sampled address. Respondents have a 2 week opt-out period.
1st interviewer visit	CAPI interview with mother (@ 45 minutes) - includes a CASI element Place and explain in detail 4-day child food diary. Two types of diary (i) 4 - 8 months; (ii) 9 - 18 months CAPI generates random start day and four consecutive days in total.
2nd interviewer visit	Mid diary check. Detailed checks of diary using Diary Prompt Sheet / IDAS. (can be done by telephone ONLY if you are sure this is appropriate).
3rd interviewer visit	Collect diary. Detailed checks and refer to Diary Prompt Sheet. Give token of appreciation (£30 in high street vouchers if complete 3 or 4 days). Note they will also get dietary feedback later. CAPI questionnaire (@ 5-10 minutes). Measure mother (height and weight) and infant (weight, length and head circumference). Introduce the clinic visit and get agreement for HNR to contact. Explain tracer water and if willing to take part provide pre-clinic visit urine collection equipment.
END OF P2905	POST DIARIES BACK TO OFFICE. POST VOUCHER RECEIPTS/ CONSENT FORMS IN SEPARATE ENVELOPE
CLINIC VISIT	NO CLINIC VISIT FOR SCOTTISH BOOST SAMPLE. At clinic child will be measured (skinfold thickness & blood sample). Mother asked to consent to tracer water & urine collection. Breast feeding mother: asked to consent to 14 day urine collection for themselves and child and to keep a breastfeeding diary over the same period. £50 voucher sent by office if urine collected. Non-breast feeding mother (most common): asked to consent to 5 day urine collection for child only. £30 voucher sent by office if urine colected.
START OF P3905	**Urine collection**
Before 4th visit	Brentwood informs you (by text/ telephone) of the collection visit. Additionally you will be sent a URINE COLLECTION FORM (there is no formal ARF). Dial in to pick up each case. Contact respondent and arrange collection. Urine must be collected within 5 days of end of 5 day/ 14 urine collection period.
4th interviewer visit (after clinic visit)	Re-weigh infant (and mother, if taking part in breast milk assessment). Pick up urine collections of infant (and mother for breast fed infants). Pick up breast milk diary (if breast milk protocol). Give promissory note for token of appreciation for urine collection (as appropriate).
AFTER	Visit post-office and post urine back to office.

1. Background and aims of the National Infant Diet and Health Survey

1.1 Background

Appropriate nutrition for the youngest age groups in the population is of paramount importance for ensuring optimal development and growth. Breastfeeding during early life and introduction of appropriate weaning foods at key time points are critical for laying the foundations for health later in life. In recent years, there have been changes to recommendations for exclusive breast feeding, with a worldwide declaration that all infants should be exclusively breast fed to 6 months of age[1], a policy which was adopted by the Department of Health in 2003[2], updating the earlier recommendation that foods should be introduced after 4 months[3]. Recommendations are also made about the introduction of solid foods, which foods should be avoided in the first year and which should be encouraged to enable adequate intakes of those nutrients which are low in breast milk, like iron. Debates continue about supplementation of infants, with the United States recently introducing a recommendation that all breast-fed infants be supplemented with Vitamin D from the first few days of life[4].

Infants are not part of the National Diet and Nutrition Survey rolling programme that we carry out at NatCen, which begins at age 18 months, and have not been the subject of a large national survey for many years. In order to assess compliance with recommendations, and to determine the nutritional health of the youngest children in the UK, the Department of Health (DH) and Food Standards Agency (FSA) want to conduct a representative dietary survey of this age group. This will provide up-to-date estimates of the dietary intakes and nutritional status for key nutrients for this age group. Results from this survey will be used as a basis for developing Government policy and measuring progress towards Agency Strategic Plan targets and other Government objectives.

1.2 Aims of the survey

The aims of the National Infant Diet and Health Survey are to:

- provide detailed, quantitative information on the food and nutrient intakes, sources of nutrients and nutritional status of a representative sample of infants and young children aged 4 up to 18 months from the UK population;
- provide detailed information on breast and breast milk substitutes consumed by young children;
- describe the characteristics of infants with intakes and/or status of specific nutrients that are above and below national reference values;
- produce a database of food consumption to provide the basis for the calculation of likely dietary intakes of natural toxicants, contaminants, additives and other food chemicals for risk assessment;
- provide height (length), weight and other body measurements and examine their relationship to social, dietary and health data as well as data from blood analyses;
- evaluate the diet of infants to establish the extent to which it is adequately nutritious and varied;

---

1 World Health Organization (WHO). Infant and Young Child Nutrition. Global Strategy on Infant and Young Child Feeding. Geneva: WHO 2002.

2 Department of health. Breastfeeding and the NHS Priorities and Planning Framework. 2003-2006. http://www.dh.gov.uk/en/Healthcare/Maternity/Maternalandinfantnutrition/index.htm)

3 Department of Health. Weaning and the Weaning Diet. Report of Health and Social Subjects No 46. London, The Stationery Office. 1994

4 Wagner CL, Greer FR and the Section of Breastfeeding and Committee on Nutrition. Prevention of Rickets and Vitamin D Deficiency in Infants, Children and Adolescents

- establish the extent of deviation of the feeding practices adopted by carers of infant from national policy for infant health;
- roughly establish the dietary habits of the mother, or other key family member, and link to the nutrient intake and nutritional status of infants; and
- measure blood indices that give evidence of nutritional status.

1.3 Survey timetable

A dress rehearsal was carried out between February and April 2010 to test the procedures and protocols for the main stage of the survey. The dress rehearsal also contained a clinic visit element.

The main stage of the survey is split into two waves of fieldwork. The fieldwork timetable is as follows:

Stage 1 is the placement and collection of the food and drink diary, and the introduction of the clinic visit:

- **Wave 1:** 5th January -15th February
- **Wave 2:** 28th March - 9th May

Stage 2 (the clinic visit) will follow for each respondent as soon after Stage 1 as possible. Clinics have the following deadlines for completing all visits:

- **Wave 1:** Wednesday 11th May
- **Wave 2:** Tuesday 9th August

The final date by which you will have returned to participating households to collect stable isotope urine samples for each wave is as follows:

- **Wave 1:** Wednesday 1st June
- **Wave 2:** Tuesday 30th August

2. OVERVIEW

The key elements to the survey are as follows:

- Face-to-face interview using CAPI
- Dietary data collection (unweighed diary, completed for four consecutive days).
- Taking of physical measurements (height and weight of mother; length, weight and head circumference of child)
- Visit to clinic where measures of body composition, fluid and breast milk intake, skin folds and blood sample collection take place
- Collection of urine samples (if appropriate)

This will involve the following interviewer visits:

- Initial visit to carry out main CAPI interview and place diary
- Diary check visit (may be done by telephone if you are sure this is appropriate)
- Diary collection visit, involves checking diary, a short CAPI interview (plus any blocks not completed at visit 1), the measurements and introducing the clinic visit
- Urine collection visit (if appropriate), involves collecting the samples, reweighing the infant (and in some case the mother), and taking the urine samples to a post office to send to the lab.

The study will sample people living in private residential households in the UK. The sample will be a sample of infants aged four to 18 months. The parent or guardian best placed to answer questions about the infant's feeding habits will be interviewed.

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

- MRC Human Nutrition Research (HNR), based in Cambridge
- NatCen (National Centre for Social Research)

Other organisations and key individuals have been identified to assist with various aspects of the survey, including:

- Dr Ken Ong and the MRC Epidemiology Unit, Cambridge. Dr Ong will serve the survey as the Survey Doctor.
- Newcastle University, who have helped test the diary procedures.
- Northern Ireland Information, Statistics and Research Agency (NISRA) who will conduct fieldwork in Northern Ireland.

As a token of our appreciation and in recognition of the time commitment required, we propose to give each fully productive individual **£30** for completing the diary (if they complete three or four diary days).

Further TOAs are available for the clinic visit stage:

- £10 for visiting the clinic;
- £30 for those providing a blood sample,
- £30 for those taking part in body composition measurement (involves the child drinking a small dose of tracer water, and then having a sample of urine collected for 5 days);
- £50 for the breast milk assessment (involves both the mother and child drinking a small dose of tracer water, and then collecting a urine sample from both for 14 days).

Information about the survey, its objectives and design have been submitted through the Integrated Research Application System (IRAS) and a NHS National Research Ethics Committee (NRES) considered and approved the application.

3. SUMMARY OF THE NIDHS SURVEY DESIGN

3.1 Sampling

The study covers England, Wales, Scotland and Northern Ireland and samples children aged between 4 months and 18 months living in private residential households only. We have selected a random sample of parents with children in this age group from Child Benefit records.

The mainstage sample comprises a core sample, and a country boost sample in Scotland. The sample consists of 4452 addresses in 212 postcode sectors (points). The points each contain 21 addresses and have been sampled as follows:

	England	**Scotland**	**Wales**	**Northern Ireland**	**Total**
Core	151	13	8	6	178
Boost	-	34	-	-	34
Mainstage total (core+boost)	151	47	8	6	212

As we are using Child Benefit records, this is a named sample – so you won't need to select households or respondents on the doorstep, you will just need to check that the child does actually live at the address. To be able to do this, you will be provided with the name of the 'benefit recipient' (the parent/legal guardian), as well as the name, date of birth and sex of the relevant child at each address.

Our target response rate for is to achieve 58% fully productive interviews (i.e. respondents completing three or four diary days).

See section 5 for more information about sampling.

3.1.1 Scotland boost

The Scottish Government have **not** funded the clinic visit for Scotland boost points. This means that the Scotland boost sample will **not** involve a clinic visit. There are separate information leaflets and opt-out / advance letters for respondents in Scottish boost points, which do not mention the clinic visit. CAPI has also been programmed to ensure that the introduction to Stage 2 of the survey does not appear.

Your ARF and CAPI programme will both tell you if you are working on a Scottish boost point.

3.2 The Interviewer Visits

You will make three main visits to a participating household. The interviewer visits cover:

- Questionnaire administration:
  - Most of the interview will be an interviewer-administered CAPI questionnaire carried out face-to-face. There is one CASI (self completion) element.
- Collection of dietary data for four consecutive days using a diary (see section 10) and
- The taking of measurements: maternal height and weight (if mother resident), infant length, infant weight and head circumference.

There is a possible fourth visit that you will need to make to a participating household:

- Picking up the urine sample (if the respondent agreed to that part of the clinic visit)

The table below summarises the tasks carried out at each visit:

Before 1st visit	An advance / opt-out letter will be sent to each sampled address, informing them of the survey. Respondents will be given a two week opt-out period.
1st interviewer visit	CAPI questionnaire (part 1) (should take about 45 minutes) Place diary.
2nd interviewer visit or telephone	Midweek diary check up (can be done by telephone ONLY if you are sure this is appropriate).
3rd interviewer visit	Collect diary & complete checklist. CAPI questionnaire (part 2) (about 5-10 minutes of questions). Give token of appreciation (£30 for diary completion in high street vouchers). Measure mother and infant. Introduce the clinic visit and get agreement for HNR to contact. Introduce tracer water & provide pre-dose equipment if willing to take part.
4th interviewer visit (after clinic visit)	NOT ALL RESPONDENTS WILL HAVE THIS VISIT. YOU WILL BE SENT A NEW ARF (URINE COLLECTION FORM) FOR ADDRESSES THAT NEED A FOURTH VISIT. SEE SECTION 12 FOR MORE DETAILS Re-weigh infant (and mother, if taking part in breast milk assessment) Pick up urine collections of infant and mother (for breast fed infants). Give promissory note for token of appreciation for urine collection (as appropriate).

3.3 The Clinic Visit

Introducing the clinic visit

The second stage of the survey is carried out at a clinic. At the end of the final visit, you will seek agreement for the respondent to either attend a clinic (these are based in a Clinical Research Facility, Children's Hospital or hospital Paediatric department) or to have a mobile health unit visit the home (for rural locations where the respondent is willing to have a clinic visit but cannot get to one). All respondents completing at least three dietary days (i.e. those deemed fully productive) will be eligible for a clinic visit.

You will need to give respondents a leaflet which explains more about the clinic visit and will ask the respondent whether they agree to HNR contacting them to explain more and to arrange a clinic appointment.

For those that agree to being contacted to find out more about the clinic, you will then tell them a

bit more about the fluid intake assessment, and hand over a leaflet about this. If the respondent is interested, you will explain about collecting a pre-dose urine sample and hand over an instruction leaflet and the collection kit. (See section 11 and 12 for more on this.)

You will also hand over a leaflet that explains more about the blood sample, so that the parents can have a chance to think about whether or not they would be happy for their child to have a blood sample taken before they visit the clinic.

What happens at the clinic?

For those attending the clinic or having the mobile unit visit, nurses will obtain written consents for all measures to be undertaken. Respondents can opt out of any of the measurements.

- **Skin fold thickness**

  Skinfold thickness provides an indication of how much body fat a child has. The nurse uses special callipers to measure skinfolds on the child's arm and back.

- **Breast milk intake, other fluid intake and body composition**

  As part of this study we are asking parents to allow us to measure their child's daily fluid intake including breast milk, by drinking some tracer water. There are two different approaches depending on whether or not the mother is still breastfeeding her child or not. If they participate in this element of the study, you will need to return to the household to pick up their collected urine samples.

Breastfeeding mothers

In order to measure how much breast milk passes from the mother to the child, both the mother and the child will be asked to take part in the procedure.

Breastfeeding mothers will be asked to collect a sample of urine from themselves and from their child prior to visiting the clinic (you will explain what this involves and provide the relevant equipment). At the clinic, both mother and child will be asked to drink a small amount of special tracer water, and then every day for the next 14 days the mother will collect one urine sample from both from herself and the child. They will also be asked to complete a breast milk diary during their urine collection period. Breastfeeding mothers who take part in this stage will be given the results to tell them how much fluid their child has taken in over the period, and what proportion of this was breast milk. Those taking part will also be sent £50 in high street vouchers (sent out from the office) as a token of our appreciation.

Non-breastfeeding mothers

Children who are not being breastfed will be given tracer water to assess their body composition (the amount of fat that the child has).

Non-breastfeeding mothers will be asked to collect a urine sample from their child prior to visiting the clinic. At the clinic the child will be asked to drink a small amount of tracer water, and then every day for the next five days the mother will be asked to collect one sample per day of urine from her child. Results will not be fed back to those taking part, but those taking part will be sent £30 in high street vouchers as a token of our appreciation.

What is tracer water?

Tracer water is completely safe and slightly different in composition from normal tap water but it is lost in the same way as normal water in the urine. It also incorporates itself into breast milk and is passed to the baby during feeding. By measuring the fraction of tracer water there is in the mother's and/or the child's urine over several days we can determine how much milk or fluid the child has drunk and then relate this to their growth and nutrition. Mothers will drink this water from a sterilised bottle with a straw. For children, mothers will be asked to bring one of the child's drinking cups or beakers with them to use, or a sterilised bottle can be provided at the clinic, or for the youngest children, the dose can be administered orally using a syringe.

Blood sample

With the parent or legal guardian's consent, a specially trained nurse will take a small blood sample (less than a teaspoon) from the child's arm using specially adapted needles designed for children of this young age. This will allow us to assess important health factors such as the iron status of the children and their vitamin D levels**.**

For those who do agree to give a blood sample, results will be fed back to them, and with permission, to their GP (such as blood count, iron store status and vitamin D status) and they will be sent £30 in high street vouchers as a token of our appreciation.

4. SURVEY MATERIALS

The following is a list of documents and equipment you will need for this survey. Before starting work, check that you have the following supplies.

Pre-doorstep

Police letter
Plastic zipper bag for you to make up packs of documents
Project instructions

Doorstep

ARF (Core)
Laminated opt-out / advance letter (Core)
Spare opt-out / advance letter (Core)
NatCen leaflet
HNR leaflet
Stage 1 leaflet (Core)

VISIT 1

Broken appointment cards
CAPI showcards
Interviewer reference cards
Stage 1 leaflet_Core
Sticker book
Interviewer diary assessment schedule
Food diary – 4-8 months
Food diary – 9-18 months
Diary instruction booklet
Practice sheets
Food diary reminder card
Carer pack (containing carer letter and food & drink recording sheets)

VISIT 2 (Diary check)

Interviewer diary assessment schedule
Green pen
Interviewer reference cards – Diary prompt page
Diary instruction booklet

VISIT 3

£30 diary Token of Appreciation receipt
£30 high street vouchers
Interviewer reference cards – Diary prompt page
Interviewer diary assessment schedule
Diary instruction booklet
Green pen
Diary evaluation (to complete after visit)
Infant measurements consent form
Measurement Record Card - Adult
Measurement Record Card - Infant
Stage 2 leaflet
'Why provide a blood sample' leaflet
Tracer water general info leaflet
Tracer water breast milk predose leaflet
Tracer water body composition predose leaflet
Equipment: Rollameter mat x 1 Kitchen roll Milton wipes Head circumference Lasso tapes x 2 Stadiometer x 1 Scales x 1 Tracer water predose kit – breast milk x 1 Tracer water predose kit – body composition x 1

VISIT 4 (urine collection – these will be sent out by the office)

Urine Collection Form (UCF)
Respondent Information Sheet
Promissory note – breast milk tracer water (if BM protocol)
Breast milk diary evaluation form (if BM protocol)
Promissory note – body composition (if Body comp protocol)
Special delivery envelope

5. YOUR SAMPLE

5.1 The sample

As discussed above, we are using Child Benefit records as the sampling approach for this study. Child Benefit records are held by HM Revenue and Customs and we have agreement to use the records in this way. We are using this sample to ensure that our survey is representative of the general population.

We will also have a Healthy Start boost – this is a boost of parents or guardians who are recipients of Healthy Start vouchers. However, this is just for your information – there will be no difference in protocol and you will not (and do not need to) know which of the addresses are Healthy Start boost addresses.

We have asked for a sample of 4 -17 month old children living within the postcodes that we have sampled. You will be provided with the following information on your ARF:

- Whether it is a priority address (see Section 5.1.1)
- Title, forename and surname of Benefit / Healthy Start recipient
- Address of recipient
- Forename and surname of child
- Date of birth of child
- Sex of child

Some parents/legal guardians and/or infants may no longer live at the address listed on your ARF. If you find out about any movers, try to get their new address. If it is local, please then try to interview at the new address. If it is not local then transmit the new address to us, and we will see if we can reallocate it.

5.1.1 Prioritisation of infants

We are asking you to prioritise those aged 17 months at the start of the survey period because as soon as they turn 18 months they will no longer be eligible to participate in the survey.

We are also asking you to prioritise those aged 4 months. If we delay with interviewing those aged 4 months, they will soon turn 5 months and we will have too few infants aged 4 months in the sample to be able to analyse separately, and these infants may also be more likely to be exclusively breastfed.

Your ARF and Interviewer Sample Sheet will tell you which infants you should prioritise at the beginning of fieldwork.

5.2 Who to interview

5.2.1 Selecting respondents

You will interview the parent or guardian of the selected infant who has most involvement in feeding the infant. In most cases, this will be the mother. If two parents share the feeding of the child, you will select one of them to take part in the interview (on the basis of which one is most readily available), but ideally have both present during the completion of the questionnaire.

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

Age is set at the date of first interview. If the infant will turn 18 months by the time you carry out your first main visit, then they will need to be coded as being too old to participate in the study.

5.2.2 Proxy interviews

If the person you want to interview does not speak English well, then you can use a translator within the household (who must be aged 12 or over). You will need to ensure that this person is present when you place the diary as well. It should also be suggested that this person should visit the clinic with the respondent and the young child, to help with translation there.

6. INTRODUCING THE SURVEY

6.1 Notifying the Police

You are responsible for notifying the police in your area about the work you will be undertaking on this survey. Before you start any work hand in your police letter at the police station in your area together with a copy of the advance letter and Stage 1 leaflet.

You will be given two copies of the police letter; leave one at the station and keep one yourself. Request more copies of the letter if you need to register at more than one station.

6.2 Advance letters and Survey Leaflets

The sample provider, HMRC, have requested that we allow a two week opt-out period for respondents. Therefore we have produced a joint advance/opt-out letter, printed on DH and FSA headed paper, which will be sent from the office on 9th December (Wave 1) and 9th March (Wave 2). Please note that due to the festive season, there will be an additional week in Wave 1 between the opt-out period and your fieldwork start date. The office will contact you before the fieldwork start date to inform you of any further opt-outs since you receiving your sample.

You will receive spares of this letter, and a laminate version, in your work packs. Please note that Stage 1 leaflets were **not** included in the advance/opt-out letter as it was agreed that the letter itself contained enough information for the participant to decide whether they will participate. Therefore please remember to **hand out a Stage 1 leaflet** when you visit the address.

6.3 Dietary feedback example

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

The feedback is made up of 5 graphs for 5 different nutrients (protein, vitamin C, calcium, iron and non-milk extrinsic sugars) and also gives feedback on total energy intake. The first page of the feedback gives a simple explanation of how to read the graphs. The pink dotted line shows the average intake of a specific nutrient, based on the infant's diet over the four days of recording. The blue line shows the UK guideline for the nutrient. The shaded area shows the range of observed intakes for the respondent's age group.

The respondent can use this information to see how their child compares with other children of the same age. The last page of the feedback form provides information on organisations that can give advice on a healthy diet.

6.4 Doorstep Introduction

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

Show your identity card

Say who you are

Say who you work for

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

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

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

What you might mention when introducing the survey

- It is a national (Government) survey (on behalf of the Department of Health and Food Standards Agency).
- It is an extremely important survey.
- It will provide the government with accurate and up-to-date information on the diet and health of babies and toddlers in the population.
- The information is available to all political parties.
- The information will be needed by whichever government is in office. To get an accurate picture, we **must** talk to all the sorts of people who make up the population - those with varied and unvaried diets, and those who like the current government's policies and those who do not.
- Each baby or toddler selected to take part in the survey is **vital** to the success of the survey. 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 without your consent
- The government only gets a statistical summary of everyone's answers.
- Respondents who complete four diary days can receive feedback based on their diet over the four days of recording
- **THERE IS A £30 TOKEN OF APPRECIATION FOR EACH INDIVIDUAL TAKING PART (this is a high street voucher that includes shops such as Boots and Mothercare).**

On the positive side, this survey will be very salient to the respondent, which will help response. We are asking a parent (in most cases, the mother) about their young child, which is a topic of interest and relevance. We will be offering feedback on the child's diet, and the option of a variety of measurements with feedback. For many parents, this will be of interest which will make "selling" the survey an easier job than for many studies.

However, parents with young children are often busy, and life can be fraught so that any extra time burden can be particularly unwelcome. Parents, especially of the youngest children, may not welcome someone into their home who they may see as "judging" their parenting skills. Parents may feel that their lives are chaotic enough without having to complete diaries, or take part in an interview. It is up to you to convince them to take part.

- Be flexible about when you do the interview – calling at a bad time will be a particular issue for people with young children
- We have provided you with sticker packs, that you can hand out to older children (the sticker books are aimed at 3-6 year olds) to help keep them occupied while you are interviewing the parent about a younger sibling

It is also important that you are aware of situations that might arise. You will need to be aware that the mother may be uneasy breastfeeding in their presence, and that the interview may have to be broken off if the baby needs feeding. You will also have to be sensitive to the needs of all the children in the household, and if the respondent becomes very distracted, should offer to come back at another time. We hope that the survey will be of interest to the respondents, but we need to ensure that we do not lose their goodwill by imposing on them.

- We have tried to keep the CAPI interview fairly short (it is around 45 minutes). If necessary, you can leave some blocks until the diary collection visit if you need to terminate the first interview early.

You will also need to be aware that interviews may take longer than anticipated due to interruptions from children, and that appointments should not be made too close together to allow for this.

6.5 Difficult situations

It is possible that you will visit a household where the child has died or no longer lives with the parent/guardian for some reason. In this unlikely situation, please apologise for visiting, and say that we will make sure that their details are removed from the sample file.

6.6 Visits to the household

You will make up to three main visits to a participating address. The ARF has space for you to enter appointments made with respondents - you might find this helpful in keeping track of your progress and also provides a checklist of tasks to be completed at each visit. (The fourth visit is covered by a different ARF, and this is explained in Section 12.)

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

6.7 Introducing Measurements

The measurements that we want to carry out are mother's height and weight (if the mother is resident) and the child's length, weight and head circumference. The protocols for these measurements are at the back of these instructions.

We suggest that these measurements are carried out at the end of the diary collection visit

(although you can do them earlier if necessary). This will minimise the time between the measurements and the clinic visit, and if tracer water is being taken the dose is based on weight, so it is important to try to get the weight measurement taken as close to the tracer water being taken as possible (as children of this age grow fast!). However, you can mention them at your first visit, so that the parent knows what to expect at the collection visit. If, for any reason, you will be unable to take the measurements at the third visit (for example, the infant will not be at home), then you should try and take these measurements at the first visit.

For the child measurements, you need to get the parent you are interviewing to sign the consent form. You cannot take the child measurements without signed consent (although you can measure the height and weight of the adult).

Explain what measurements you want to do and what they involve. For the child measurements you will need the help of the parent with all of them.

You will have a measurement record card for the child and for the mother, so ask if they would like a record of their measurements.

For the mother, unlike on other surveys where we measure height and weight, we are not providing Body Mass Index, as this is not useful among those who have been recently pregnant or are breast feeding.

7. THE ARF

7.1 Introduction

You will receive a pre-labelled ARF for each of the addresses in your sample.

REMINDER: THE 'ONE-WAY' ARF

The aim of this system is to improve efficiency in operations by eliminating NatCen's dependence on information written on the ARF by interviewers. All the information we require from you is now recorded in CMS.

Your use of the ARF as a document remains unchanged. Before returning work to the office always check that you have recorded everything written on the ARF into the **CAPI admin block**.

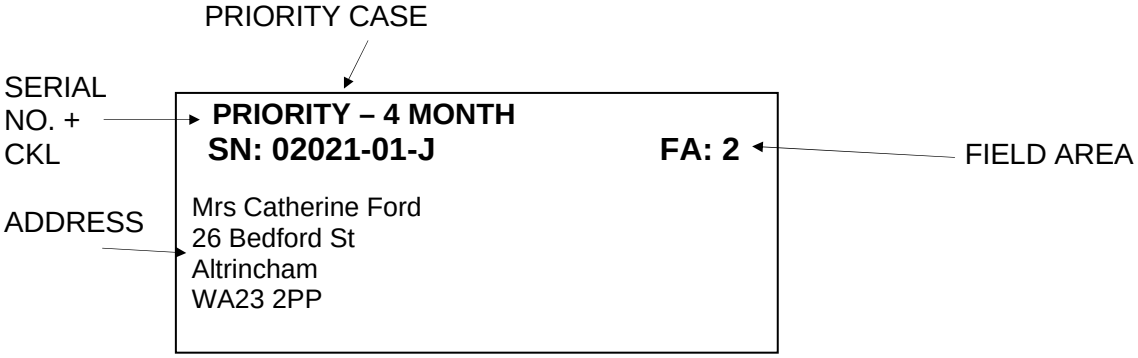
The ARF enables you to:

- record all attempts to make contact at the address, and keep track of the visits you make;
- establish whether the sampled child lives at the address;
- establish new address for named mother who has moved with child;
- establish parent most suitable for being interviewed about the baby's feeding;
- record the final outcome
- and it provides a checklist of the tasks that you need to do.

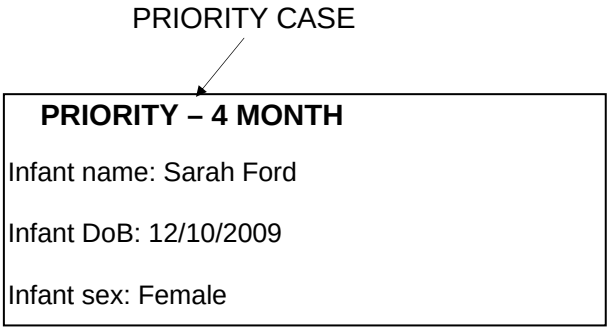
7.2 Address label

There will be two ARF labels at the top of the ARF giving, in addition to the details about the Benefit/Healthy Start recipient, a 7-digit serial number plus a check letter:

Label 1 (Adult info)



Label 2



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

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

7.3 Two versions of the ARF

There are two versions of the ARF: Core (yellow) and Scotland boost (orange). This is so that those working on a Scottish boost point can easily identify their sample, and will know straight away that there will be no Stage 2 (clinic visit). Otherwise, all core points will include a clinic visit so please continue as normal.

7.4 Final outcome

(top right corner of the ARF)

For addresses which are totally unproductive, this code will come from the ARF. For addresses which were productive (or partially productive) CAPI computes the outcome code on the basis of the respondent interview – i.e. how many diary days were completed. It can only be coded when you have completed all your tasks for that address. This code will be given to you in the Admin block.

7.5 Calls record

(bottom half of front page of the ARF and p2 of ARF)

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

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

7.6 Completing the ARF

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

SECTION B, Establishing if named infant aged 4-18 months lives at the address, and if so, identifies the person most involved in feeding the baby and is hence best placed to act as respondent.

B1:The name, date of birth and sex of the infant recorded in the Child Benefit records is provided on the label on front of the ARF. At this question, you need to establish whether the named child with this date of birth (DoB) lives at the address. If yes, go to B4 to establish the person (parent/legal guardian/foster parent etc) who is best placed to answer questions about the infant's diet and health. If no, you will be routed to questions to code why the named infant is not resident. If unsure, you will be routed to section C to record the reason.

B2:If the named infant is not resident, code the reason. If the named mother has moved with the infant, you will be routed to B3 to establish the new address.

B3:This question (routed from B2) establishes the new address for an infant who has moved with the named mother. If a new address is obtained is within your area (ie within the same postcode sector), please attempt to follow them up at the new address. If an established new address is outside your area, record the details (and outcome code) and transmit the case as soon as possible, as we may try to reallocate the address. If the address is not known/given, you will be routed to section C to record the appropriate unproductive code.

B4:Establishes the parent (or legal guardian/foster parent etc) who is most involved with the feeding of the infant and hence is best placed to act as respondent. If there are two people with equal involvement, you will select either as the respondent but should try to conduct visits when both are available so they can both provide information.

B5:This is a check to ensure that the infant will still be aged under 18 months at the date of first visit. Age is set at date of first interview so you will need to ensure that they are still going to be under 18 months, otherwise they will not be eligible to participate.

B6:Records whether the parent was interviewed at all.

SECTION C, Final outcome, is where you record the outcome of the interview.

SECTION D, Unproductive outcome, is where you record further information (ready for transfer into CAPI) about an unproductive outcome. In particular, record information any information that you think might be useful to a reissue interviewer.

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

7.7 Additional screening during interview

There are two further eligibility criteria to ensure that the infant and their parent/legal guardian are able to participate. These criteria may be sensitive for the parent/legal guardian, which is why they are included in the CAPI rather than when you are carrying out your ARF. The further eligibility criteria are as follows:

- If the infant had a very low birth weight (< 2kg);
- Or, if the infant had to have a feeding tube aged one week or older, then unfortunately they will not be able to participate.

We anticipate that this should be very rare.

8. CAPI QUESTIONNAIRE

8.1 Overview of coverage

At the first interview, the main CAPI questionnaire covers the following:

Section of questionnaire and coverage
Eligibility check A few questions about the child, to assess if the child is eligible for the study. If the child had a very low birth weight (< 2kg), or had to have a feeding tube at some point when aged one week or older. This should be very rare.
Background and demographics: Age, sex, date of birth, ethnic origin, household composition.
Breastfeeding/weaning practices: Duration of breastfeeding, use of breast milk substitutes, exclusive breastfeeding/formula before weaning, make-up of formula milk, age of introduction of solid foods and foods provided, receipt and use of Healthy Start vouchers and vitamins.
Eating patterns: Information about habitual eating pattern to help interpret the dietary record. Covers number and timing of meals, milk feeds, snacks, and drinks normally consumed; type of commonly consumed foods; use of salt; dietary restrictions.
Developmental stages: Age of: eating from a spoon, transition from pureed food, sitting without support, appearance of teeth, use of a cup, self-feeding.
Dietary supplements and medications currently taken by infant (and by mother if breastfeeding): Name, brand, strength and product license number.
Assessment of exposure to sunlight of infant over previous 12 months: plus use of sunscreen by child
Details of childcare arrangements: Information on whether foods are provided, or supplied by parent/care and whether this depends on age of the infant.
Health information: Information on hospital treatment, serious medical conditions that might affect dietary behaviour or the physical measurements.
Sleeping and minor gastrointestinal symptoms: Bowel habit, refluxing, posseting, sleeping and activity level.
Smoking and drinking: This bit is designed to be a CASI module and asks about the parents current smoking and drinking as well as details of the mothers smoking and drinking in pregnancy.
Socio-economic details of parents/primary carers: Education, income, receipt of benefits.

We assume that the average CAPI interview length will be around 30-40 minutes for the parent/carer. This excludes the time for placing the diary. At the second interview, as well as picking up any issues with diary completion, there is a short CAPI interview on the **parent's dietary habits and usual eating patterns**.

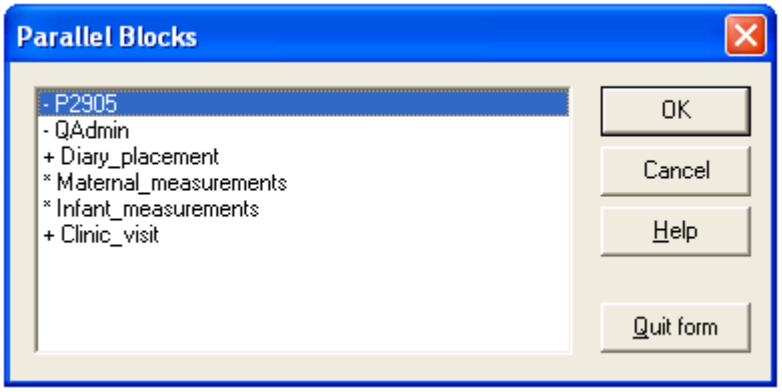
9. NAVIGATING THE CAPI MODULES

The computerised questionnaire consists of:

1. The main questionnaire **(P2905)**
2. The admin block **(QAdmin)**
3. The diary placement **(Diary_placement)**
4. The mother's measurements **(Maternal_measurements)**
5. The infant's measurements **(Infant_measurements)**
6. Clinic visit introduction **(Clinic_visit)**

Each component is known as a 'parallel block'. This means that you can enter a variety of components at certain times, depending on what visit you are carrying out. For example, if necessary, you can enter the diary placement block before you have finished all visit 1 questions (if a child starts crying for example).

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

10. FOUR-DAY FOOD AND DRINK DIARY

The parent/primary carer is asked to keep a record of everything their child had to eat and drink over a four-day period. You will need to place the diary with the parent/primary carer, 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.

10.1 The food diary

10.1.1 Types of food diary in the National Infant Diet and Health Study

- **4-8 month diary**
- **9-18 month diary**

10.1.2 Components of the food diary

Although there are different types of diaries, they are very similar in terms of how the information is collected. They all start with instructions for the parent/primary carer, followed by some example diary days and then a section asking the parent/primary carer to provide some general detail regarding their child's eating habits. This is followed by the main diary itself that the parent/primary carer completes and finally there are some questions relating to the age that certain foods were introduced to their child. Please familiarise yourself with the different components in order to help explain these to the parent/primary carer when placing the diaries. The reason why we require so much detail on the food, drink, and supplements consumed by the child is so that we can identify each food item correctly and allocate a corresponding food code from our nutrient databank as well as an appropriate portion code. Missing detail makes food and portion coding difficult and less likely to represent what the child actually had to eat.

The following list describes the important components of the food diary:

1. **General questions on eating habits** – before the start of the four-day recording period, the parent/primary carer should provide information on their child's usual eating habits such as usual type of milk, type of oil used when cooking, etc.
2. **Will anyone else look after your child today?** - this question is asked at the start of each diary recording day to remind the parent/primary carer that on occasions where other carers feed their child, that the diary or food and drink recording sheets are completed.
3. **Day & Date** – this should be filled in either by you at the first visit when you place the diary or by the parent/primary carer as they go along.
4. **Time slots** – this helps the parent/primary carer with recording but it also helps you when you come to check the diary. For instance, if the child has a 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 the parent/primary carer forgot to record the drink.
5. **Time** – the parent/primary carer still needs to record the time for each eating occasion, as this is what will be entered when the food is coded.
6. **Where, who else eating, at the table and watching TV** – this information is useful in 2 ways: 1) it helps us decide how to code certain foods depending on where they were eaten such as 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.
7. **Food/drink description and preparation** –the parent/primary carer needs to record as much detail as they can about the type of food and drink the child consumed including how it was prepared. There are prompts for most foods in the instruction booklet (listed mainly in alphabetical order) which tell the parent/primary carer the sort of detail needed. For example, if the child has squash to drink, they can look up squash under soft drinks and it tells the parent/primary carer what they need to record.

8. **Brand name** – wherever possible we ask that the parent/primary carer records brand name as this is very helpful for coding.
9. **Portion size** – it is important that we do not guess at how much the child is eating. Therefore, we need the parent/primary carer to describe the amount served and leftover using household measures, weights from packaging and the number of individual items, e.g. 10 raisins.
   Portion sizes for various foods can be found alongside the food description prompts at the back of the instruction booklet. At the back of the diary is a picture of some life-size spoons. When the parent/primary carer describes the amount in tablespoons they are often thinking of dessertspoons so it is important that they are clear about the difference.
   For composite foods the parent/primary carer needs 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 milk-shakes. So, a sandwich would be split into bread, spread and filling(s) and the amount of each component recorded separately. Splitting foods up like this means we get accurate portion sizes no matter how small the amount i.e. a slice of tomato in a sandwich.
8. **Questions on that day's food and drink intake** – these need to be filled out by the parent/primary carer at the end of each diary recording day to indicate whether the child's consumption that day was typical, and provide reasons if it was more or less than their usual intake.
9. **Dietary supplements** – if the child has taken supplements, the parent/primary carer should go back and record in the diary; brand name, full name of supplement, strength and amount taken.
10. **Has anyone else looked after your child today?** – if the child has been cared for by anyone other than the main carer, please ensure that the diary or food and drink recording sheets have been completed.
11. **Recipes** – for any homemade recipes, the parent/primary carer should list the ingredients, the amount of each ingredient, how many people the recipe was for and how much of the recipe the child ate.
12. **Questions relating to age and introduction of certain foods** – at the end of the four-day recording period, the parent/primary carer should complete the questions relating to how old the child was when certain foods were introduced. There is also space for the parent/primary carer to make any other additional comments.

10.2 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 DIARY 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.

10.3 Other diary documents

10.3.1 Instruction booklet

All parent/primary carers completing the diary should be given the separate instruction booklet. This contains the same instructions, examples and description prompts but saves the parent/primary carer from having to flick back and forth in the diary. It also includes some additional examples.

10.3.2 Carer packs

Children might have meals where the person keeping the diary is not present e.g. at the childminders, nursery, relative or a friend's house. In order to get information on the foods consumed at these occasions, we need to ask other carer(s) to help. Ideally we want them to fill in

the diary, but in some cases this won't be possible. Carers will not have received the same introduction to the diary as the parent/primary carer; they may not be as motivated or committed; they may not have enough time or the level of understanding required. As an alternative to recording in the diary, they can fill in a carer food and drink recording sheet, which is a simple form for recording key details about what the child ate whilst in their care. On the reverse side of the recording sheet are 'Diary instructions for other carers', to assist other carer(s) in the completion of the food and drink recording sheet.

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

- 1 x carer letter. This letter asks the person to complete the diary on the child's behalf
- 4 x carer food and drink recording sheets. There is one for each diary day.

The parent/primary carer needs to:

- WHEN THEY DROP OFF THEIR CHILD, place the diary OR the instruction/ recording sheets in the plastic bag along with the covering letter
- WHEN THEY COLLECT THEIR CHILD, collect the pack from the other carer

Information collected on the food and drink recording sheets does not need transcribing into the diary.

10.3.3 Reminder card

This card is to remind the parent/primary carer when they should start keeping the diary. They should put it somewhere prominent e.g. on their fridge door, bedroom mirror etc.

10.4 Placing the food diary

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

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

It is important that after you have placed the diary with the parent/primary carer, they feel confident with what is expected of them and are aware of the information in the diary that will help them record what their child has 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 the parent/primary carer gets an overview. Then go back through giving the parent/primary carer more detailed instructions using the DIARY PROMPT SHEET (see section 10.2).

10.4.2 Practising with the parent/primary carer

The best way of ensuring the parent/primary carer 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.

Ask the parent/primary carer to recall a recent eating occasion for their child (a few food items will suffice). Using the practice pages, show them how you would record those food items in the diary, making sure you put them in the correct time slot and fill in the details such as time, where and who else eating. Refer to the food description pages in the instruction booklet and demonstrate how these can ensure that you have recorded enough detail about the food. If appropriate refer to the life size spoons at the back of the diary.

Then ask the parent/primary carer to recall a different recent eating occasion for their child and, this time, have them record the information on the practice diary page. Some parent/primary carers will need to record more practice items than others, depending on how well they are coping. Remember to also ask them if the day was usual, if dietary supplements have been taken and if the child spent time with another carer, i.e. childminder.

10.4.3 Plastic bag for food labels

These are for the parent/primary carer to collect labels, in particular, ready meals and pre-prepared baby foods. The parent/primary carer is asked to wash all labels/packaging that have come into contact with food. You should label plastic bags with the respondent's serial number.

10.4.4 Food eaten away from home

The parent/primary carer is asked to record food and drink consumed at home and away from home e.g. restaurant or a friend's house. Therefore, they are expected to take the diary with them when they are away from home. If the child is in the care of someone other than the parent/primary carer, the other carer should be given a carer pack (see section 10.3.2). If the parent/primary carer forgets to take the diary out with them, they should make notes and transfer these into the diary as soon as possible.

We understand that it is difficult for the parent/primary carer to collect the same level of detail for foods eaten outside the home. They should try and record as much information as possible, describing what is in dishes rather than just giving the name. So, for example, if the child ate 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.

10.4.5 Arrange the check-up visit

After placing the diary, please arrange a check-up visit with the parent/primary carer 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 parent/primary carer's phone number if they are willing to give it to you.**

Ideally the check up visit should be a home visit (i.e. personal). If this is not possible then you must at least phone the parent/primary carer on the second day of recording to check that they have started keeping the 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 parent/primary carer needs.

10.5 Check-up visit

This visit is an opportunity to provide encouragement and support and to point out things the parent/primary carer may be omitting, thereby improving recording for the remaining days. You should review what they have recorded so far.
Remain neutral when reviewing the diary, as the parent/primary carer 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 parent/primary carer when reviewing their child's 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 child's diet based on the data collected in your child's diary. The more information you provide, the more reliable the assessment of your child's diet will be".
4. "While checking the diary I may need your help in clarifying anything that might not be clear".

10.5.1 Restarting the diary

If when you arrive for your check-up visit or speak to the parent/primary carer 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, the parent/primary carer is asked to keep the diary from Saturday to Tuesday but when you arrive for your check-up visit on the Sunday, the parent/primary carer has not started recording. Allocate them four new diary recording days starting with that Sunday through to Wednesday. Ensure that the parent/primary carer is in possession of their child's 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 their child had that day. Arrange a new check-up visit for the next day (now the second day of diary recording).

On some occasions, a parent/primary carer may not have started recording and may want to delay for some reason. Although we do not want the parent/primary carer to be picking "good" and "bad" weeks to keep their diary, the alternative could be that we would lose the respondent. If this would be the case or it would be difficult to arrange subsequent visits, you can allocate them four new days. You should replace like-with-like so if the original days were Saturday – Tuesday, the new days should also be Saturday – Tuesday. Give the parent/primary carer 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.

10.5.2 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 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. 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 parent/primary carer 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 parent/primary carer. Please use a green pen (or at least a different colour from that used by the parent/primary carer) when you write on the diaries so that we can see where you have needed to probe for additional information or made changes.

10.5.3 Regional and ethnic foods

A parent/primary carer 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 parent/primary carer 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'.

10.5.4 Additional check-up visits

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

10.6 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 parent/primary carer has followed your guidance, checking the remainder of the diary should not take very long. You must also ensure that the parent/primary carer has completed the General questions about food/drink on pages 17-19 and the Questions regarding the age at which certain foods were introduced, 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 and carer packs.

10.7 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.

10.7.1 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 parent/primary carer might have had with keeping the diary and how well you thought it reflected what their child actually ate. For example, if a parent/primary carer had language difficulties and their younger son or daughter translated for them, you would note this in your evaluation.

10.7.2 Early work feedback

This is based on your first completed diary and is sent via your Project 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.***

10.7.3 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.

11. Introducing the clinic visit

As mentioned above, the second stage of the survey is carried out at a clinic. This visit will involve:

- Skin fold measurements
- Blood sample
- Tracer water dosage (to measure body composition or breast milk intake)

Scotland boost assignments only: *If you are working on a Scotland boost assignment, please remember that there is no clinic element so you will not be introducing the clinic. Your ARF will tell you whether you are working on a Scotland boost point.*

At the end of the diary collection visit, you will introduce the clinic visit. (This is mentioned in the stage 1 leaflet, so it won't be totally out of the blue.)

In summary this will involve:

- Seeking agreement to pass contact details to HNR so that they can phone to explain more (Stage 2 leaflet describes clinic visit)
- Asking about interest in the body composition or breast milk intake part of the clinic visit (Information sheet explains what this involves)
    - If interested, explaining how to collect a urine sample from their child to take to the clinic (specific information sheet and equipment for this)
- Handing over blood sample leaflet so that the parent can consider this prior to visiting clinic

We are seeking agreement to pass the respondents details onto HNR so that they can get in touch (by phone) to explain more about the clinic visit, answer any questions, and if appropriate book an appointment. We are not seeking absolute agreement to visit – just agreement to think about it and find out more.

All respondents completing at least three dietary days (i.e. those deemed fully productive) will be eligible for a clinic visit. The CAPI programme will alert you that you need to introduce the clinic visit, and bring up some text that you should use to get permission to pass contact details onto HNR, who will then phone the parent to tell them more about the clinic visit and will book an appointment.

The introduction to the nurse visit is given by the CAPI program at the question *ClinInt*. The parallel block will appear at the end of the second visit (after the questions about the parent's dietary habits and usual eating patterns and you will need to select the 'Clinic_visit' parallel block (please refer to section 9 for more information about parallel blocks) which appears after the parent's dietary habits and usual eating patterns questions. The introduction to the clinic visit should be read exactly as worded. Sometimes you will need to provide further information in order to convince people of the importance of this stage. They may want to know more about what is involved. Some may be nervous about taking their child to a clinic and you will need to allay any fears.

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

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

If the respondent wishes, they and their GP can be given their child's blood sample results most closely related to their health. If you feel that this will help you get agreement to the clinic visit, please explain this. However, be careful to avoid calling the clinic visit a 'health check' – it is not. You are asking the respondent to help with a survey.

REMEMBER – We don't access the medical records of the respondents, so the only way to obtain medical information on them is to have a clinic 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 clinic visit:

- "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 the clinic visit"
- "the nurse and clinics are covered by the Data Protection Act and anything you say will be treated in the strictest confidence"
- "she will answer any questions you have, and you don't have to do anything you don't want to. The nurse will ask separate permission for each test, so you can decide at the time if you don't want to help with a particular one"
- "If you want, you will be given the results of some of your measurements. Some measurements can also be sent to your GP if you would like"
- "The NHS Research Ethics Committee has given approval for the survey"
- "All those who visit a clinic will receive a £10 high street voucher as a token of our appreciation"

- We can help with transport to and from the clinic, if needed
- We will cover all travel expenses incurred.
- The clinics are child friendly, so it would be possible to take other children along as well.
- The visit should take about 40 minutes

You will be given copies of the Stage 2 leaflets to give to all respondents so they can make an informed decision about whether to progress to stage 2. The leaflets give details of the measurements and give other information that respondents might need to know before the visit. You must also hand over the "Why provide a blood sample" leaflet so that respondents can consider this.

11.1 Interest in body composition or breastfeeding intake assessment

For those that agree to being contacted to find out more about the clinic, you will then read out some text about the fluid intake assessment, and hand over a leaflet about this. The actual assessment that they will be asked to take part in depends on whether or not they are still breastfeeding. This will also **only** be introduced for those where we have a **valid weight measurement**. These assessments involve the infant (and possibly the mother) drinking some tracer water – the amount they are given is dependent upon their weight. The CAPI programme will pick up whether the child is still being breast fed and will give you the appropriate introduction.

If the mother is breastfeeding, then ideally we would like them to take part in the breast milk intake assessment. This involves collecting a sample of urine from both mother and child prior to visiting the clinic; both mother and child drinking tracer water at the clinic, and then collecting one sample of urine from both the mother and child each day for 14 days. The clinic will also ask the mother to complete a simple breast milk diary during the urine collection period. Those who take part in this part of the project will be given **£50** in high street vouchers as a token of appreciation.

If the mother is not breastfeeding, or is not willing to take part in the breastfeeding assessment, then they can take part in the body composition assessment. This involves collecting a sample of urine from the child before visiting the clinic, the child drinking a dose of tracer water at the clinic, and then collecting one urine sample a day from the child for five days. Those taking part in this will be given **£30** in high street vouchers as a token of appreciation.

If the parent (mother) expresses interest in either of these, then you will need to show them how to collect a urine sample from their child. You will have an information sheet to hand out that explains this in detail:

- The GREEN information sheet is for those taking part in the breast milk intake (i.e. both mother and child)
- The BLUE information sheet is for those taking part in the body composition assessment (i.e. just the child).

You also have two sets of equipment:

- A set for those taking part in the breast milk intake (that has a collection bottle for **both** the mother and child)
- A set for those taking part in the body composition assessment (a collection bottle **only** for the child)

11.2 How to collect child's urine

You will need to show the equipment to the parent and explain how to use it. (You do not need to actually collect the sample!)

Equipment:

- 1 bag with labels to complete on collection of urine
- 1 small glass screw capped bottle labelled "Pre B0" (if doing breast milk assessment) or "Pre C0" if doing body composition.
- 1 disposable syringe (without a needle)
- 1 pair plastic forceps
- Cotton wool

The cotton wool is placed in the child's freshly changed nappy. Every hour or so, the nappy needs

to be checked to see if the cotton wool is saturated (very wet). If more than four hours elapse, or the cotton wool is contaminated with faeces (poo), the cotton wool should be discarded and the process started again.

When the cotton wool is soaking wet, pull the plunger out of the syringe, and transfer the cotton wool balls into the syringe using the forceps. Put the syringe plunger back in and squeeze the urine out of the cotton wool into the small glass bottle labelled B0. Aim to three-quarters fill the bottle and put the cap on

Write the date and time that the sample was collected onto the bag's collection label and onto the label on the bottle. Record the time of the nappy change relating to the successful collection on the bag label too. Throw away the cotton wool and syringe (in standard household waste).

Tell the parent to wash and dry the forceps as they will need them for the urine collections after the clinic visit.

11.3 Mother's urine collection

Equipment

- 1 disposable plastic cup
- 1 small glass screw-topped bottle labelled "Pre-M0"

The urine collected should not be from the first urine passed in the morning. The urine needs to be put into the small glass bottle labelled "Pre-M0" using the plastic cup if needed. Three quarters fill the bottle and put on the cap.

Storing the urine sample(s)

Make sure that the caps are screwed on tightly and put the bottle(s) back into the packaging they came with and store them somewhere cold, preferably the fridge. Do not freeze the samples.

Attending the clinic

The urine samples should be taken along to the clinic. They will be reminded to take the sample with them by the clinic appointment team at HNR. Also remind parents to take their child's usual sterilised feeding bottle, so that this can be used for the tracer water dose.

Apart from these, there is nothing special that needs to be taken to the clinic.

12. Urine Collection Visit

If a parent agrees to take part in the body composition assessment or the breast milk intake assessment, you will need to return to that household to pick up all the urine samples that they collected after the clinic visit, and post them to HNR for analysis. Note that this could be a few weeks after visit 3 (diary collection) and we will contact you (by text / telephone) in advance. The samples will need collecting within **5 days** of the last day of urine collection.

Not all parents will agree to this, so only some households will need to have a urine collection visit. Also, we will not know which parents have agreed for definite until after the clinic visit has taken place.

Once we know that a child (and mother) has taken a dose of tracer water, and so will be collecting urine samples that need to be picked up, we will generate a Respondent Information Sheet and Urine Collection Form that will be sent out to you to alert you that a collection visit is needed. As this part of the project takes place some time after the main stage, it has a new project number so that the fees for the main stage can be paid before the fees for the urine collection visit. This stage is therefore **P3905.**

The following items will be sent to you:

1. Respondent information sheet, that provides details:
    - Serial number, telephone number and address
    - Type of urine collection and date when samples will be ready (i.e. whether a breast milk assessment with a 14 day collection period, and samples from both mother and child or a body composition assessment with a 5 day collection period and samples from the child only).
    - Name and DOB of child
    - Name of parent or legal guardian who attended clinic
    - Other information about address
    - Breast milk diary evaluation form (Breast milk assessment only)
    - Voucher TOA promissory note
2. Urine Collection Form (UCF) to record outcome of collection visit.
3. Plastic Special Delivery envelope in which to post the samples to HNR.
4. Urine collection card – instructions telling you what you need to do

The date of collection and the number of samples will depend on whether the respondent is doing:

- Body composition measure – this involves 5 post-dose samples being collected from the child only.
- Breast milk assessment – this involves 14 post-dose samples from both the child and the breastfeeding mother.

We would like you to try to pick up the samples **up to 5 days** after the final sample has been collected.

12.1 Reminder telephone call

When possible (i.e. soon after you have received notification that there are samples to be collected), please telephone the adult respondent early in the collection period to check that all is going well.

If the respondent has missed a sample, tell them just to continue collecting the remaining samples. Reassure them that long as we know about any errors in collection then we will be able to correct for them later. Make sure they are completing the collection form as well (they will have received this at the clinic, when they and/or their child drank the tracer water dose).
If they have stopped altogether, then find out how many samples they have collected, and try to persuade them to at least collect the final sample (e.g. day 5 or day 14, depending on which assessment they are taking part in).

If the mother and infant are participating in the breast milk protocol and the mother is completing a breast milk diary, then you need to remind them to carry on filling this in.

If the respondent has specific problems with collection or has collected very few samples, give HNR a ring to discuss the best way to proceed.

Arrange an appointment (either during this reminder call, or via a later call) to pick up the samples, to administer a short interview, and to reweigh the child (and mother if appropriate) as soon as possible after the final sample has been collected. This visit will probably take about 15 minutes.

12.2 The Urine collection Form

This form acts as the ARF for this part of the project. It has some information printed on the label (but there is more information in the Respondent Information Sheet, so do make sure you refer to that). It allows you to record all attempts to contact the address (by phone or visit), and allows you to record the outcome. As with the main ARF, the Urine Collection Form is one way, and so you will need to transfer some of the information into the admin block/collection block for P3905 (visit 4), which will generate the fees for this task.

12.3 The Urine Collection Visit

At the collection visit, you will need to reweigh the child (as children grow so much at this stage in their life, that we need to have their weight both at the time of the dose and at the end of the sampling period). **Therefore you will need to take your laptop and your scales**. Depending on which protocol was carried out, you may also need to reweigh the mother. Also remember the plastic Special Delivery envelope as you will need this to post the samples.

As well as completing the weight measurement blocks in CAPI, you will also need to fill in some admin details about various tasks you have completed in relation to the urine samples. Please ensure you fill these details in accurately so that we know which respondents have done what, and so that your fees are computed correctly. This information can be filled in at home, as and when you carry out each task. **However, it must be fully complete before you sign off the case, otherwise fees can't be generated**.

When you visit, ask the respondent how things went and whether they had any problems. Have a quick look and check that all the samples have been collected and that records have been filled in correctly on the bottles and recording sheet. If necessary go through this with the respondent.

Put all full bottles, containers and most importantly the record sheet back into the collection box and secure with provided elastic bands. For those doing the breastmilk assessment there will be two boxes – one for the mother (white) and one for the child (yellow).

Wrap the full box(es) inside the plastic returns bag tightly and seal down using the sealing strip. Where there are two boxes of samples, these will fit into one posting bag.

You can leave the cooler boxes with the respondent if they would like them.

12.3.1 Breast milk diary collection

If the mother is breastfeeding and agrees to participate in the breast milk protocol when they visit the clinic, the nurse will ask whether she is willing to complete a breast milk diary it the same time as collecting their urine samples.

This diary will be used to assess the validity of using diaries to collect accurate information about the amount of breast milk consumed. It will validate the diary against the stable isotope method.

You will be notified as to whether there is a breast milk diary to collect. If there is, then you will need to check this when you return. This is not as detailed as the food and drink diary checking. You will just need to do the following:

a. Check whether there are any missing entries in the diary, and record why on the diary evaluation sheet;
b. Check that the mother has coded whether it is a full or partial (i.e. some information missing) day of completion ;
c. and complete a breast milk diary evaluation form.

The breast milk diary and evaluation form should be returned to HNR with the urine samples.

12.3.2 Once you have collected the urine samples

Thank the respondent for their participation and explain that their token of appreciation will be sent in the post within 6 weeks. (We will send out the token of appreciation as long as they collected some urine). Please give them a promissory note for the correct amount (£30 for the 5+1 sample for body composition and £50 for the 28+2 samples for the breast milk intake assessment).

When possible take the Special Delivery envelope containing the full sample box to a post office. The bag will already have been labelled with HNR's address and the postage paid. Please retain the proof of postage that will be given to you by the post office clerk.

Once you have done this please ring HNR at your earliest convenience to let them know you have posted the samples. You may be asked for the special delivery proof of postage number. You should ring HNR Reception on **01223 426356** during office hours only and ask for the "Infant Survey Breast Milk Intake Coordinators".

13. TOKEN OF APPRECIATION

13.1 Gift voucher token of appreciation for all those completing diary (3+ days)

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

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

When you give the vouchers to the respondent, you will need to get them to sign a receipt. These are provided in your pack. Keep the top copy to send to the office, leaving the carbon copy with the respondent.

13.2 Gift voucher token of appreciation for clinic visit element

The tokens of appreciation for the clinic visit will be sent out from the office. The amounts are as follows:

- £10 for visiting the clinic
- £30 for allowing child to provide a blood sample
- £30 for taking part in the body composition assessment
- £50 for taking part in the breast milk intake assessment

14. RETURNING WORK TO THE OFFICE

14.1 Transmitting CAPI work

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

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

REMINDER: TRANSMITTING CAPI WORK

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

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

Don't forget to back-up work regularly.

Do I need to complete the admin block before transmitting?

No. It is important that you transmit after each day's work, so you should not wait until a household Is complete before returning your work. You can complete the admin block at a later point.

14.2 Returning paper documents

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

Before returning work for an address, check all paper dietary documents for correct serial numbering and completion – the diaries, consent forms for child measurements and Token of Appreciation receipts.

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

- Top copies of the £30 Token of Appreciation receipts and consent forms.

- Diaries (and associated documents)

Diaries and associated documents must be returned to the office via Recorded Delivery, in up to three batches per assignment (apart from the first completed diary, which should be sent back straight away – sending this back does not count as one of your three batches).

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

Please note that 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.

REMINDER: SENDING BACK PAPERWORK

Before sending work back:

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

Return work in **two separate envelopes**:

1. Consent forms & receipts
2. Diaries (and associated documents)

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

14.3 Last return of work

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

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

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

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

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

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

15. ANY PROBLEMS

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

If you have a problem with your **fieldwork, equipment or supplies**, talk to your Area Manager or contact the Blue team in Brentwood on 01277 200600.

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

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

APPENDIX A: PROTOCOL FOR TAKING MATERNAL HEIGHT MEASUREMENT

A. THE EQUIPMENT

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Dismantling the stadiometer
Follow these rules:-

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

2. Remove one rod at a time

B. THE PROTOCOL

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

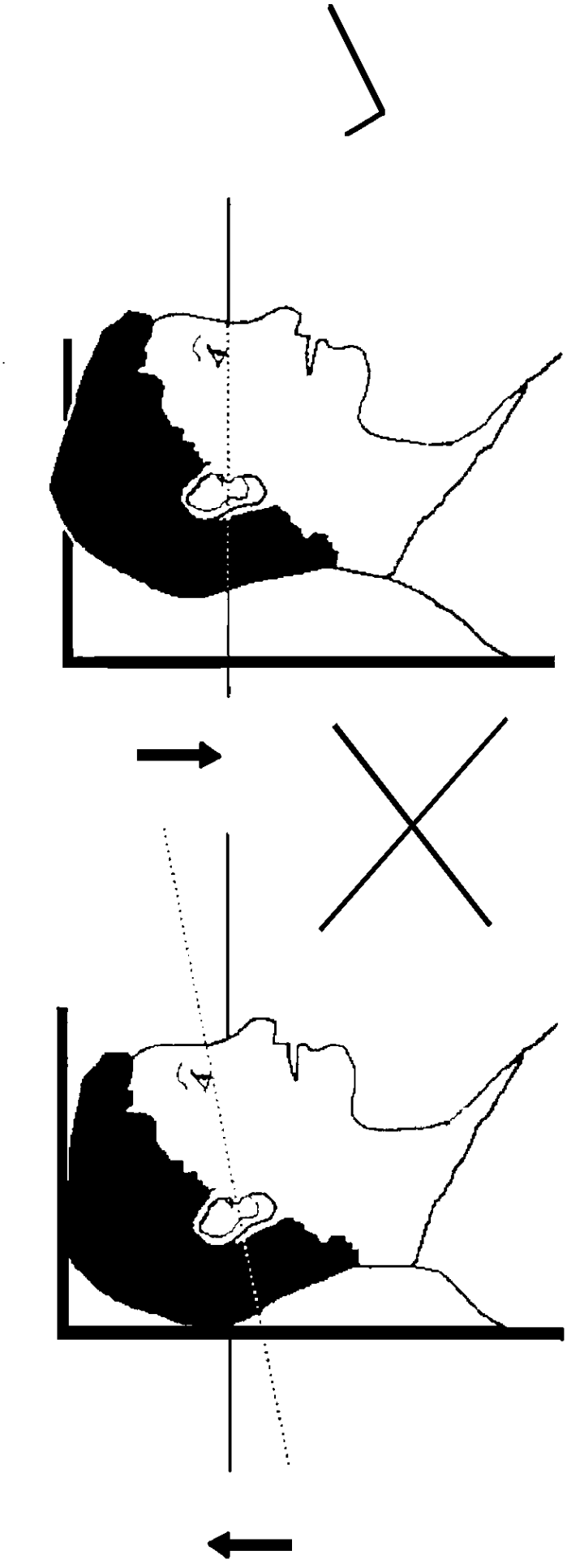
2. Assemble the stadiometer and raise the headplate to allow sufficient room for the respondent to stand underneath it. Double check that you have assembled the stadiometer correctly.

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

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

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

FRANKFORT PLANE – ADULTS



PROTOCOL

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

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

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

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

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

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

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

E. ADDITIONAL POINTS

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.

4. You should take two height measurements. If these differ by more than 0.5cm then CAPI will ask you to take a third measurement.

APPENDIX B: PROTOCOL FOR TAKING MATERNAL WEIGHT

A. THE EQUIPMENT

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

Soehnle Scales

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

Seca 850

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

Seca 870

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

Tanita THD-305

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

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

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

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

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

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

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

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

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

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

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

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

B. THE PROTOCOL

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

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

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

4. Ask the respondent to stand with their feet together in the centre and their heels against the back edge of the scales. Arms should be hanging loosely at their sides and head facing forward. Ensure that they keep looking ahead - it may be tempting for the respondent to

look down at their weight reading. Ask them not to do this and assure them that you will tell them their weight afterwards if they want to know.

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

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

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

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

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

MEASUREMENT RECORD CARD

If the mother would like a measurement record card, please complete one to leave with her.

APPENDIX C: PROTOCOL FOR MEASURING WEIGHT OF INFANT

You must get parental consent before taking any child measurements

You must get the co-operation of a parent. This will help the infant to relax.

Infants should be wearing a dry disposable nappy. 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.

You will first weigh an adult then weigh that adult holding the infant as follows:-

a) Code as “Weight obtained (infant 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 infant together and enter this into the computer at *WtChA1.*

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

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

MEASUREMENT RECORD CARD

If the parent is interested, you can record the child’s measurements on the child measurement record card

APPENDIX D: PROTOCOL FOR MEASURING LENGTH OF INFANT

1.1 Introduction

You must get parental consent before taking any child measurements

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.

We know that you are unlikely to have taken this measurement before so we want you to feel as confident as possible in carrying out infant length. If you would like to see the training DVD again, please let us know and we can provide this for you.

1.2 Equipment

You will need:

- A Rollameter baby measure mat
- A Frankfort Plane card
- Kitchen roll

1.3 Preparing the child

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. For hygiene purposes, lay one layer of kitchen roll on the mat.

3. 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.

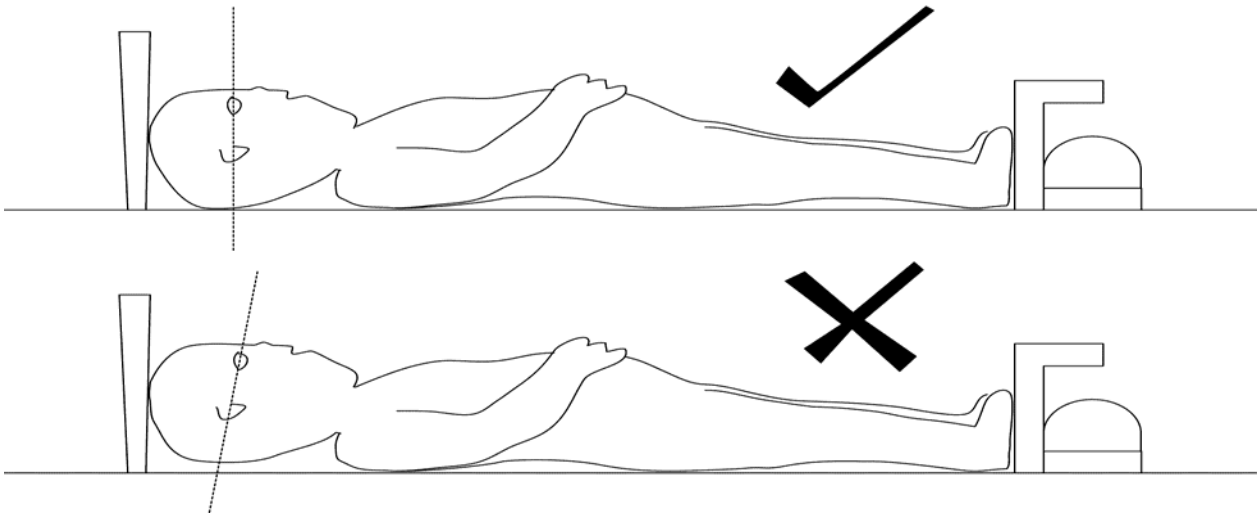


Figure 1 The infant Frankfort Plane

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**.

TOP TIPS!

- If the child becomes extremely agitated and is lying on the rollameter mat, you should try to take the measurement using just one leg, as demonstrated on the training DVD
- Always get signed consent before taking this measurement
- Play therapy is really important when distracting the infant and gaining the parents trust
- Assess each child individually on their age and development
- Be prepared – read up on protocols and check your equipment before you go for your first visit
- Remember when using the rollameter mat you must press the red button so the tape measure can slide easily to the base of the infant's feet
- Take three infant length measurements and record these in CAPI and on the measurement record card
- See the 'dealing with vulnerable groups section' in your Operations Standards Manual for further information on handling children.

APPENDIX E: PROTOCOL FOR MEASURING HEAD CIRCUMFERENCE OF INFANT

You must get parental consent before taking any child measurements

Measurement of head circumference (Occipital-Frontal circumference – OFC) is a routine part of the infant's growth assessment.

Equipment

Disposable 'Lasso' measuring tapes

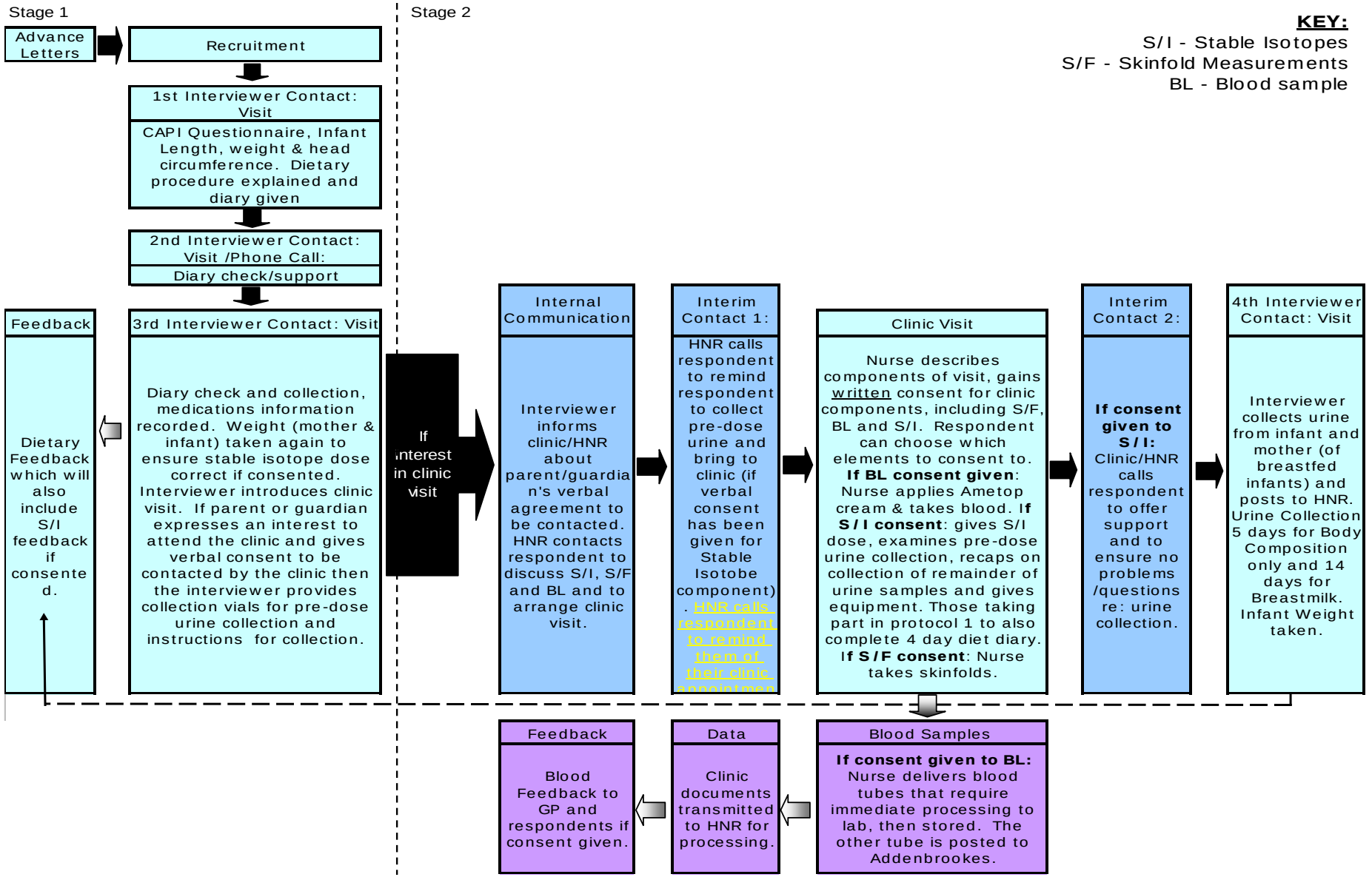
Procedure

- Ensure tape measure is intact before each use. The tape measure must be threaded correctly as per instructions on the tape. Thread the narrow end through slip holes 1, 2 and 3. You should be able to read the measurement in the 'WINDOW' at the 'Read Here' marker. Check tape measure is intact before each use.
- Explain the procedure to the parent/carer.
- Position the child on mothers lap facing the nurse or lay the child on the changing mat. Do not leave unattended in any position they may roll off from.
- Ask the parent to remove any hair clips, bobbles, hair bands and hats from the child's hair. Try and distract the child with toys to stop them pulling the tape off.
- Place the tape measure around the child's head at its largest diameter above the eyebrow ridges, just above the point where the ears attach and around the occipital prominence (back of the head).
- Ask the parent to hold the tape in place on the back of the head with a finger. Once you've fitted it correctly, pull the tape snugly to compress the hair; the objective is to measure the maximum head circumference. Read the tape measure to the nearest 0.1cm from the 'read here' marker.
- Take 3 measurements on each child. Record each measurement to nearest 0.1 cm on your laptop.
- Write the average head circumference in the Measurement Record Card if the parent wants this.

TOP TIPS!

- Always get signed consent before taking this measurement
- Try to distract the child, perhaps making a game of the measurements. For example, "let's make mummy into a princess…now we can make you into a princess!". Play therapy is really important when distracting the infant and gaining the parents trust.
- Assess each child individually on their age and development
- Be prepared – read up on protocols and check your equipment before you go for your first visit
- Take three measurements and record these in CAPI and on the measurement record card
- See the 'dealing with vulnerable groups section' in your Operations Standards Manual for further information on handling children.

APPENDIX F: Flow chart of National Infant Diet and Health survey design



Diet and Nutrition Survey of Infants and Young Children (P2905)

National Centre for Social Research
and
Human Nutrition Research

Editor's Code Book – Interviewer CAPI

September 2011

Contents

1 Introduction

This document details the editing to be applied to CAPI questionnaires on the Diet and Nutrition Survey of Infants and Young Children. 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.

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
EthOth	Back code into EthGrp	Ethnic group
soc2010	Code as standard	Occupational coding
Sic2003	Code as standard	Industry type coding

Indiv Qure

DrinkO	Back code into Drink	Most commonly consumed drink
Drink2O	Back code into Drink2	Second most commonly consumed drink
MAddWhO	Back code into MAddWh	Addition to milk in infant's bottle
BottBrO	Back code into BottBr	Make of baby bottles
BottBrSO	Back code into BottBrS	Supermarket own brand of baby bottles
PackTYO	Back code into PackTY	Type of packaging on ready prepared meals
AvOth	Back code into Avoid	Type of food avoided
WhyAvO	Back code into WhyAv	Reasons why food avoided
DifHowO	Back code into DifHow	Difficulties introducing solid foods
CCareO	Back code into CCare	Type of childcare
DAdvWhO	Back code into DAdvWh	Dietician advice
DWhPrBX	Back code into DWhPrB	Health problems
DHspAX	Back code into DHspA	Hospital visits
WherEatO	Back code into WherEat	Where family main meal eaten
MilkO	Back code into Milk	Milk usually used
MilTypO	Back code into MilTyp	Milk usually used
SpreadO	Back code into Spread	Spread usually used
FryO	Back code into Fry	Fat usually used in cooking
ClinRefO	Back code into ClinRef	Reason for refusing clinic visit

Maternal measures

OHiNRel	Back code into HiNRel	Unreliable height measurement
NoHitCO	Back code into NoHtBC	Reasons for refusing height
NoWatCO	Back code into NoWtBC	Reasons for refusing weight

Infant measures

RelWtW	Code into BRelWtW	Unreliable weight measurement
NoWatCO	Back code into NoWtBC	Reasons for not obtaining weight
LgthRelW	Code into BLgthRelW	Unreliable length measurement
OthNLth	Back code into NoAttL	Reasons for not obtaining length
HCRelW	Code into BHCRelW	Unreliable head circumference measurement
NoAttHCO	Back code into NoAttHC	Reasons for not obtaining head circumference

3 Additional CAPI edits

3.1 National identity

XNatOth Other national identity. To be coded back to **NatIDG.**

Inspect answer at XNatOth and if Cornish, back code to English (code 1 in the code frame below). Do not back code any other answers.

1 English
2 Scottish
3 Welsh
4 Irish
5 British

If the case is from a NI point then 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

3.2 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. Any other white background
Include Southern Irish, Irish, Irish traveller, Gypsy/Romany, Cypriot, Former USSR, Baltic States, Former Yugoslavia, Other European, White South African, American, Australian, New Zealander, Mixed White

3. Mixed – White and Black Caribbean

4. Mixed – White and Black African

5. Mixed – White and Asian

6. Any other mixed background

7. Asian or Asian British - Indian
Include Punjabi

8. Asian and Asian British – Pakistani
Include Kashmiri

9. Asian and Asian British – Bangladeshi

10. Any other Asian/Asian British background
Include East African Asian, Sri Lankan, Tamil, Sinhalese, Caribbean Asian, Nepalese, Bengali, Mixed Asian (i.e. mixture of descriptions in the Asian section).
Code Chinese as 14 (see below).

11. 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

12. Black or Black British – African
Include Nigerian, Somali, Kenyan, Black South African, Other Black African countries

13. Any other Black/Black British background
Include Black American, Mixed Black

14. Chinese
Include Hong Kong

15. Any other
The following ethnic groups **SHOULD NOT** be coded back to the categories above but should remain as "other": Japanese, Vietnamese, Filipino, Malaysian, Aborigine, Afghani, Burmese, Fijian, Inuit, Maori, Native American Indian, Thai, Tongan, Samoan, Arab, Iranian, Israeli, Jewish, Kurdish, Latin American (Cuban, Puerto Rican, Dominican, Hispanic), South American (incl. Central American), Moroccan, Other North African, Iraqi, Lebanese, Yemeni, Other Middle Eastern, Mauritian, Seychellois, Maldivian, St Helena.

3.3 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 Nicola Shiels [Nicola.Shiels@dfpni.gov.uk] from NISRA with the details of the 'other ethnic group' and ask her which code she 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**

3.4 Drinks consumed

DrinkO Other most commonly consumed drink. To be coded back to **Drink**.

Inspect responses at DrinkO and code back into the code frame at Drink (shown below). If 'prescription milk' (including Neocate), leave as other. If 'soya milk' do not code into soy formula as we cannot be sure respondent means formula - leave as other. If 'fruit juice mixed with water' or 'baby juice' use code 11 (fruit juice).

Drink2O Other second most commonly consumed drink. To be coded back to **Drink2**.

Inspect responses at Drink2O and code back into the code frame at Drink2 (shown below). If 'prescription milk' (including Neocate), leave as other. If 'soya milk' do not code into soy formula as we cannot be sure respondent means formula - leave as other. If 'fruit juice mixed with water' or 'baby juice' use code 11 (fruit juice).

1 Breast milk
2 Infant Formula
3 Follow on milk (designed for infants aged six months or more)
4 Soy formula
5 Liquid Whole cow's milk
6 Liquid Semi-skimmed cow's milk
7 Liquid Skimmed cow's milk
8 Liquid Goat's milk
9 Water (tap or mineral)
10 Flavoured water
11 Fruit juice
12 Squash/soft drink non-low calorie
13 Squash/soft drink low calorie
14 Tea/coffee/herbal drinks
97 Other

3.5 What's added to infant's milk

MAddWhO Other addition to milk in infant's bottle. To be coded back to **MAddWh**. Blue text indicates additional codes, added after the completion of fieldwork.

Inspect response at MAddWhO and code back into the code frame at MAddWh (shown below).

1	Extra scoop of powder
2	Rusk
3	Chocolate powder
4	Gaviscon
5	Vitamin drops
6	Baby rice
7	Medicines (including calpol)
97	Other

3.6 Makes of baby bottle

BottBrO Other make of baby bottles usually used. To be coded back to **BottBrO**. Blue text indicates additional codes, added after the completion of fieldwork.

Inspect responses at BottBrO and code back into the code frame at BottBr (shown below). If a specific supermarket name is given, use code 4 (supermarket own brand) and code which one at BottBrS. Code 'Pound shop' as other.

1 Tommee Tippee
2 Dr Brown's
3 Boots own brand
4 Supermarket own brand
5 Mothercare own brand
6 Avent – includes Philip's Avent
7 Mam
8 Nuk
9 Medela
97 Other

BottBrSO Other supermarket own brand of baby bottles usually used. To be coded back to **BottBrS**.

Inspect responses at BottBrSO and code back into the code frame at BottBrS (shown below). If 'Boots', use code 3 (Boots own brand) at previous question **BottBr**. If 'Mothercare', use code 53 (Mothercare own brand) at previous question **BottBr**. If other non-supermarket given, use code 97 (Other) at previous question **BottBr**.

1 Asda
2 Morrison's
3 Sainsbury's
4 Tesco
97 Other

3.7 Type of packaging

PackTYO Other type of packaging on ready prepared meals. To be coded back to **PackTY**.

1 Jars with twist on/twist off lids
2 Tins or cans
3 Packets or pouches which need reconstituting (that is dried food mixes)
4 Ready to eat packets/pouches
5 Plastic tubs/trays
97 Other

3.8 Type of food avoided

AvOth Other food avoided. To be coded using original **Avoid** code frame, shown below. Blue text indicates additional codes, added after the completion of fieldwork.

If a specific fruit is given, use code 13 (fresh fruit); if a specific vegetable is given, use codes 10 (salad vegetables), 11 (cooked green vegetables), or 12 (root vegetables). Any drinks should be left as 'other'.

1 Some meat or meat products (not including poultry)
2 Chicken or other poultry and dishes containing them
3 All meat and poultry
4 Fish or seafood and fish and seafood dishes
5 All meat, poultry and fish
6 Eggs
7 Milk (including yoghurt)
8 Cheese
9 All dairy products
10 Salad vegetables (e.g. lettuce, cucumber, tomato)
11 Cooked green vegetables (e.g. spinach, cabbage, peas, broccoli)
12 Root vegetables (e.g. carrots, parsnips)
13 Fresh fruit
14 Nuts
15 Offal
16 Spicy foods
17 Processed foods
18 Sweets/chocolate
19 Foods with perceived high salt content
20 Sugars including foods with high perceived sugar content
21 Foods with perceived high fat content
22 Cereal based foods e.g. rice, wheat, pasta, bread including gluten free
97 Other (Please specify)

3.9 Reasons why food avoided

WhyAvO Other reasons for avoiding giving food to infant. To be coded using original **WhyAv** code frame, shown below. Blue text indicates additional codes, added after the completion of fieldwork.

1 Child dislikes taste / texture / colour
2 Weight-related health reasons
3 Health reasons (NOT related to weight)
4 Cultural/religious reasons
5 Ethical/moral reasons
6 Allergic/adverse reaction
7 Not cooked in household
8 Fear of choking
9 Difficulty chewing
10 Child is too young
11 Advised by professional/health visitor
12 High salt and/or sugar content
13 Allergy in family
14 Fear of developing allergy/illness
97 Other

3.10 Difficulties introducing solid foods

DifHowO Other reasons it was difficult to introduce solid foods. To be coded using original **DifHow** code frame, shown below. Blue text indicates additional codes, added after the completion of fieldwork.

1 Would not take solids
2 Would only take certain solids
3 Was disinterested in food
4 Prefers drinks to food
5 Vomiting
6 Doesn't like eating from a spoon
7 Difficulty chewing (including choking)
8 Parent(s) unsure how to wean
9 Did not like the texture (including lumps)
97 Other

3.11 Type of childcare

CCareO Other type of childcare. To be coded back to **CCarex**

Inspect responses at CCareO and code back into the code frame at CCarex (shown below).

1 Day nursery
2 Playgroup or pre-school
3 Nursery school or nursery class
4 Special nursery or unit for children with special educational needs
5 Childminder
6 Nanny or au pair
7 Crèche
8 Baby-sitter
9 The baby's grandparent(s)
10 The baby's older brother/sister
11 Another relative
12 The baby's other parent who does not live in this household
13 A friend or neighbour
14 No one else looks after the baby
97 Other (please specify)

3.12 Dietician advice

DAdvWhO Other advice/prescription provided by the dietician. To be coded using original **DAdvWh** code frame, shown below. Blue text indicates additional codes, added after the completion of fieldwork.

1	Advice for allergy or intolerance
2	Advice for concern regarding insufficient milk/food consumption for adequate growth
3	Advice for constipation
4	Advice for general weaning problems (e.g. fussy eater, not interested in food, having difficulty moving on to solid foods)
5	Specialised formula for allergy or intolerance
6	Specialised formula for other conditions
7	Advice for overconsumption of milk/food and concern about growth rate
8	Reflux
97	Other

3.13 Health problems

DWhPrbX Other health problems (infant taken to GP, health centre or Health Visitor, Casualty, or parent called NHS Direct). To be coded using original **DWhPrb** code frame, shown below.

1	Chest infections
2	Ear infections/hearing problems
3	Cold
4	Virus
5	High temperature
6	Feeding problems
7	Sleeping problems
8	Wheezing or asthma including breathing problems
9	Skin problems
10	Sight or eye problems
11	Failure to gain weight or to grow
12	Persistent or severe vomiting
13	Persistent or severe diarrhoea/GI problems
14	Fits or convulsions
15	Accidents or injury
16	Allergies
17	Persistent reflux
18	Colic
19	Jaundice
20	Heart murmur/problems
21	Hernia
22	Tonsillitis/thrush
97	Other health problems

3.14 Hospital visits

DHspAX Other reason infant admitted to a hospital (for an illness or health problem, not accident or injury). To be coded using original **DHspA** code frame, shown below. Blue text indicates additional codes, added after the completion of fieldwork.

1 Gastrointestinal problems i.e. reflux/Gastroenteritis
2 Chest infection or pneumonia
3 Wheezing or asthma or breathing problems
4 Convulsion, fit or loss of consciousness
5 Meningitis
6 Pyloric stenosis
7 Hernia
8 Circumcision
9 Specific problem with feeding (specify in next question)
10 Other operation
11 Allergies
12 Viral infection, including colds
13 Jaundice
14 Bacterial infection (inc. UTI)
97 Other

3.15 Where main meal eaten

WherEatO Where family main meal is usually eaten. To be coded back to **WherEat**.

Inspect responses at WherEatO and code back into the code frame at WherEat (shown below). If response 'kitchen/diner' is given, use code 1 (in the kitchen). If response 'sitting on the floor in the lounge' is given, use code 4 (in the sitting room/lounge sitting on sofa). If response 'in conservatory at table' is given, use code 2 (in the dining room at a table).

1 In the kitchen
2 In the dining room at a table
3 In the sitting room/lounge at a table
4 In the sitting room/lounge sitting on sofa
97 Other

3.16 Milk usually consumed

MilkO Other type of milk usually used in household. To be coded back to **Milk**.

Inspect responses at MilkO and code back into the code frame at Milk (shown below). If organic semi-skimmed, organic skimmed etc. specified, code into relevant category below (we do not need to differentiate between organic and non-organic). If just 'organic' specified, it should remain in code 97 (other).

1 Full fat
2 Semi-skimmed
3 1%
4 Skimmed
5 Goat/sheep milk
6 Soya milk
96 Don't use milk
97 Other

MilTypO Other milk usually used. To be coded back to **MilTyp**.

Inspect responses at MilTypO and code back into the code frame at MilTyp (shown below).

1 Pasteurised
2 UHT
3 Sterilised
97 Other

3.17 Spread usually used

SpreadO Other type of spread usually used in household. To be coded using original **Spread** code frame, shown below. Blue text indicates additional codes, added after the completion of fieldwork.

1	Butter
2	Polyunsaturated margarine e.g. Flora, sunflower margarine, Vitalite, I-Can't-Believe-its-Not-Butter
3	Hard or soft margarine e.g. Blue Band, Utterly Butterly, Stork, Clover, supermarket own brand
4	Low fat spread e.g. Delight, St Ivel Gold, Flora Xtra Light
5	Olive oil or monounsaturated spread e.g. Bertolli, Olive Gold, Mono
6	Cheese spread
7	Soya spread
8	Dairy free spread
97	Other
98	Don't use spread

3.18 Fat usually used in cooking

FryO Other sort of fat usually used in household for cooking. To be coded using original **Fry** code frame, shown below.

1	Butter, ghee, dripping, lard, solid cooking fat
2	Polyunsaturated margarine e.g. Flora, sunflower margarine, Vitalite, I-Can't-Believe-its-Not-Butter
3	Hard or soft margarine e.g. Blue Band, Stork, Clover, supermarket own brand
4	Low fat spread e.g. Delight, St Ivel Gold, Flora Xtra Light
5	Olive oil spread or other monounsaturated spread e.g. Olivio, Olive Gold, Mono
6	Sunflower oil, corn oil, soya oil
7	Olive oil, hazelnut oil, rapeseed oil
8	FryLite
9	Other vegetable oil
96	None of these - do not use any fat when cooking
97	Other

3.19 Clinic visit

ClinRefO Reason why respondent refused clinic visit. To be coded back to **ClinRef**. Blue text indicates additional codes, added after the completion of fieldwork.

Inspect responses at ClinRefO and code back into the code frame at ClinRef (shown below).

1 Given enough time already to this survey/expecting too much
2 Too busy, cannot spare the time (if Code 1 does not apply)
3 Had enough of medical tests/medical profession
4 Worried about what nurse may find out/'might tempt fate'
5 Scared of medical profession/particular medical procedures (e.g. blood sample)
6 Not interested/Can't be bothered/No particular reason
7 Can't get childcare for other children
8 Too much stress/hassle
9 Language difficulties
10 Other reason

3.20 Maternal measurements: 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.

Checks for maternal height 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.

OHiNRel Other reason for unreliable height measurement. To be coded back to **HiNRel**.

Inspect response at OHiNRel and code back into the code frame at HiNRel (shown below).

1 Hairstyle or wig
2 Turban or other religious headgear
3 Respondent stooped
4 Child respondent refused stretching
5 Respondent would not stand still
6 Respondent wore shoes
97 Other

NoHitCO Other reason for not obtaining height measurement. To be coded back at **NoHtBC**.

Inspect response at NoHitCO and code back into the code frame at NoHtBC (shown below). Veiled refusals at NoHitCO (where respondent has not given a reason for not having height taken but has effectively terminated the interview: eg ‘too busy’, ‘had to go out’, ‘not convenient’ etc.) should be recoded to Code 2 ‘Height refused’ at **RespHts**, and the reason for refusal coded at **ResNHi**.

1 Mother not available
2 Respondent is unsteady on feet
3 Respondent cannot stand upright/too stooped
4 Respondent is chairbound
5 Confined to bed
6 Respondent unable to remove shoes
7 Ill or in pain
8 Stadiometer faulty or not available
97 Other

NoWatCOM Other reason for not obtaining weight measurement. To be coded back at **NoWtBCM**. . Blue text indicates additional codes, added after the completion of fieldwork.

Inspect response at NoWatCOM and code back into the code frame at NoWtBCM (shown below). Veiled refusals at **NoWatCOM** (where respondent has not given a reason for not having weight taken but has effectively terminated the interview: eg ‘too busy’, ‘had to go out’, ‘not convenient’ etc.) should be recoded to Code 2 ‘Weight refused’ at **RespWtsM**, and the reason for refusal coded at **ResNWtM**.

1 Mother not available
2 Respondent is unsteady on feet

3 Respondent cannot stand upright
4 Respondent is chairbound
5 Confined to bed
6 Respondent unable to remove shoes
7 Respondent weighs more than 130kg
8 Ill or in pain
9 Scales not working
10 Mother pregnant
97 Other

3.21 Infant measurements: weight, length and head circumference

If you get an Interviewer Check (Active Signal) at variable **Lngth** or **HDCirc** and the decimal is .0 (e.g. 15.0), suppress this warning to continue moving through the Edit.

RelWtW Reason for unreliable weight measurement. To be coded into new variable **BRelWtW**.

Inspect response at RelWtW and code into new variable BRelWtW using code frame listed below.

1 Child frightened/upset
2 Child would not stay still
3 Child ill
4 Problems with scales
5 Combined infant~parent weight more than 130kg
6 Other reason

NoWatCOI Other reason for not obtaining weight measurement. To be coded back at **NoWtBCI**.

Inspect response at NoWatCOI and code back into the code frame at NoWtBCI (shown below). Veiled refusals at **NoWatCOI** (where respondent has not given a reason for not having weight taken but has effectively terminated the interview: eg 'too busy', 'had to go out', 'not convenient' etc.) should be recoded to Code 2 'Weight refused' at **RespWtsI**, and the reason for refusal coded at **ResNWtI**.

1 Child away from home during fieldwork period
2 Respondent is unsteady on feet
3 Respondent cannot stand upright
4 Respondent is chairbound
5 Confined to bed
6 Respondent unable to remove shoes
7 Respondent weighs more than 130kg
8 Ill or in pain
9 Scales not working
10 Parent unable to hold child
11 Child asleep
97 Other

LgthRelW Reason for unreliable length measurement. To be coded into new variable **BLgthRelW**.

Inspect response at LgthRelW and code into new variable BLgthRelW using code frame listed below.

1 Child frightened/upset
2 Child would not stay still
3 Child ill
4 Difficult to straighten legs/place feet at foot plate

OthNLth Other reason for not obtaining length measurement. To be coded back at **NoAttL**. Blue text indicates additional codes, added after the completion of fieldwork.

Inspect response at OthNLth and code back into the code frame at NoAttL (shown below).

1 Child asleep
2 Child too frightened or upset
3 Child too shy
4 Child would not lie still
5 Child ill
6 Child not available
7 Parent does not wish to continue with study
8 Problems with equipment (THIS CODE WILL ONLY APPEAR FOR NON-REFUSALS)
97 Other

HCRelW Reason for unreliable head circumference measurement. To be coded into new variable **BHCRelW**.

Inspect response at HCRelW and code into new variable BHCRelW using code frame listed below.

1 Child frightened/upset
2 Child would not stay still
3 Child ill
4 Child pulled measuring tape off/did not like having tape on head

NoAttHCO Other reason for not obtaining head circumference measurement. To be coded back at **NoAttHC**. Blue text indicates additional codes, added after the completion of fieldwork.

Inspect response at NoAttHCO and code back into the code frame at NoAttHC (shown below).

1 Child asleep
2 Child too frightened or upset
3 Child too shy
4 Child would not lie still
5 Child ill
6 Child not available
7 Parent does not wish to continue with study
8 Problems with equipment (THIS CODE WILL ONLY APPEAR FOR NON-REFUSALS)
97 Other

DIET AND NUTRITION SURVEY OF INFANTS AND YOUNG CHILDREN

Food Coding & Editing Instructions

V6.0 06.04.2011

This page is intentionally blank

1.Contents

This page is intentionally blank

2.Introduction

2.1 DNSIYC Diet coding

Interviewers for the Diet and Nutrition Survey of Infants & Young Children (DNSIYC) provide all respondents with a food diary for the parent/carer to keep. In this diary the parent/carer is asked to record all food and drink items their child consumes for four 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 UK Food 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

There are two types of diary used in the study:

- 4-8 months
- 9-18 months

2.3 Extra documents attached to diary

You should **always** receive;

- Diary evaluation form (yellow)

Diary evaluation forms do not always arrive at HNR at the same time the corresponding diaries. They should be matched to the diaries once both have arrived, but if you are coding a diary that does not have an evaluation form, the form may be found in the box, which holds items sent separately to the diaries. If a batch of diaries has most of its evaluation forms missing, the interviewer can be reminded to fill them in when they receive feedback – please let the DNSIYC Research Assistant know when you fill out the feedback spreadsheet.

You **may** also receive;

1. Plastic zip bag for packaging
2. Carer forms (pink)

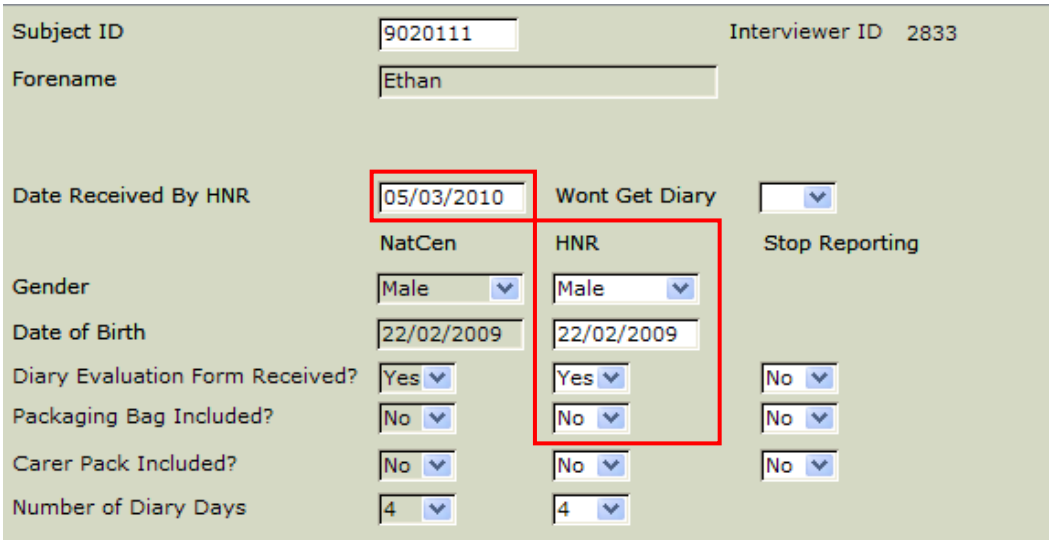
2.4. Logging incoming diaries

If the DNSIYC Research Scientist or Research Assistant asks you to log diaries you will need to read this section (3.4.1). To log the diaries when they come into HNR select ***Subject/Diary Assessment*** then ***subjects***. Place the cursor in the ***Subject Id*** box and click the find tab at the top of the page (). Type the 8-digit subject ID into the ***Find what*** field and click ***Find next***. The following details for the corresponding respondent should appear:

- Forename
- Gender
- Date of birth
- *Some of the feedback questions will also be populated*

Check this information matches the details on the diary then complete the form by entering:

- Date received at HNR
- Gender
- Date of birth
- Diary evaluation form received
- Packaging included
- Carer pack included



You will notice the gender and date of birth are already populated in the form, and you have to enter them again. This checks the details are correct and that you are logging the diary on the appropriate form in DINO. On some occasions there may be a discrepancy between the subject ID, gender or date of birth recorded on the diary and in DINO. The interviewer may have made a mistake when writing the respondents date of birth on the diary, or you may be logging the diary on the wrong subject ID in DINO. Use your judgement to work out why the discrepancy has occurred. If you think it is a mistake by the interviewer, and there is only a small difference between the date of birth on the diary and that in DINO, default to the date of birth in DINO and record this on the diary. If there is a large discrepancy between the date of birth on the diary and that in DINO, record the date of birth as it appears on the diary and this will be investigated further. The box in the form will appear in pink to highlight the conflicting information.

For other fields (items received in addition to the diary) code whether an item is received or not, even if it conflicts with the NatCen field. Items may arrive separately (the field can be updated) or may not be received.

If an evaluation form or packaging bag is received before the diary, it can be marked as received for the subject by selecting yes for the appropriate item (do not enter the date received – this relates only to the diary). It should then be placed in the box holding items sent separately to the diary. When the diary arrives, this prompts you to get the form/bag from the box and store it with the diary.

When logging, the number of days coded does not need to be completed. However if the "number of diary days" field says 1 or 2, please look through the diary to see if this is correct. If

the respondent has completed less than three days, the “not received at HNR” field (next to the “date received by HNR”) should be changed to ‘Yes’. Some of the fields on the Subjects page will become populated. These diaries should not be coded and should be given to the DNSIYC Research Scientist/Assistant.

2.5 Batches and filing

When diaries arrive in the office, they should be batched on a 1st in 1st coded basis. Ensure that diaries ‘to be coded’ are filed by month of arrival e.g. all diaries arrived in January together. This will be identifiable from a date stamp on the front of the diary applied by NatCen when they receive the completed diary.

Once coded, diaries can be filed numerically by subject ID. Diaries for wave 1 and wave 2 (identifiable by the second digit of the serial number) should be filed separately.

3.Getting started

3.1 HELP function

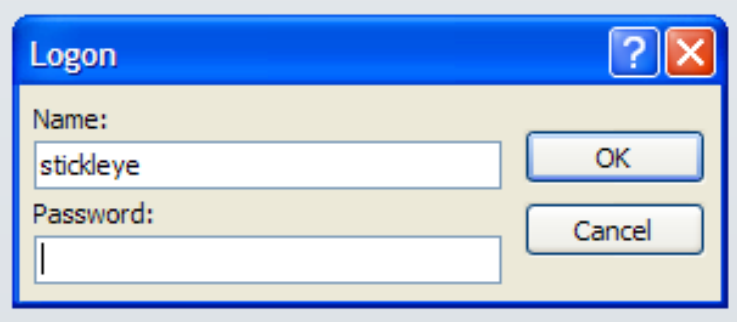
The DNSIYC help file has information on how to use DINO, some of which is in this user guide. The help function can be accessed by pressing **F1** at any time in DINO. It is useful to familiarise yourself familiar with this information so spend some time looking through it.

3.2 Accessing DINO

To open DINO click the ***Open DNSIYC.mdb*** shortcut on your desktop as shown below. This can be found on your desktop.

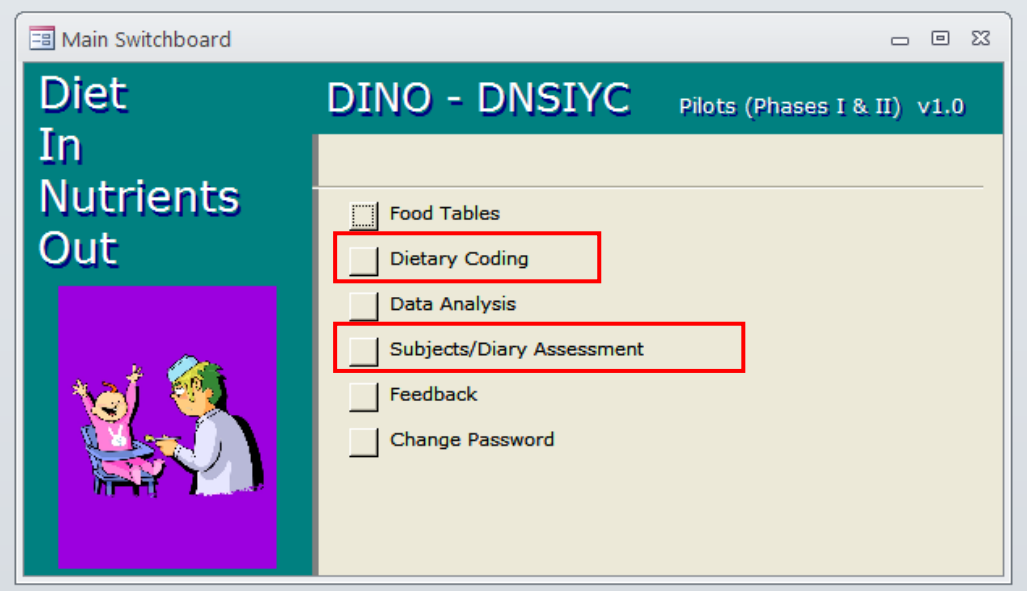
3.3 Coding database

Click on ***DNSIYC Coding database*** and enter your password (your user name will appear automatically).



You will come to the main switchboard screen. You will be using two options on this screen:

1. Dietary coding
2. Subjects/Diary assessment



3.4 Subject / Diary assessment - Subjects

All diaries need to be logged into DINO when they arrive at HNR. We also need to record when we code, edit and complete diaries. Use the ***subjects*** form to do this.

3.4.1 Taking diaries for coding

Please take one diary at a time, ensuring that diaries are coded in the order that they arrived at HNR, i.e. 1st in 1st coded. When you first go into the respondent details, the number of diary days will already be in the system. This number is based on the interviewer's assessment of the number of days. To be included in the final analysis, a respondent needs to have completed 3 or more diary days. If the number of days in the system is **2 or less**, the diary should not have got through to the coding stage, but check that this is the case and if so, select the matching number of diary days from the drop down menu and then write on the front of the diary UNPRODUCTIVE. You do not have to code this diary, give it to the DNSIYC Research Scientist/Assistant to send them back to Brentwood.

If the number of days in the system is **3 or 4**, then this diary should be coded. Once a diary has been coded, go back to the ***subjects*** form and select the number of diary days coded from the drop down menu and enter the date you completed coding on the ***subjects*** form. In some cases, we may decide that we cannot use a diary day because, for example, there is too much

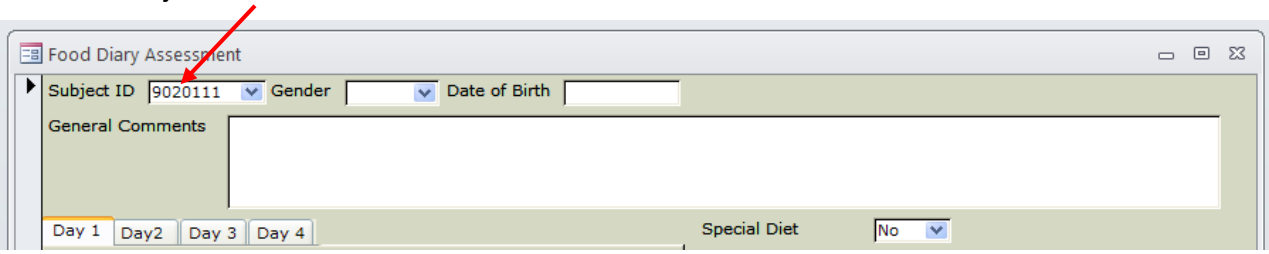
missing information. Therefore, the number of days coded may not match the number of days in the system.

3.4.3 Logging completed diaries

When all queries are resolved and editing is fully complete, go back to the ***subjects*** form, go to Coding and Editing Complete and select yes from the drop down box and enter the date. Ensure that the diary is "plausible".

3.5 Diary questions

When a batch of diaries has been logged and is ready to be coded open the ***diary questions*** form. Create a new record (), then select the respondent ID number from the drop down list found under Subject ID.



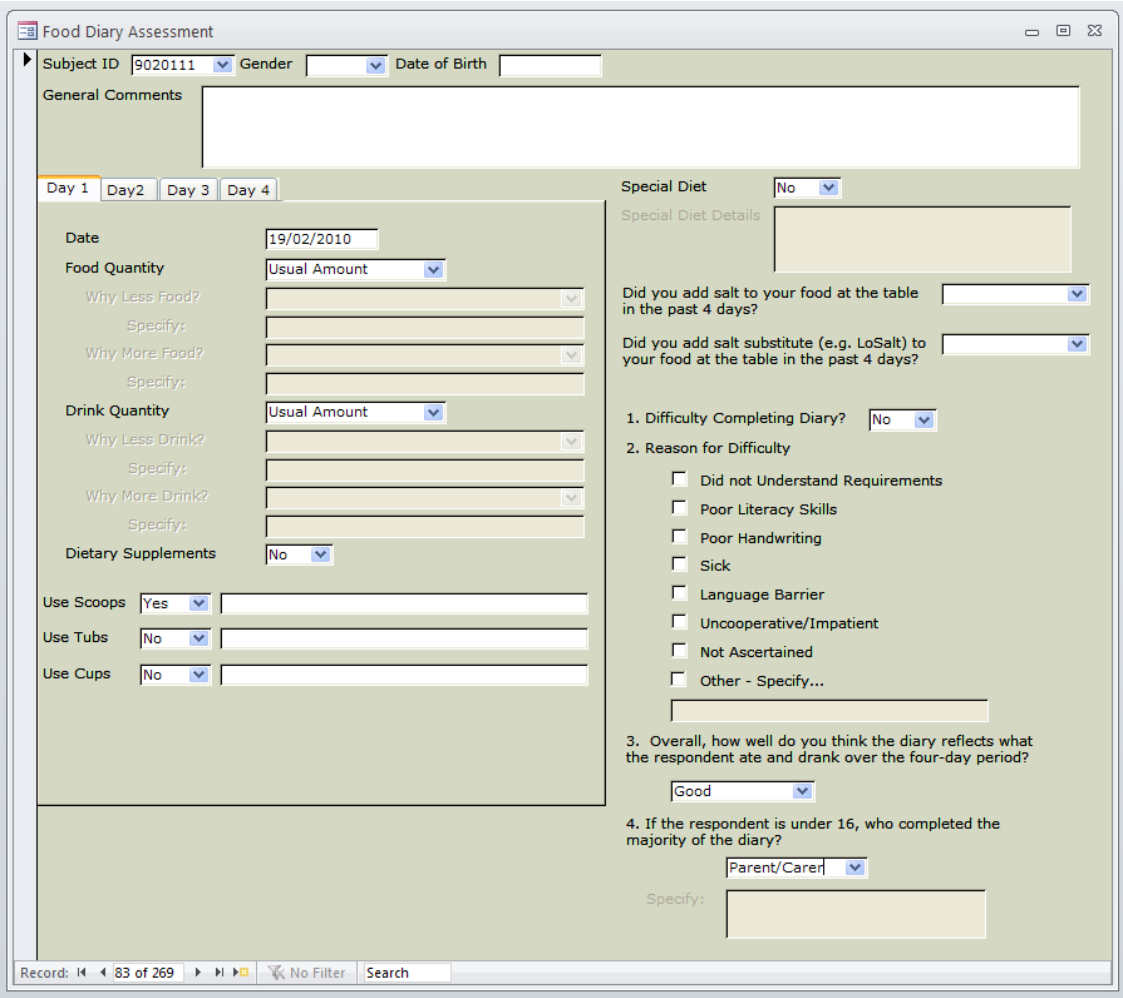
Enter the gender and date of birth then complete the form using the diary questions at the end of each day and the diary evaluation form.

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
- Whether the respondent is on a special diet or not and any corresponding details
- Interviewer feedback from the evaluation form

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



3.6 General comments

In the ***general comments*** box enter the interviewer's comments from the DNSIYC 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).

General comments about the quality of each of the diaries should also be sent to the DNSIYC Research Assistant via interviewer feedback spreadsheets (\\Elsie\dnsiyc\Main\Dietary\DAA Coding Feedback). They will feed comments back to the interviewers, which should lead to continual improvements in dietary data received. You will be sent a template detailing the information needed.

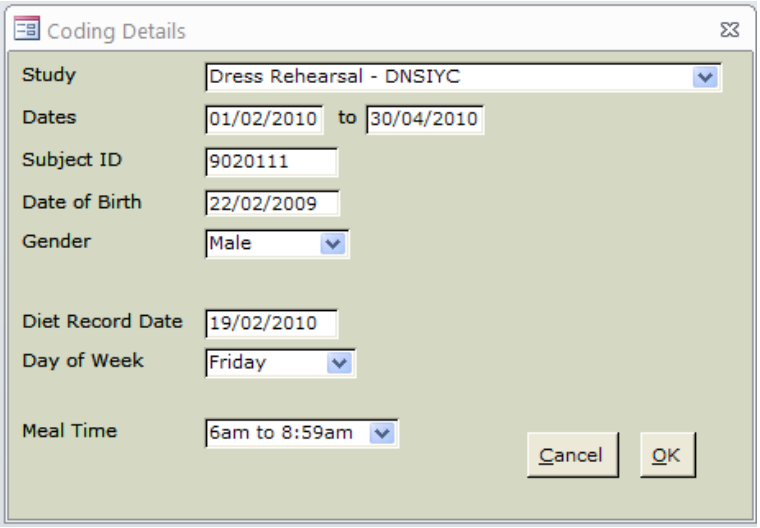
4.Using DINO to code a food diary

General instructions on how to use DINO to code diet records can be found in the HELP function as described on page 9. Below are additional, specific instructions for DNSIYC.

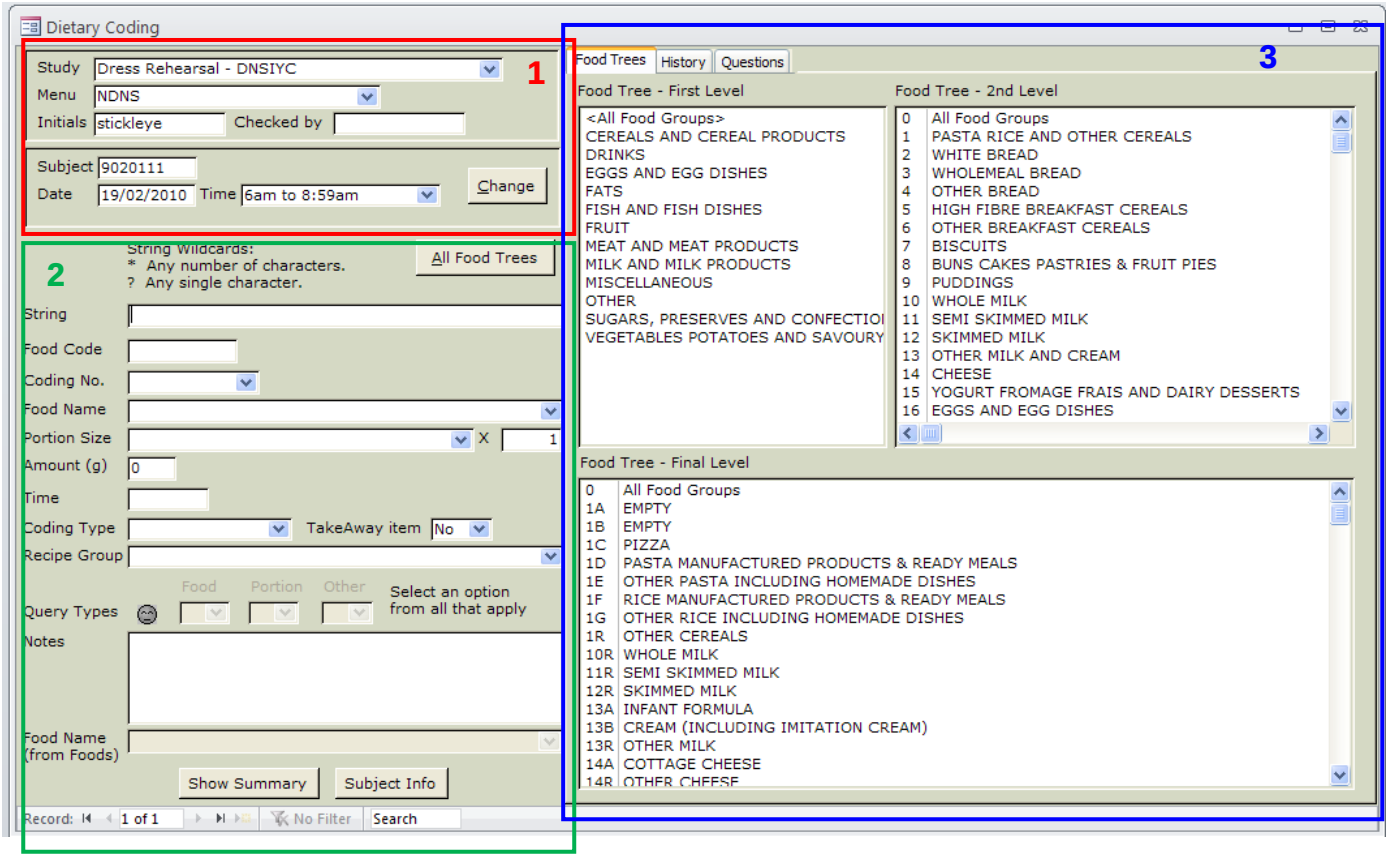
On the main menu select ***Dietary coding***, ***Code Diet Record*** then ***DNSIYC Diaries*** from the drop down menu. Using the drop down list in the Study Title box, select ***Main Stage - DNSIYC*** then ***Open Coding Form***.

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.

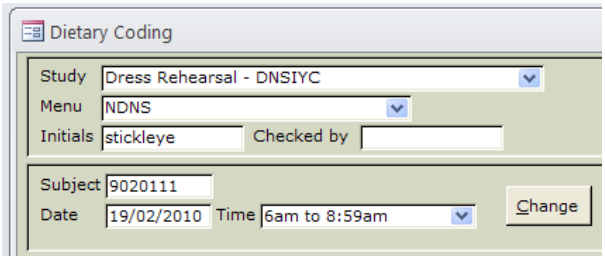


4.2 Dietary Coding screen

Once this information has been entered for a particular diary, the "***Dietary Coding***" window will appear. The following information explains each part of this window in more detail.

4.2.1 Default data

The top left hand side **(1)** of the screen displays the default data for the subject. This is the information entered on the previous two forms.

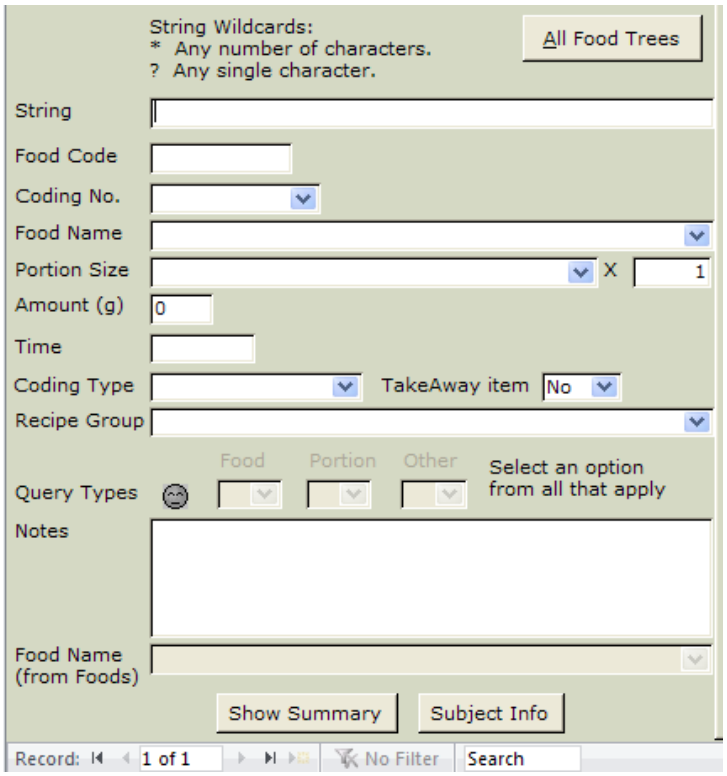


4.2.2 Additional data

The bottom left hand frame **(2)** 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 information on queries
- Flagging icon – Use this to highlight queries
- Food name – This is the name linked to the coding number



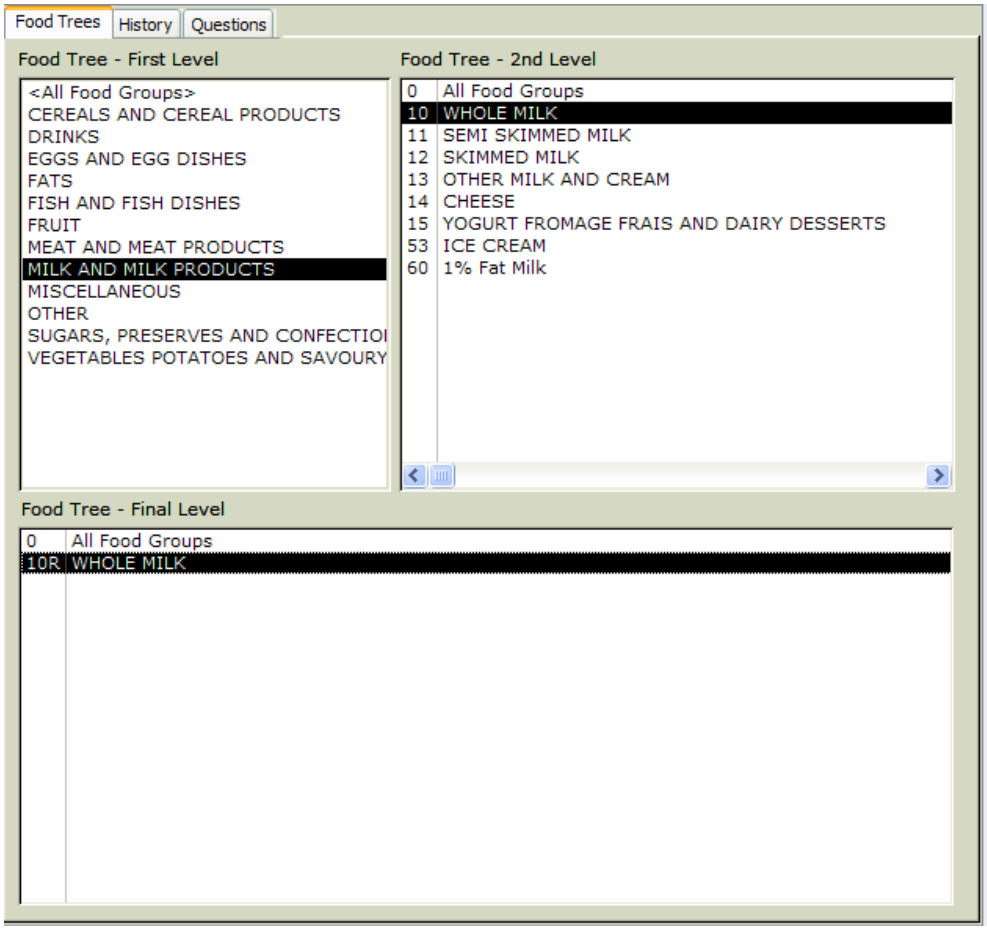
On the right hand side of the screen you will see tabs for ***Food trees***, ***History***, and ***Questions***.

4.2.3 Food trees

Food trees **(3)** can be used to help find the appropriate food name. When a branch is selected, only foods in that group will appear in the food name list. This function has advantages over using the string when you are not sure which way round words will need to be in the string to find the food you are looking for

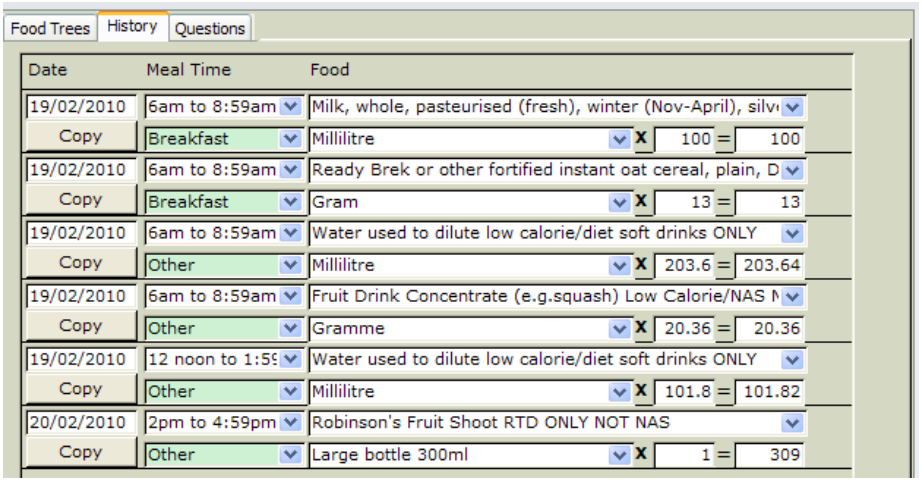
Additionally, using the food trees will narrow your search area, limiting the number of 'hits' you receive for a search term. For example, searching for 'whole *milk'* will find all of the food codes containing the word milk; savoury, desserts made with milk, yogurts and milk based beverages.

However, if the correct food trees were selected '*milk'* and then '*whole milk',* the search area will be limited, making the milk consumed in the diary easier to find.



4.2.4 History

Frequently consumed foods such as squash or breakfast items can be saved and copied into new food records. To save a food allocate a group from the coding type list e.g. tea/coffee, or type a new term into the box if the allocated groups are not applicable. It will then appear in the history list. Click on 'copy' to transfer this information into the new food record.

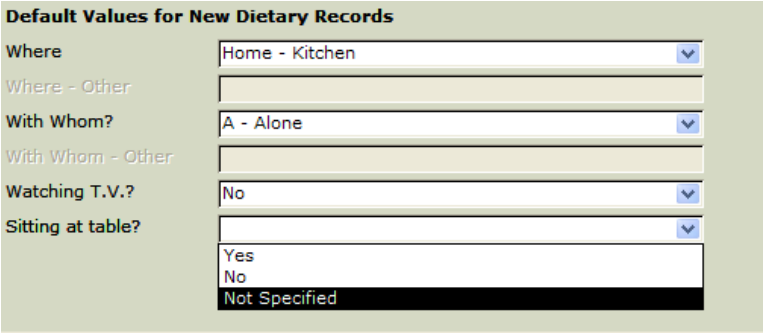


As you would do if you were entering foods by string, you will need to open a new record before pressing copy. The same food code and portion code will be entered.

4.2.5 Questions

For each food a code needs to be allocated describing ***where*** the food was consumed, ***who else is eating***, if the respondent was ***watching TV*** and whether they were ***sitting at a table***. The following options are available for selection:

Who else eating?	**Where**
Alone	Home - Kitchen
Family (incl. Relatives)	Home - Living room
Friends	Home - Dining room
Family & Friends	Home - Bedroom
Parent(s)/Carer (long-term)	Home - Garden
Siblings	Home - Other
Parent(s)/Carer (long-term) & Siblings	Home - Unspecified
Nursery Staff/Childminder & Other Children	Childminder/Nanny's Home
Babysitter/Childminder	Friend's or relative's house
Babysitter/Childminder & Other Children	Leisure activities, shopping, tourist attractions, cinema, places of interest
Other	Restaurant, pub, night club
Not Specified	Coffee shop, café, shop, deli, sandwich bar
Others known to respondent	Sports club, sports leisure venue
	Community Centre/Day Centre/Drop In
	Public Hall/Function Room
	Place of Worship
	Fast Food Outlet
	Nursery/Kindergarten/Crêche
	Street
	Holiday Accomodation
	Outside - Other
	Bus, car, train
	Not at home - unspecified
	Other place
	Unspecified



Below are a few examples/clarifications:

Where

- **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.
- **Bus, car, train** should only be coded when being used as a mode of transport.
- **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 parent/carer states that the infant was 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 it is not clear, code as **home - unspecified**.
- If a 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.
- **Home – other** can be used for rooms that are not on the list, for example the conservatory or a play room
- **Home – Unspecified** should be used when the infant ate at home but the exact room was unspecified
- 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 – unspecified.**

- Where ever possible, avoid classifying a location simply as **Unspecified.** Use other information in the diary, to see if it is possible to work out where the food is being consumed.

With whom (Who else is eating)

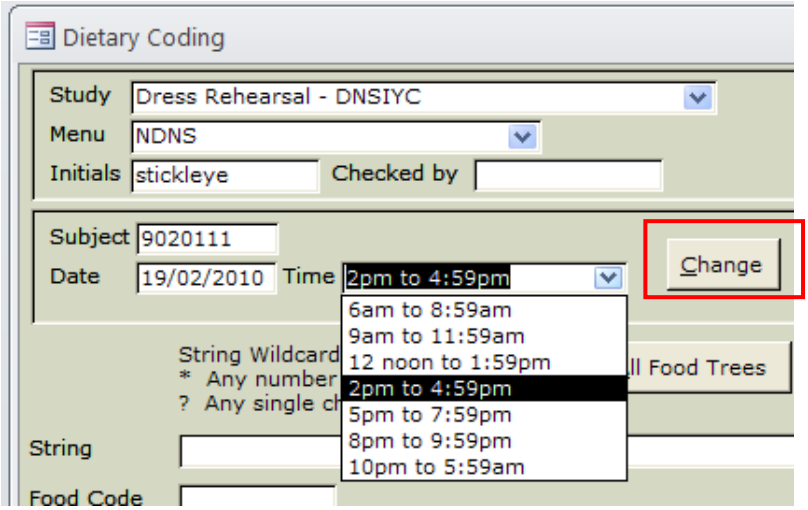
- For **with whom**, **Family (incl relatives)** refers to unspecified family or wider family e.g. grandparents, aunts.
- A 'carer' is defined as an adult who is taking long term charge of the child, for example, gaurdian.
- The code **Parent(s)/Carer (long-term)** or **Babysitter/Childminder & Other 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 **Family** or **Sibling**.

Table/TV

- Respondents should only record information about watching TV/sitting at the table not any other activities like listening to music/sitting on the sofa/playing with toys. If they provide these details, but do not say about TV/table tell the Research Assistant in the interviewer feedback you send, and code as **Not Specified**
- Do not assume from other details you give that the infant 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 the infant is in a **highchair**, we want to know if the highchair is at the table or not.

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 if the eating habits are consistent.

Get into the habit of filling in these questions before searching for a new food name. Answers to these questions will remain the same within a meal time. If the answers to the questions change, e.g. the TV is turned on, or a sibling is eating with the infant, but the '***time'*** stays the same, the answers to the questions must be changed manually, using the "***change***" button.



For example, a drink was consumed at 2.15pm and the TV was turned off and the infant was not at a table. Then at 3.30pm, an apple was consumed, but the TV was on, and the infant was at a table. You need to manually **change the answers** to these questions, otherwise, the TV will remain off and the infant will not be seated at the table.

4.2.6 Navigating through records

To move into a new food record use the arrow buttons on the bottom left hand side. These buttons can be used to navigate through the food records entered in that one session. If you have made a mistake (e.g. forgotten to change the television code) or wish to delete a record, you can go back to change the records you have entered using the arrow buttons.

 **First record**

 **Previous record**

 **Next record**

 **Last record**

 **New record**

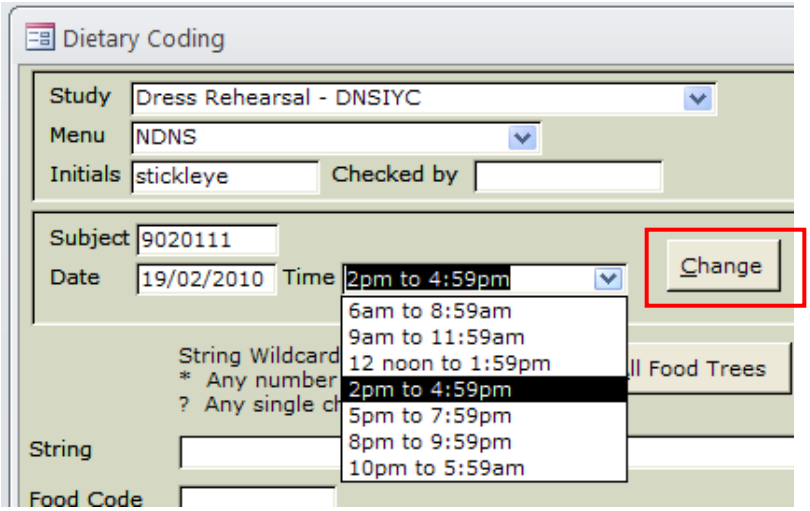
You can also navigate through records using the roller dial on your mouse.

However, you can only navigate between the records entered in that one session. Exit out of the ***Dietary Coding*** screen and open it again and you are given a blank sheet. To amend or delete previously coded data, use ***review coding***.

4.3 Changing default details

Use the ***Change*** button to move onto a new time slot, day or subject ID. Don't try and change the details within the coding form itself e.g. to select a new meal time always click the ***Change*** button and amend details in the form, do not select from the drop down list as this will only

change it for one entry. If the Change button is not used, the details will revert to what they were previously.



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

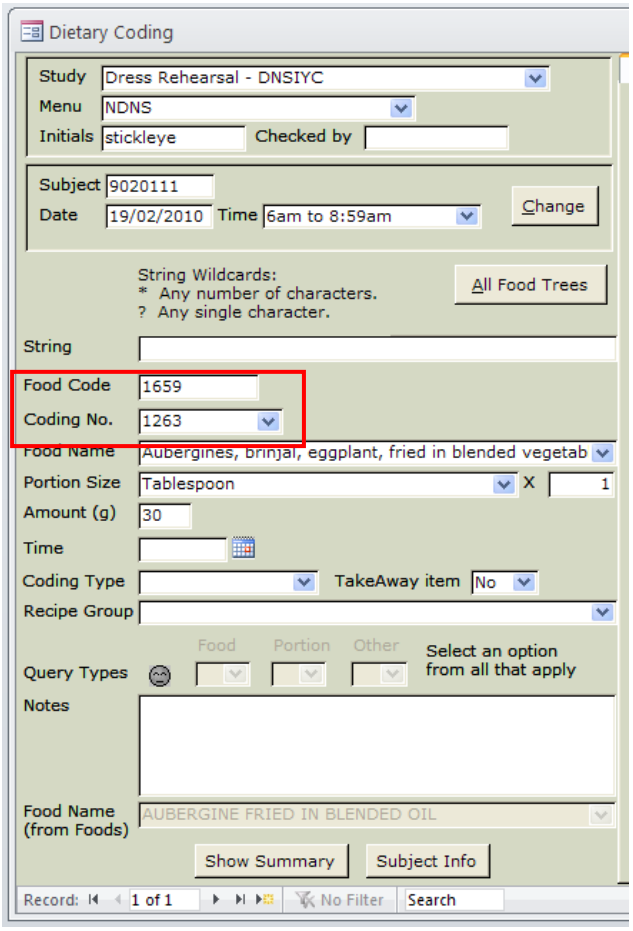
This field is used to limit the foods in the food name field. Type text into this box and only food names containing that text will appear in the food name box e.g. type *bread* and only foods with bread in the name with appear in the food name field.

The text you enter may contain 'wildcards'. Wildcards are used to substitute for unknown characters and 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.

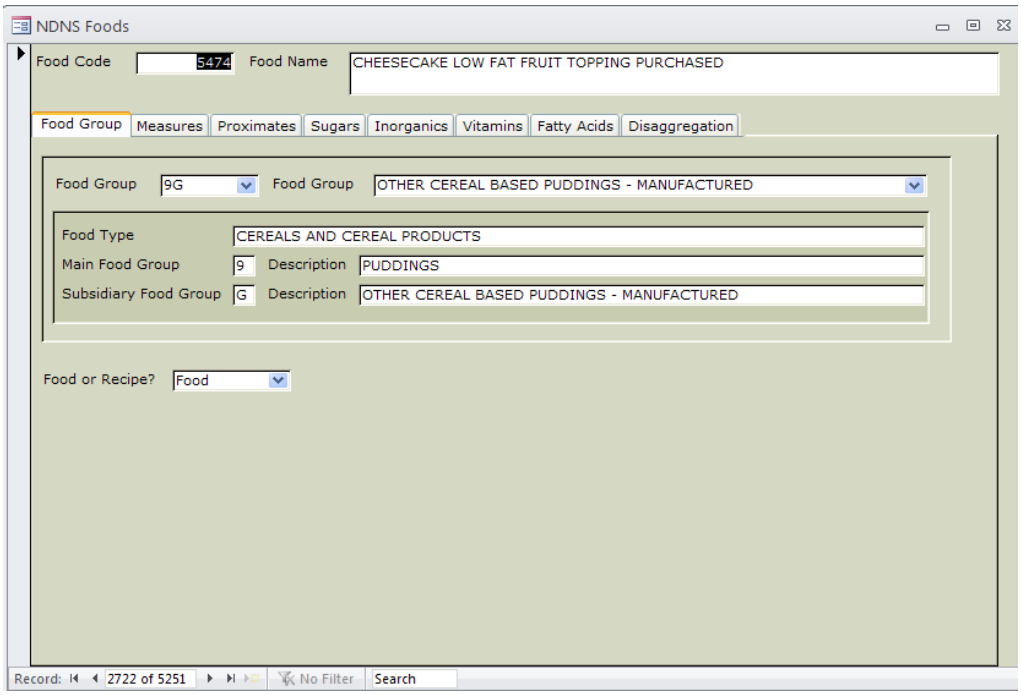
Once you are familiar with some of the more common foods on DINO (e.g. breast milk or tap water) and know their respective ***coding number*** you may wish to enter this number directly, which will save you needing to search using the string field or food trees. *NB Foods should not be coded directly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



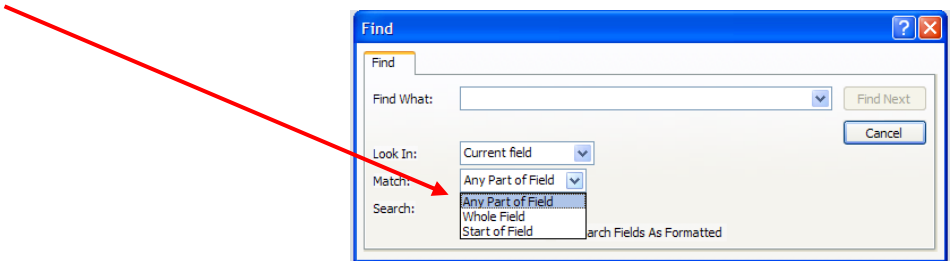
5.4 Food trees

See section 4.2.3.

If you are unsure which group a food is under then make sure you are searching under the first level in the food tree. Otherwise you can look up the food by going to the main menu and selecting ***Food Tables, Foods***.

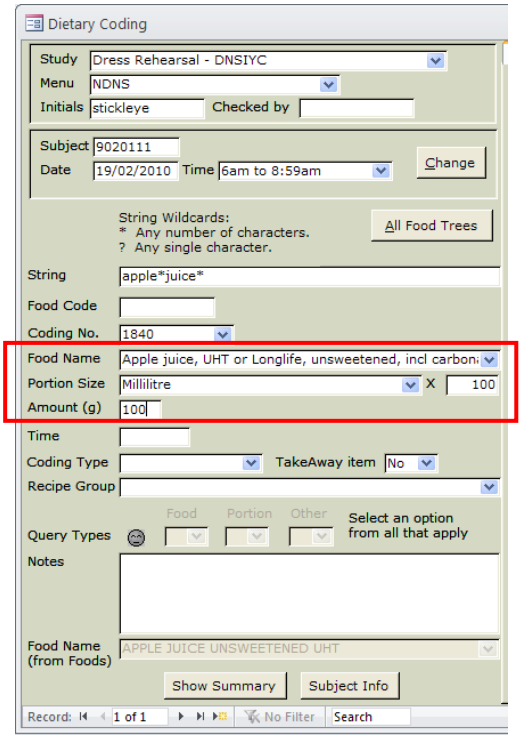


Place the cursor in the Food Name box and click on ( ). Make sure you select "Any part of field" under Match.

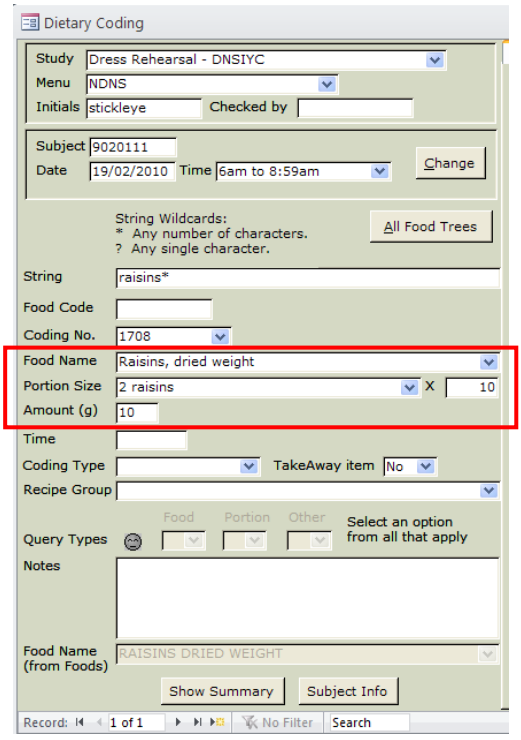


5.5 Portion sizes

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). For example, for 100ml of apple juice, select 'mls' from the portion size list and then enter 100 in the 'X' field.



Parent/carers are encouraged to use household measures when recording food and drink intake, for example ¼ of a pint of gravy, a dessert spoon of peas or the number of individual items.



In some cases the respondent will not record a portion size, or may record “small, medium or large”. A spreadsheet is available to help you code these called “DNSIYC_portionsizes” and is found in the Coding folder Elsie\dnsiyc\Main\Dietary\Coding.

See sections 6.2 and 6.4 for information on how to deal with a portion size query

5.6 Conversion factors

Where foods are recorded in mls, these should be converted to grams before entering into DINO e.g. 20mls mashed banana = 20 x 0.95 = 19g. Use the food rules spreadsheet – conversion factors tab at Elsie\dnsiyc\Main\Dietary\coding\queries.

5.7 Time

Enter the time of each eating occasion in 24hr format e.g. 18.00 (6.00pm). 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.

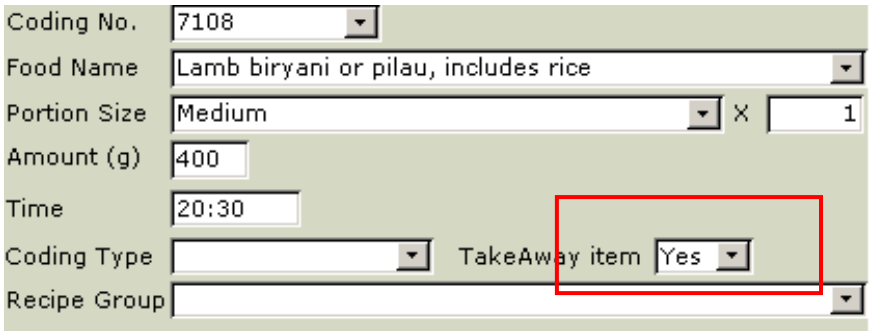
Each food diary should cover four 24-hour periods.

5.8 Coding Type

To save time searching for foods you can save frequently consumed food and portion size codes by allocating them to a coding type e.g. if a respondents drinks tea throughout the day assign each component i.e. tea, milk and sugar to the tea/coffee coding group and it will appear in the history list. You can then copy each of these items into the food record each time you code the tea saving time searching for the separate ingredients again.

5.9 Takeaways

If a food is eaten as part of a takeaway, you should select ‘Yes’ for Takeaway Item.



Food eaten in a fast food joint (anywhere you don't get crockery or cutlery) is still classed as a takeaway even if it is eaten in the establishment e.g. McDonalds, KFC, Burger King. If in doubt, flag & query.

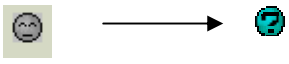
5.10 Recipe group

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 7.4 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.

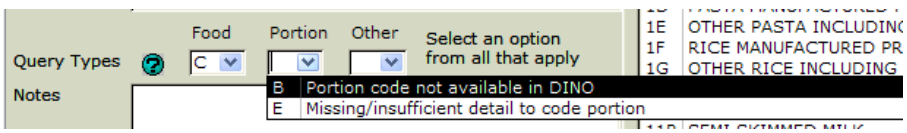
Occasionally manufactured foods will be recorded in diaries that are not in the database. As discussed in section 6 you will need to query these items. The food composition coordinator will decide whether the new food should be added to the database, or whether the composite ingredients should be coded 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 there is no appropriate recipe group available raise a query and it can be added.

5.11 Flagging a record

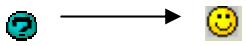
There are many reasons for flagging a record: if you are unsure of the food you have selected, have coded an unknown food (when there is no appropriate food match) or the portion size is missing. To flag a record you click the grey sleepy face (see section 6 also).



It is important that we monitor the reasons why entries are being flagged so after raising a flag you should select a query type from the adjacent boxes. Multiple types can be selected but only one from each category: Food (query relates to food), Portion (query relates to portion) and Other.



Even if you resolve a query whilst you are in the record and therefore don't need to flag it, it is helpful for monitoring if you still allocate a query type. So raise a flag as you would normally, allocate the query type and then click on the blue question mark to highlight the query as complete.



5.12 DNSIYC Food rules

You have a separate document that gives instructions on how to code certain foods such as tea, squash, formula milks, bread and other commonly consumed items. See food rules document at Elsie\dnsiyc\Main\Dietary\queries.

5.13 Deleting foods

See section 8.2

When a diary is coded remember to record the date and the number of diary days in the subjects form under the *Subjects/Diary Assessment* tab.

6.Queries

Most queries can be classified into one of four categories;

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

6.1 Missing food code in DINO

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. Enter 9489 in the food number, select 'unknown food' for Food Name, 'not defined' for portion size and flag this entry. 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.

This gives up to date product information from the FSA's analysis studies on processed/retail foods. The list is not exhaustive so it will not be useful for all queries, but could help reduce shopping trips and internet searches. The spreadsheet is divided into product type to make searching easier. Some foods have nutrient data relating 'as sold' (uncooked), as well as 'as cooked' (as consumed), together with per serving and per 100g so be careful which data you look at.

Record the details of the query on your personal query spreadsheet and a decision will be made to either add the new food to the database, or use an existing food in the database as a substitute.

6.2 Missing Portion codes in DINO

Occasionally respondents will record portion sizes in the diaries that we don't have in DINO. Before you raise a query it is worth checking to see if you will find it in the 'FSA portion sizes' book or the 'food rules spreadsheet'. If you can't find the portion size here enter 1g as the weight and flag this entry. 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. If you think it would be useful to have the portion size in DINO raise a query.

6.3 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.
- **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 e.g. default cheese if the type of cheese has not been listed. 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.
- **Food rules spreadsheet –** Food rules are created when new foods can't be entered into the database. If a food is not in the database, or you are unsure how to code it, it is worth checking the foods rules spreadsheet for further information. Food rules are often created for composite foods such as sandwiches. The food rules spreadsheet can be found in the queries folder.

6.4 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):

- If item is consumed on another day base on this size
- Base size on usual portion size for this particular respondent
- Refer to DNSIYC portion size spreadsheet 'Infant Portion Sizes' tab and food rules spreadsheet.
- Refer to DNSIYC portion size spreadsheet 'Infant Food Rules' tab.

Further Information

In the coding documents file you will find spreadsheets containing portion sizes for supermarket foods, branded goods, fast food and restaurant items. Refer to these when such items are specified in the diary.

6.5 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. Your queries for each week will be added to the master copy by the food composition coordinator, so that they can be reviewed on a Monday. These queries will then be discussed in more detail at the weekly meeting where actions to solve them are devised. For this reason, it is important to start a new tab for each new week of coding to make sure that no queries go unnoticed.

To add a query to the spreadsheet enter:

- **Date of query** – The day you raised the query, not the diary date.
- **Subject ID** – Of the diary the query is from
- **Query initials** – Your initials
- **Food** – Describe the name of the food the query applies to including brand name if stated in the diary e.g. M&S French tartlet crème patisserie or Kellogg's nutrigrain oat baked bars. Record this in exactly the same way it is written in the diary.
- **Query** – Describe the query e.g. 'Food is not in database, what is this?' Or 'Website does not list proportions, shop to split code'. Record as many details as you can about the query. The food composition co-ordinator should be able to understand the query by reading the

information in this column, without looking at the diary. If you think it will help you can record details about the respondent such as their age; you may also want to record what other items the queried food was eaten with.

- **Portion size query** – Please enter the portion size which is being queried.
- **Packaging included** – Put a Y in this column if the packaging is included and leave the packaging with the diary. Enter 'have info' if you have obtained relevant information from an internet search and also leave with the diary.
- **Shop** – Put a Y in this column if you can't find the food on the internet and someone will need to visit a store to shop for the item. If you do find the product on the internet pass this information on to the food composition co-ordinator
- ***Resolution*** – The food composition coordinator will update this column once the query has been solved. You will need to complete the query based on the information provided here e.g. new code added 5263 (you would then code the food using the new code 5263). There may be a note to remind you to link the foods to a recipe group (see section 7.4). When a resolution is confirmed the food composition coordinator will complete the remaining information and highlight the query in green. This indicates that the query can be resolved in DINO.
- ***Food code*** – if a new food code is allocated to the new food, the food composition coordinator will enter it here. You can then enter this straight into the food code field on the dietary coding screen
- ***Coding number*** – if a substitute food can be used, the food composition coordinator will enter the corresponding coding number in here
- ***New food rule? (Y/N)*** – This denotes whether a new food rule has been added to the spreadsheet
- ***New food code needed*** – The food composition coordinator uses this to highlight any new codes that need creating
- ***Date of resolution*** – When the query is solved a date will be entered here that indicates you can complete this diary
- ***Edit date and initials*** – Add the date you edit the diary and your initials to indicate the query has been resolved.

The headings marked here in italics are for completion by the food composition coordinator once the query has been resolved. You will see that these columns are shaded on your spreadsheets to remind you not to enter any details. Only complete edit queried foods in DINO that have been highlighted in green by the food composition coordinator.

When all queries are complete and a diary is fully edited remember to select 'yes', diary is complete on the *subjects* form and enter the date.

7.Weight changes on cooking and calculating recipes

7.1 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 6th Edition (pg 431-435) for estimated weight changes on cooking. e.g.

25g dry white rice
% weight change boiled = +177
(25 X 1.77) = 44.25g
25 (dry weight) + 44.25g (cooking gain) = **69.25g white rice boiled**

Or

8oz steak (227g)
% weight change grilled = -28
(227 X 0.28) = 64 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 casseroled = -25 (i.e. cooked weight is 75% of raw)
Raw weight = (cooked weight/per cent remaining after cooking) X 100.
130g/75 X 100 = 173.3g (per breast).
173.3g (per breast) X 4 = **693g raw chicken breast.**

7.2 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 inadequate details are provided you will need to flag the recipe and raise a query (see section 7.5).

If the respondent eats the whole recipe you simply enter a cooked food code for each ingredient but the "raw" weight of each ingredient and then link them together by allocating a recipe group to each ingredient (see section 7.4). 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 volume, 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.

NOTE:** The ***recipe calculator should only be used for recipes where ingredients are COOKED TOGETHER. To calculate proportions of individual ingredients within an entry you should use the **leftovers/proportions calculator** in DNSIYC/Main/Dietary/coding. For example, 1tbsp pureed chicken dinner consumed (ingredients: 1 tbsp cooked chicken, 1 floret cooked broccoli, 1 tbsp mashed potato and 2 tbsp gravy) – this example would be entered into the leftovers/proportions calculator as all ingredients have been cooked separately and therefore no weight loss is required.

Go into Dietary Coding screen and click on ***recipe calculator***. Move onto a new recipe record in the same way you would a new food record by clicking on the arrow on the bottom left side:

- 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 7.1)

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].

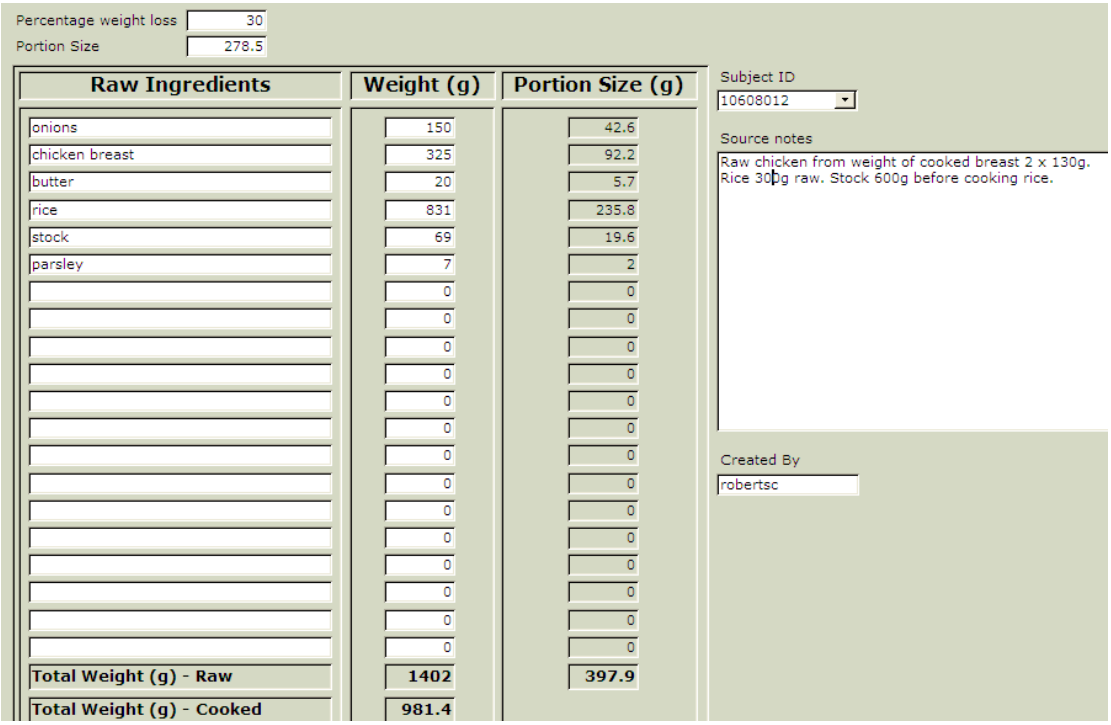
Make any notes on further calculations in the source notes box

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. **Where a portion is recorded as a volume, for example, 40ml Spaghetti Bolognese this must first be converted to grams using an appropriate conversion factor from the conversion factor tab within the New Food Rules spreadsheet. This can then be added to the portion size in the recipe calculator.**
- 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 7.3 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. For further description on recipe calculation refer to NDNS homemade recipe data handling v2.0.doc in: \\Elsie\ndns_data\NDNS2009\NDNS Dietary Data\Databank meetings. If you don't have access to this file please request a hard copy.

7.3 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
Wine or sherry after cooking in stews

7.4 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. Record the recipe group you have chosen in the spreadsheet titled 'Recipe groups' in the 'Recipes.xls' spread sheet, found in \\Elsie\dnsiyc\Main\Dietary\Coding. You will also need to record the subject ID, date of recipe, name of recipe and your initials. If you are unsure which recipe group to choose just ask or flag each ingredient as a query. Check the recipe spreadsheet for other recipes that have been classified into a group to maintain

consistency in groupings. The Food Composition Coordinator will check recipe groups at regular intervals to ensure consistency in coding.

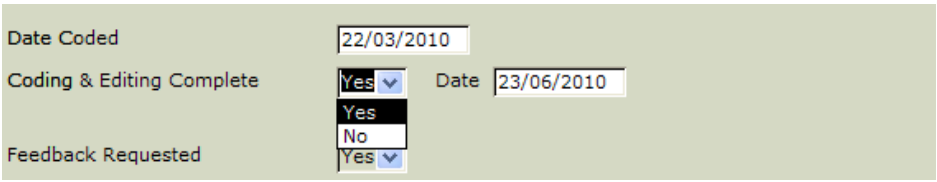
Remember that the same recipe group must also be assigned to each ingredient in the recipe as you enter it into DINO.

7.5 Recipe query

If inadequate details are provided to calculate the recipe enter 9490 in the coding number, select **'recipe food'** from the drop down list and **'not defined'** for the portion size. Flag the entry and the recipe will be dealt with at the query meetings.

7.6 Completing coding

When coding is complete (even with outstanding queries) the diary status must be changed.
Go to subject details, enter the coding date and choose the correct completion status from the drop down menu:



Make sure the status, date and coders initials have been written on the front of the diary.

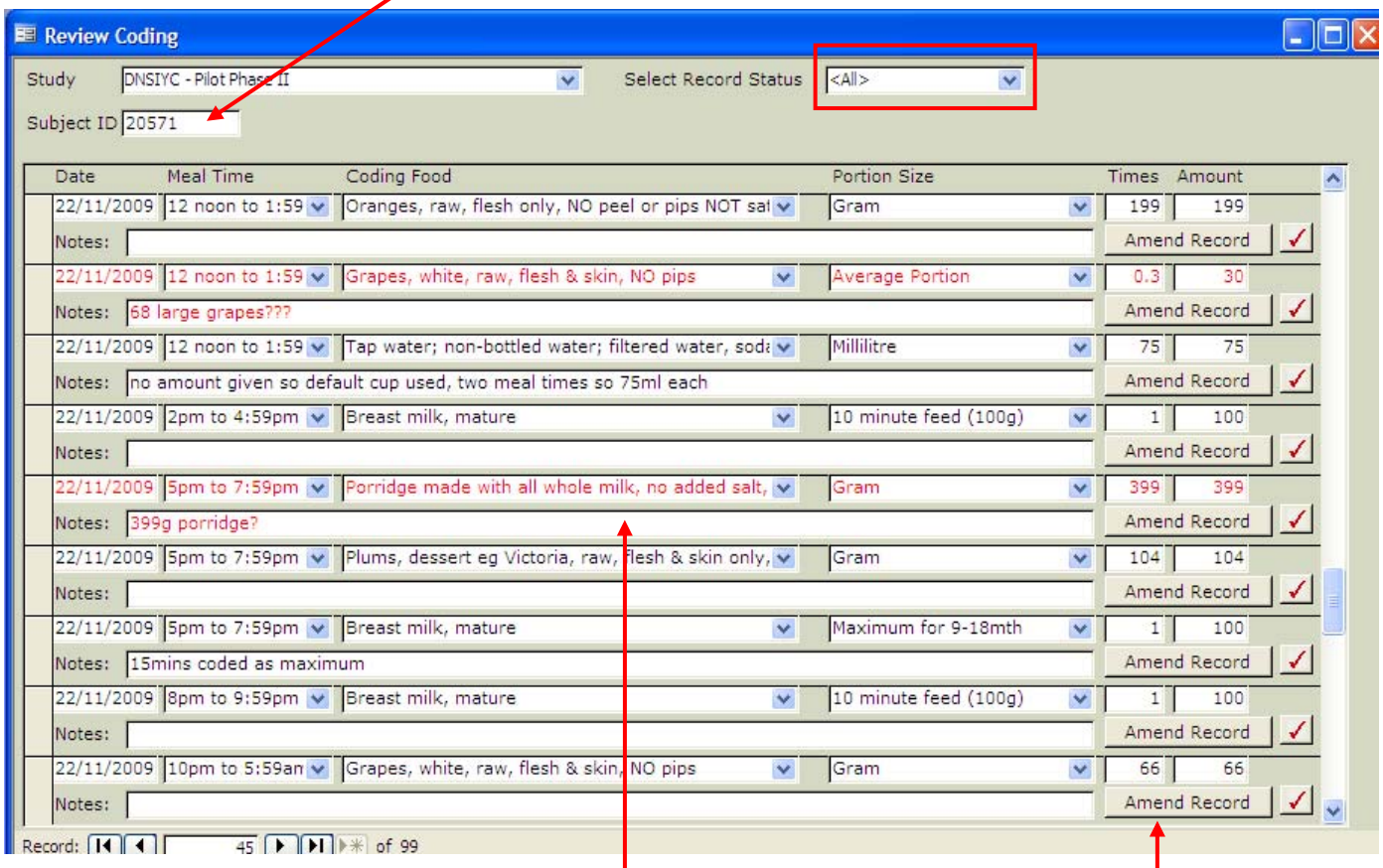
File diaries numerically in the correct section:

- Coded with queries
- Fully completed diaries

8.Editing

8.1 Dealing with resolved queries

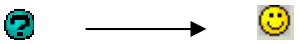
Once the Food Composition Coordinator has resolved a query, it will appear in green text on the master query spread sheet. You will need to go back in to DINO and clear the flagged entry. To re-visit these queries, use ***review coding*** on the ***dietary coding*** screen. To find the appropriate food record select ***Main Stage DNSIYC*** and search for the subject ID using the find tab () whilst the courser is in the 'ID' field. Any queries that have been flagged will appear in red as shown below.

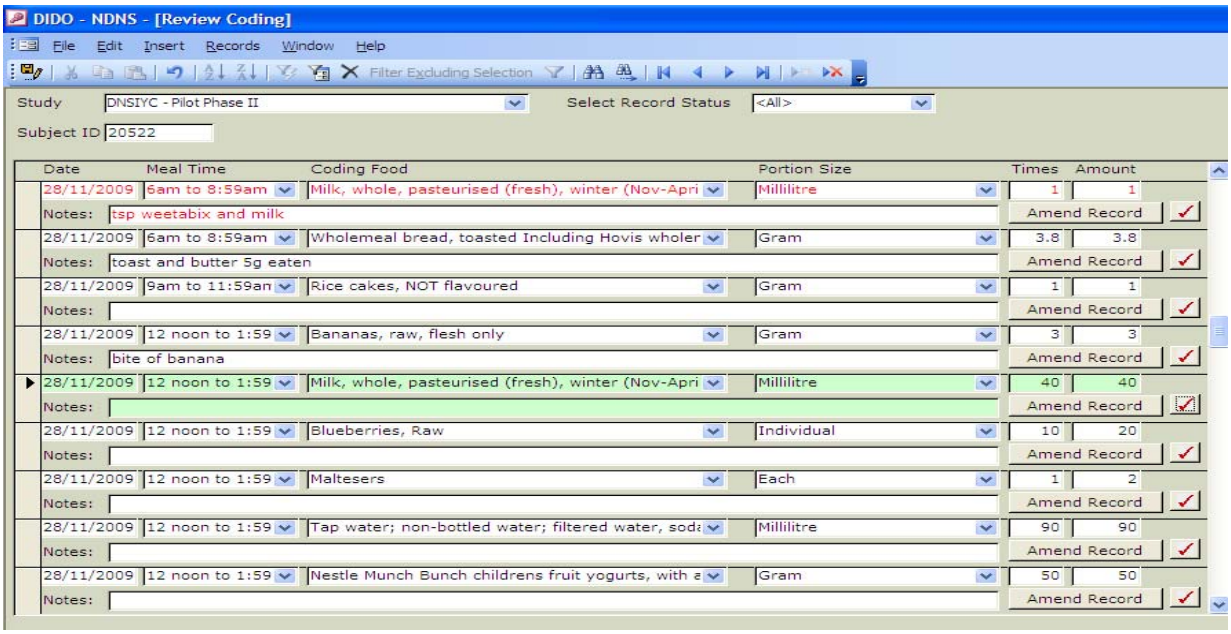


You can see two queries on this form, grapes and porridge. Click on ***amend record*** to amend the query and the dietary coding screen will open.

N.B. To view queried food items only, the 'Record Status' can be changed to 'question'.

Select the appropriate food and portion size code to complete the query as recommended in the query sheet then click the blue question mark to highlight the query as complete.

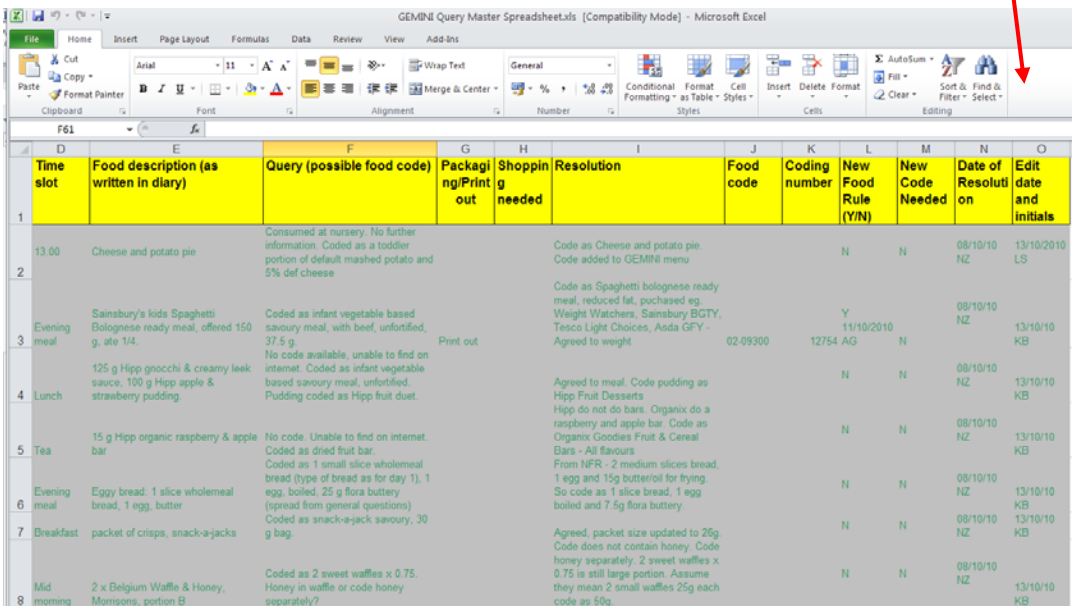




If the food Composition Coordinator has instructed that a recipe should be entered, remember to link the foods together using a recipe group.

You will notice the query becomes highlighted in green; this indicates it has been completed.

Remember to record the <u>date</u> the query was completed, with your <u>initials</u>, in the query spreadsheet. Highlight the row in grey.



When all queries in a diary have been resolved, go into the **Subjects** form under **Subjects/diary assessment** and change coding and editing complete to 'Yes' and enter the date the diary was completed. You should also change the feedback status to 'Plausible'. For diaries where the child consumes milk only, the feedback status should be changed to 'Milk'.

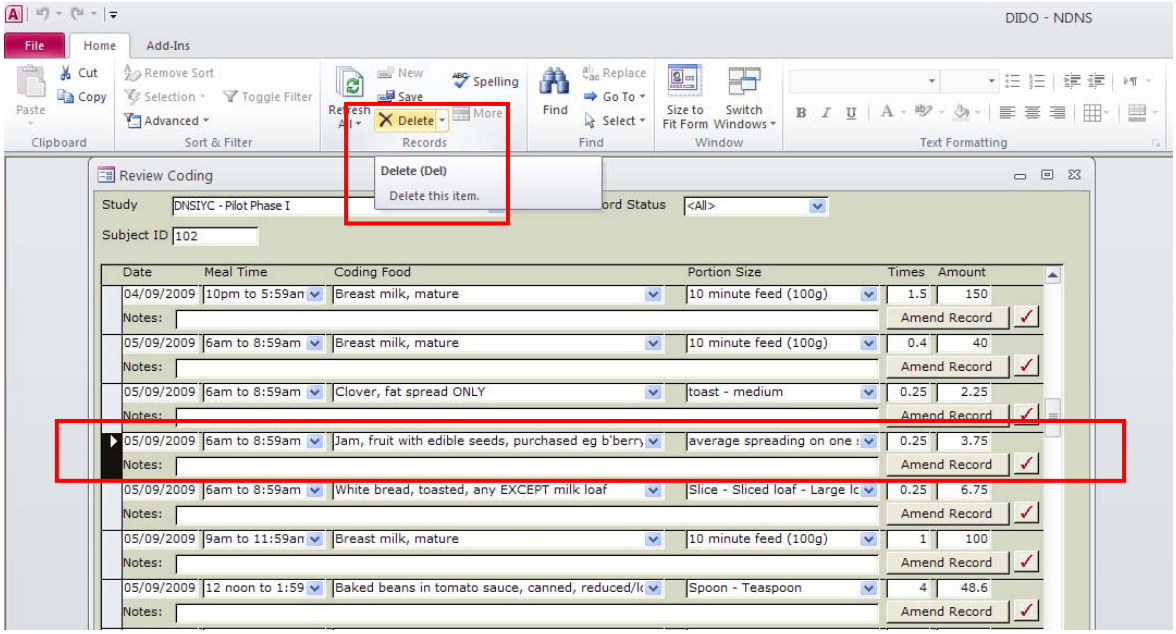
Sometimes there will be a number of people editing at the same time or the Food Composition Coordinator may need to be editing the query spreadsheet. If this is the case, rather than waiting for the file to be available, open it as a 'read only' file and make a note of the queries you have edited in the diaries. When the query spreadsheet is available remember to go back in and record your completed queries. ***It is of great importance that editing is kept up to date in order for dietary feedback to be generated and passed on to the parent/carer on a monthly basis.***

Please consider the number of people who need to use this document – as soon as you have finished with the spreadsheet or if you leave your desk, close the sheet so someone else can use it.

8.2 Deleting records

Review coding can be used to delete any records entered in error.

Select the record you wish to delete, as shown in the diagram below.



Select the *'delete record'* tab from the toolbar at the top of the screen to permanently delete the entry.

DIET AND NUTRITION SURVEY OF INFANTS AND YOUNG CHILDREN

Breast Milk Diary Coding Instructions

V3: 20/09/2011

Introduction

After completion of the food and drink diary (stage one), parents are invited to take part in the second stage of DNSYIC.

During this stage of the study, parent(s) and child attend a clinic where the following take place:

- Physical measurements
    - Weight
    - Height/length
    - Skinfold thickness
- Blood sample
- Administration of tracer water

After the tracer water dose, parents are asked to collect urine samples

- If there is no breast milk in the diet, urine samples are collected for baby only for 5 days
- If there is breast milk in the diet, urine samples are collected for mother and baby for 14 days

In addition to the collection of urine samples, mothers who breastfeed are asked to complete a breast milk diary for 14 days.

This guide explains the procedure for coding the breast milk diaries.

The breast milk diary

The diary includes instructions to parents and 14 pages for recording breast milk intake (1 page = 1 day). Parents are asked to record all breast milk feeds over the 14 day recording period. At the end of each day, parents are asked to record whether it has been a full or partial day of recording, i.e. if a parent forgot to record a feed in the diary, it would be a partial day of recording.

Extra documents

You should always receive:

- Breast milk evaluation form (green)

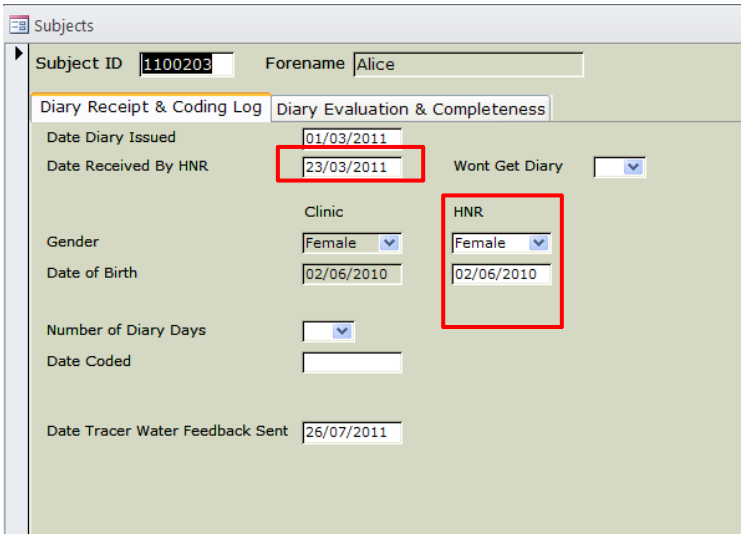
Evaluation forms do not always arrive at HNR at the same time the corresponding diaries. They should be matched to the diaries once both have arrived, but if you are coding a diary that does not have an evaluation form please let the DNSYIC research assistant know.

Logging diaries

Once diaries have been returned to HNR, the following information should be entered on the *Subjects* form, under the *Diary Receipt and Coding Log* tab:

- Date received by HNR
- Gender
- DOB

  NB: ensure that the Gender and DOB relates to the baby and not the parent. If necessary, double check this information on DNSYIC Dietary DINO. If there are any discrepancies, please see the DNSYIC Research Assistant.



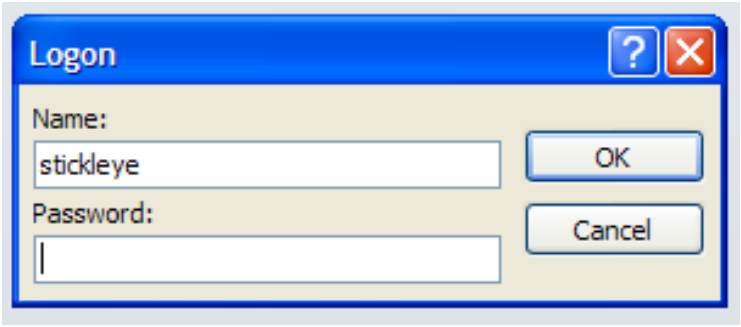
Coding diaries

HELP function

The DNSIYC help file has information on how to use DINO, some of which is in this user guide. The help function can be accessed by pressing **F1** at any time in DINO. It is useful to familiarise yourself familiar with this information so spend some time looking through it.

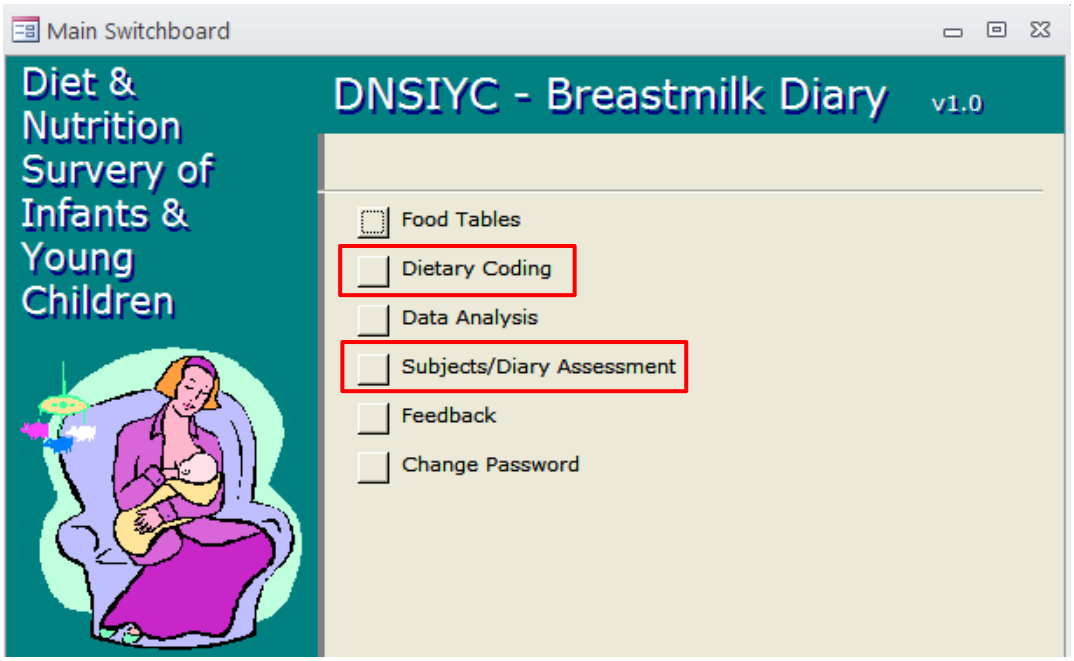
Accessing DINO – DNSYIC Breast Milk (BM DINO)

To open BM DINO click the *Open BM Diary* shortcut which can be found on your desktop. Once opened, you will be prompted to enter your password (your user name will appear automatically).



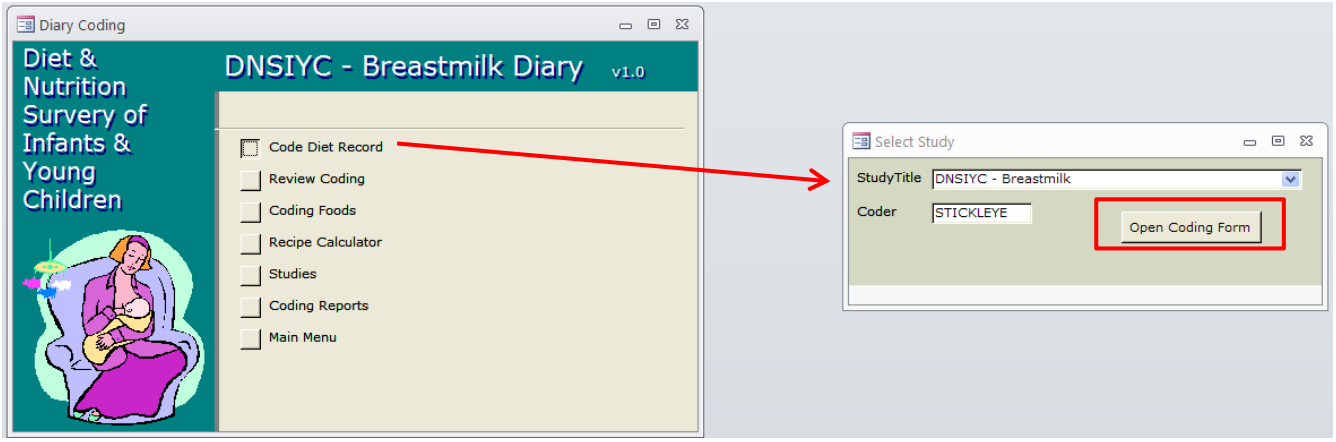
You will come to the main switchboard screen. You will be using two options on this screen:

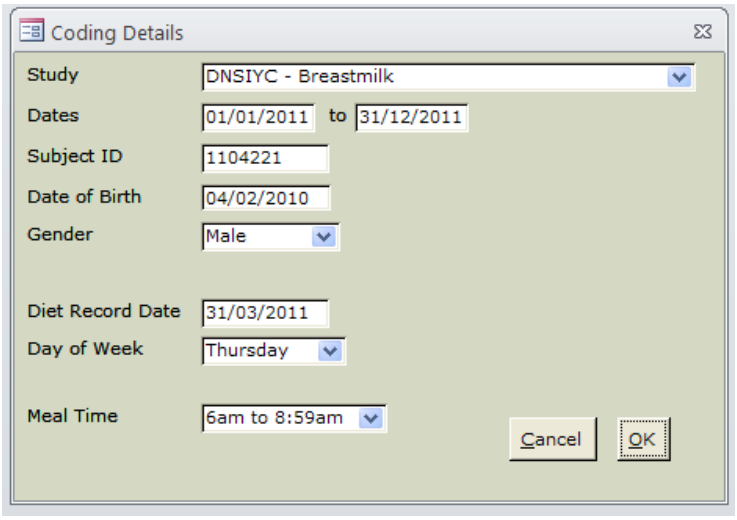
1. Dietary coding
2. Subjects/Diary assessment



Dietary Coding

To code a diary, click on the *Dietary Coding* button and then *Code Diet Record*. You will be prompted to enter subject details, which can be found on the front of the diary.



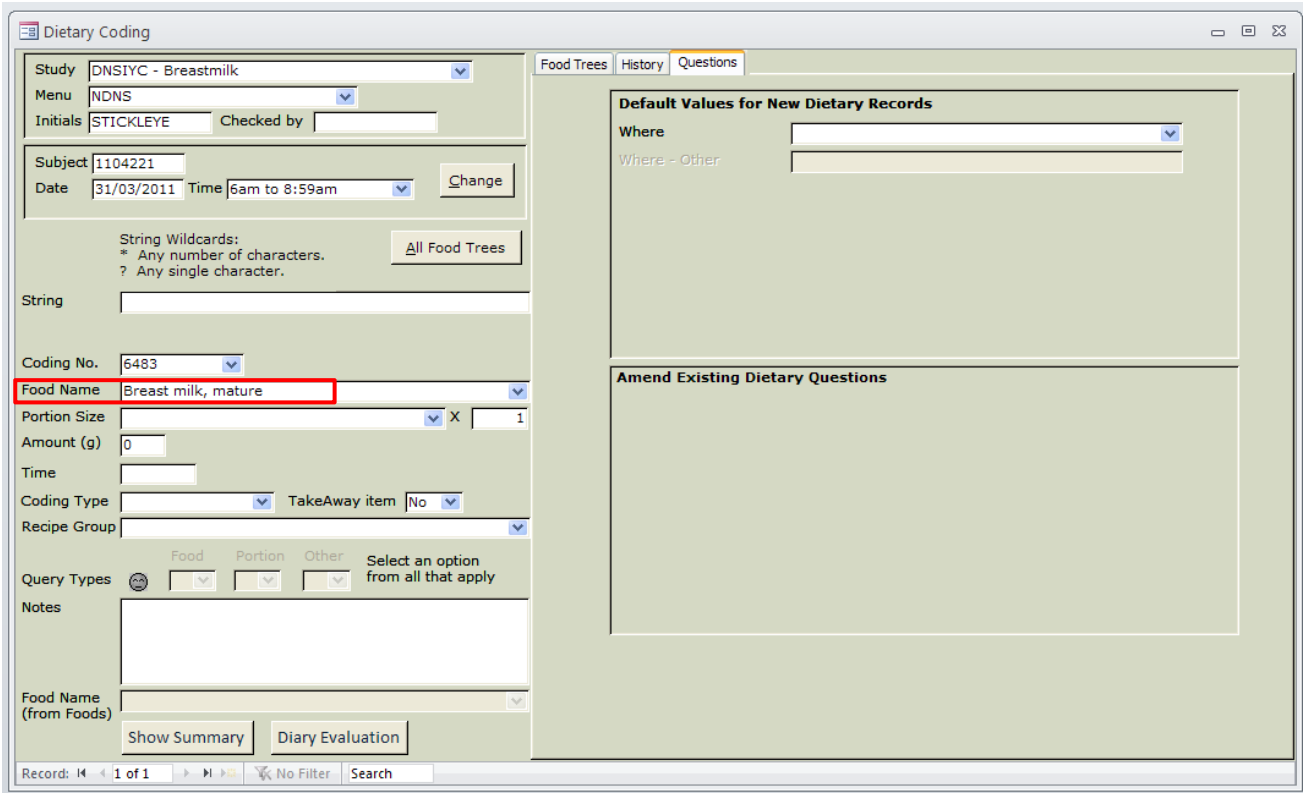


Once these details have been completed, click ok and the coding form will appear.

NB: If the data entered in the coding details form does not match the information in the subjects form, an error message will appear.

BM DINO consists only of one food- breast milk. So this automatically appears in the food name box.

PLEASE CHECK THAT THE ID ON THE DIARY AND EVALUATION FORM MATCH BEFORE CODING



Information to be entered for each breast feed:

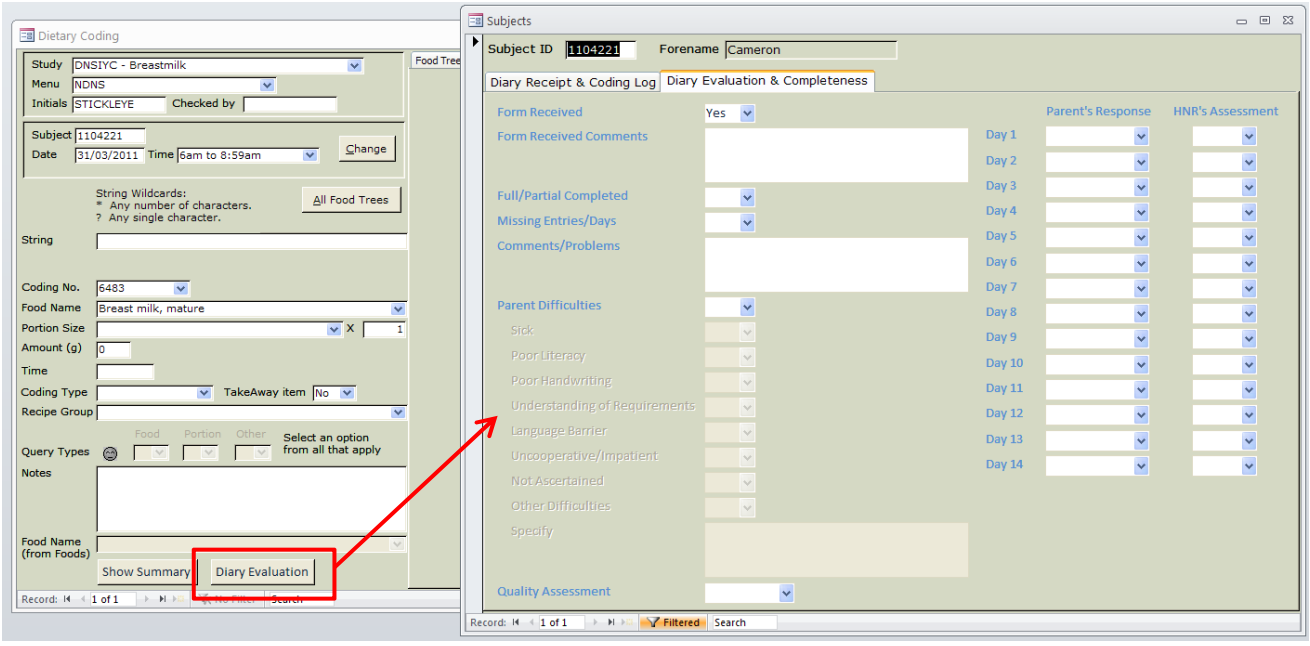
- **Portion size**
  - Mls
  - Minutes
  - Ounces

**** Please note: WE ARE NOT USING AGE APPROPRIATE MAXIMUMS WHEN CODING THE BREAST MILK DIARIES. CODE THE AMOUNT AS STATED E.G. A 60 MINUTE FEED SHOULD BE ENTERED AS 60 MINUTES ****

- **Where**
  - To be selected from a drop down menu
- **Time**
  - In 24 hour format

Diary evaluation

On the dietary coding form, you will see a button for *Diary Evaluation.* This button opens up the *Diary Evaluation and Completeness* tab on the *Subjects* form.

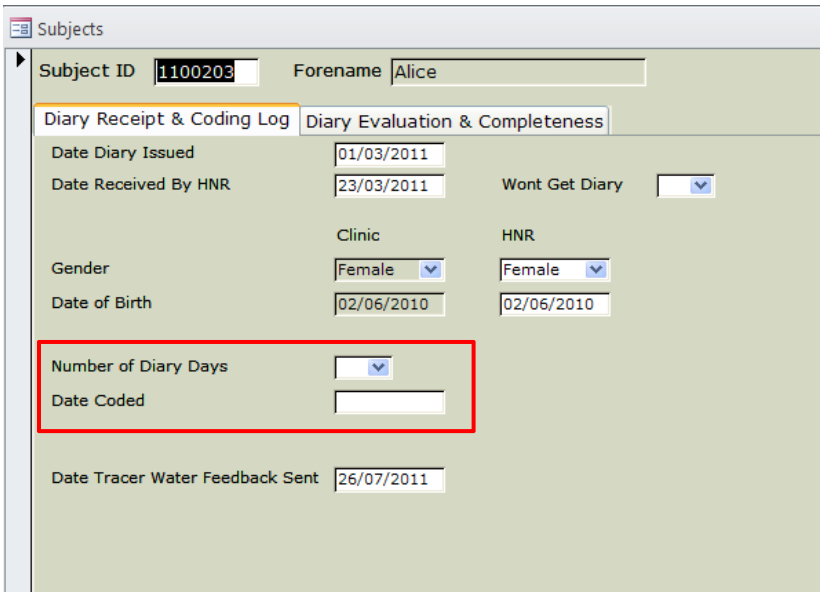


N.B: this can also be accessed from the *Subjects/Diary Assessment* option on the main menu of BM DINO.

You may find it useful to complete the right hand side of this form as you code the diary. However, it can all be entered at the end of coding if you prefer (please see the next section)

Subjects/Dietary Assessment

Once a diary has been completed, please enter the date and how many days were coded in the relevant boxes on the *Diary Receipt and Coding Log* tab.



The *Dairy Evaluation and Completeness* tab should be fully completed:

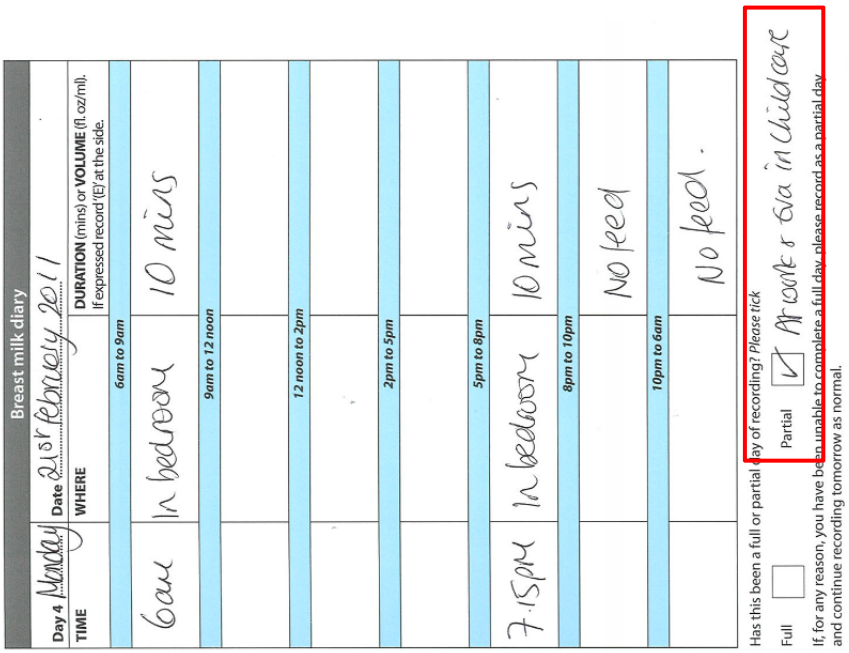
The breast milk diary evaluation form should be used to complete the left hand side of the tab. You will record:

- Whether there were any missing days or entries (Y/N)
- Whether parents have used the full or partial boxes at the bottom of each day (Y/N)
- If there were difficulties (Y/N)
- If 'Yes' then what difficulties were experienced
- Assessment of the quality of the diary

On the right hand side of the *Diary Evaluation and Completeness* tab, please complete whether it was a full or partial day of recording for each diary day according to the boxes at the bottom of each page of the diary.

If there is a disagreement between the parent's response and HNR's assessment of whether a day is complete or partial, the HNR's assessment boxes can be completed in addition.

For example, the mother has ticked partial recording and has explained this was because she was at work and the child was in childcare. However, no feeds would have been given during this period and feeds at other times of the day have been recorded.



It would be acceptable in this case to record HNR's assessment as "full".

Once a diary is fully complete, and all questions have been answered, please store it in the completed box file in numerical order.

As a measure of quality control, 10% of diaries will be checked.

National Infant Diet and Health Study

Stage 2 - Clinic Visit

Manual of Procedures

Table of contents

List of addenda

H.1. Introduction

The purpose of this document is to detail, from start to finish, the procedures and components involved in **Stage 2 of The National Infant Diet and Health Study** that are being carried out within your clinic ((CRF)/hospital) and/or laboratory. Training is provided for key personnel ahead of the study start and we will also aim to be there for your first study day to offer support.

The study is being carried out for the Department of Health and the Food Standards Agency, by the National Infant Diet and Health Study consortium. The consortium consists of independent research institutes: Medical Research Council (MRC) Human Nutrition Research (HNR) based in Cambridge, National Centre for Social Research (NatCen) based in London, MRC Epidemiology Unit based in Cambridge, and the Human Nutrition Research Centre at Newcastle University. The study has been reviewed and approved by the Scientific Co-ordination Committee of MRC HNR and by *Cambridgeshire 4* Research Ethics Committee [REC Ref: 09/H0305/101].

The clinic visit (Stage 2) component of the National Infant Diet and Health Study is overseen and coordinated by MRC Human Nutrition Research.

This pack includes all the information you need to know about the overall study. Prior to the clinic visit the following steps will have been completed for participants:

1. Postcodes selected by National Centre for Social Research (NatCen), London
2. Children selected by HM Revenue and Customs from Child Benefit Records
3. Opt out/Advance letter sent to homes of selected children (NatCen)
4. NatCen interviewer goes to the home and with agreement interviews the parent/carer of the selected child
5. Parent/carer completes a 4 day diet diary for the selected child
6. NatCen interviewer returns to collect the diet diary and introduces Stage 2, the clinic visit. If interest is shown, further information is left with the participant and contact details are collected for the parent and child
7. Contact details for interested participants are passed to HNR from NatCen
8. HNR contact the participant by telephone to set up the clinic visit

H.2. Clinic Visit - Set Up

Telephone call to participant

The research team at HNR are responsible for contacting the parent/carer of each participant by telephone prior to the clinic visit. This phone call is used to book the appointment and to determine which components of the clinic visit the participant is likely to be involved in. The participant will already have received Stage 2 leaflets [Annexes 8, 10 and 11] and instructions on how to take a pre-dose urine sample if an interest in the breast milk, fluid intake and body composition element was recorded at Stage 1. The telephone call is the first time that the parent of the participant will have the chance to ask detailed questions about the different components of the clinic visit. Each component will be discussed in full and plenty of time will be allowed to ensure the parent/carer is comfortable with each component.

Please refer to flowchart below for the format of the telephone call.

Telephone call to participant (HNR Research Team)

Ensure you are speaking to the correct person and introduce yourself.
Ask if it is convenient to talk?

Not interested → No further contact

YES

Firstly, I'd like to tell you what will happen during the clinic visit, including the order and the components of the visit.

NO

Arrange a call back for a convenient time

Outline clinic visit structure
Nurse takes some basic information
Nurse discusses and takes consent
Nurse checks pre-dose urine sample
Ametop gel (or alternative) applied
Physical measurements and skinfolds
Breastmilk volume/Body composition
Blood sampling
Nurse takes expenses form & gives promissory notes

<u>Probe Respondent</u>
What are your initial thoughts on the clinic visit?
Are you happy to consider all components of the clinic visit?
Are there any questions you want to ask about the clinic visit/a specific component of the clinic visit?

Not interested → No further contact

Handle objections with sensitivity.
Listen to concerns
(e.g. confidentiality, no time, just don't want to, bad timing, done enough, invasion of privacy)
Make respondent feel special and reassure them about specific concerns.

Discuss transport to and from clinic – car/taxi
Discuss whether hotel is required
Enter GP details
Update call log and contact status
Remind: take along pre-dose urine sample(s) and child's drinking bottle

Data File
Following the telephone call the data below will be entered into the clinic database:

- date of phone call(s)
- participant status i.e. appointment booked, appointment refused etc
- date and time of clinic visit
- clinic visit components likely to be undertaken
- method of transport to clinic (e.g. taxi, car) and whether a hotel is required

A letter confirming the clinic visit will be sent to the participant by HNR. Text message reminders may also be sent where permission is obtained.

Taxi
HNR will already have arranged a TAXI account with your local site.

When the TAXI box is selected in the clinic database you will need to ensure a taxi is booked (to and from the clinic visit) for your participant with a local taxi company and that the participant is informed.

Expenses
HNR will issue expenses forms to participants (if required), and book hotel (if required).
Collect the expenses claim form at the participant's clinic visit and post back to HNR weekly.
In the event that it is **not** possible to collect the expenses claim form, i.e. because the mum is unsure of the return costs, HNR will provide pre-addressed/paid envelopes for the clinic to provide the parent for the return of the expenses form. **This should be a last resort.**

H.3. Informed consent

The tests involved cannot be done unless the parent of the participant has consented to the procedure and has consented for either their child's results to be sent to their GP, or alternatively, to be contacted by a study clinical advisor if their results have potentially important implications for their health or health care. Each component requires separate consent. Parents/carers may choose which components they wish their child to participate in. Consent forms are provided by HNR.

Please ensure all procedures are fully explained and time for discussion is allowed to ensure informed consent. Annex 24, the study conduct information sheet must also be given out and explained.

Informed consent must be taken at the clinic visit prior to commencing any measurements or procedures.

Procedure

1. Check the DOB and gender on the labels with the participant and place the **CON** label on page 1 of the consent form
2. Write the participant's study ID number in the appropriate place on all 3 pages of the consent form
3. Clearly write the name of the parent/legal guardian and the participant in the appropriate place on page 1 of the consent form
4. Complete each section of the consent form as appropriate and initial each statement in the relevant box
5. Strike through any sections that are not relevant to the participant e.g. if the participant is not taking part in the blood sampling protocol, strike through section **C** and **D**
6. Ensure the parent/legal guardian has clearly written their name, the date and signed each page of the consent form
7. It is equally important for the research team member, who has taken the written consent, to also print their name, date and sign each page of the consent form in the presence of the parent/legal guardian

Notes on the consent form:

1. The participants' GPs will only be informed of blood results. They will not be informed of general participation in the study in the event that a blood sample is not undertaken.

2. Section D – only needs completed if the parent/legal guardian of the participant fulfils **all** of the following criteria:

   - If the parent/legal guardian has initialled 'Yes' to consent questions 11 and 12
   - If the parent/legal guardian has initialled 'No' to consent questions 3 and 13

   *To continue with the blood sample the parent **must** complete section D. If refused, please do **not** continue with the blood sample.*

3. Top copy (original): to be faxed at end of clinic visit to HNR (see Section 8) and then posted back to HNR by pre-paid special delivery
   Middle copy: to be given to the parent/carer of the participant to keep
   Bottom copy: to be kept by clinic

H.4. List of Documents

There are a number of documents required for the National Infant Diet and Health Study. Documents are split into 1) Informational documents such as Stage 1 leaflets (for your reference) and Stage 2 leaflets (for your usage), and 2) Forms to be completed at the clinic visit. Please see list below with brief explanations:

Stage 1 – participant information sheets for reference

- Annex 6 – NatCen general information leaflet
- Annex 6A – HNR general information leaflet
- Annex 7 – Opt out/Advance letter
- Annex 8 – Stage 1 leaflet
- Annex 18A – Instruction sheet – pre-dose urine sample - Protocol 1
- Annex 18B – Instruction sheet – pre-dose urine sample - Protocol 2

Stage 2 – participant information sheets

- Annex 9 – Stage 2 leaflet – 'The Clinic Visit'
- Annex 10 – Why provide a blood sample
- Annex 11 – General info sheet about combined breastmilk, fluid intake and body composition
- Annex 19A – Instruction sheet for urine sample – Breastmilk, fluid intake & body composition
- Annex 19B – Instruction sheet for urine sample – Fluid intake & body composition
- Annex 20A – Collection form - Breastmilk, fluid intake & body composition
- Annex 20B – Collection form - Fluid intake & body composition
- Annex 21 – Ametop gel leaflet
- Annex 22 – Clinic consent 2
- Annex 23 – Clinic appointment letter
- Annex 24 – Study conduct sheet
- Annex 31a&b – Bravery certificates
- Annex 37 – Missed clinic appointment card
- Promissory notes – for promise of voucher payment, following completion of certain clinic components

Clinic – Forms/information sheets

- Clinic measurement record card
- Addendum B – Blood tracking form
- Addenbrooke's blood form
- Checklist

Laboratory Information

- Addendum A – Flow chart for sample processing
- Addendum B – Blood sample tracking form
- Addendum C – Instructions for the shipment of the National Infant Diet and Health Study serum samples

Participant Feedback

- Example of Dietary Feedback
- Example of Blood feedback
  - Full blood count
  - Iron and Vitamin D
- Example of breastmilk feedback

H.5. Clinic Visit – Order of Events

Once consent has been taken it is at your discretion which order you undertake the components of the clinic visit. The participant may choose which components to take part in and does not have to complete all of them. If the participant is undertaking the blood sampling and the mother requests the use of Ametop gel, this takes at least 20 minutes to take effect. We advise that this is applied while other procedures are carried out to allow the gel to take effect. Additionally, if the participant is taking part in the stable isotope component, you may start giving the dose at the beginning of the clinic visit and allow up to an hour to complete the dosing.

Suggested order of events (as applicable per participant)

1. **Give out study conduct information sheet – Annex 24**
2. **Give study toy**
3. **Describe components, talk through consent and allow time to read and discuss consent**
4. **Take written consent –** *see section III*
5. **Check pre-dose urine sample(s) **if not provided do this now –** *see protocol 1/2*
6. **Apply Ametop gel if desired–** *see Annex 21*
7. **Give stable isotope dose to mother first and then child. Note: dosing can continue for up to an hour –** *see either protocol 1 or 2*
8. **Take child's length –** *see protocol 3*
9. **Take mother's height –** *see protocol 4*
10. **Take mother's weight –** *see protocol 5*
11. **Take child's weight –** *see protocol 5*
12. **Take child's head circumference –** *see protocol 6*
13. **Recap – how to collect a spot urine sample –** *see either Annex 19A or B (which are provided in the Stable Isotope dosing kit)*
14. **Demonstrate how to complete urine collection forms –** *see either Annex 20A or B (which are provided in the Stable Isotope dosing kit)*
15. **Provide and discuss instructions for completion of the Breastmilk diary and place Breastmilk diary**
16. **Carry out skinfold thickness measurements –** *see protocol 7*
17. **Photocopy clinic measurement record card and SI form – give originals to mum –** *refer to chapter on 'after clinic visit'*
18. **Take blood –** *see protocol 8*
19. **Give promissory note(s) –** *see promissory notes voucher payment form*
20. **Take and check expenses claim form (if applicable)**
21. **Deliver blood to Laboratory** *– see protocol 8*
22. **Post EDTA monovette to Addenbrooke's hospital –** *see protocol 8*
23. **Fax documents to HNR** *– refer to chapter on 'after clinic visit'*
24. **Update electronic database –** *refer to chapter on 'after clinic visit'*

H.6. Individual Protocols

Protocol 1.0 Tracer water BREAST MILK Protocol

Breast Milk Volume Assessment – Protocol for Dose Administration

Introduction

All mothers who report some degree of breastfeeding will be asked whether they are willing to participate in the breast milk volume assessment component of the study. A sample of urine is required from both mother and child, and then both are given oral doses of tracer water. The mother and child will then supply further urine samples, one a day for fourteen consecutive days after drinking the tracer water, which together with the pre-dose, makes a total of fifteen urine samples each. The urine samples will be sent to HNR for analysis.

If this protocol is completed, protocol 2.0 will not apply.

Before the Clinic Visit

The mother will have been asked for verbal consent to participate, and if they have agreed she will have been supplied with a pre-dose collection kit. On arrival at the clinic the mother should have brought with her:

- 1 x sample of the mother's urine
- 1 x sample of the child's urine
- Details of when the samples were collected should be written on both the bag labels and the urine bottle storage containers
- One of her child's usual feeding bottles (ready for use). (They may not have one if they are exclusive breastfeeders)

The clinic should have received Annex 19A, 20A, the breast milk diary, prompt sheet, trial page and the tracer water dosing kits from HNR comprising:

- 1 x mother's dosing bottle containing a pre-weighed amount of tracer water.
- 1 x straw for drinking of dose
- 1 x printed urine collection form
- 1 x printed urine collection instructions.
- 14 x glass urine collection and storage bottles for mother's post dose daily urine collections (labelled days M1 to M14)
- 15 x plastic cups to aid mother urine collection (if required)
- 1 x child's dosing bottle containing a pre-weighed amount of tracer water
- 14 x glass urine collection and storage bottles for child's post dose daily urine collections (labelled days B1 to B14)
- Cotton wool
- 15 x syringes (14+1 spare) to squeeze urine out of cotton wool
- 1 x spare pair of plastic forceps
- 1 x pen
- Elastic bands to secure full boxes

The dosing bottles should be inspected for leakage against a 'fill line' on the bottle, and the whole kits should preferably be stored refrigerated (but NOT frozen) or in a cool place if not possible to do so.

*** Please note: The dosing kits should be taken out of the fridge at least an hour before the clinic visit to allow the doses to reach room temperature.**

During the Clinic Visit

Discuss and gain consent for the dosing procedure with the mother and witness the signature on the consent form. The form must be correctly filled in before any further part of the protocol can be performed.

The breast milk volume assessment components of the clinic visit are to:

- Ensure that formal *written* consent from the mother is obtained for herself and her child before administering the dose
- Check that the pre-dose samples have been properly obtained
- Weigh both the mother and the child
- Dose the mother
- Dose the child
- Hand over the equipment required for the mother to complete the method protocol for post-dose urine collection
- Hand over the breastfeeding diary and explain how to fill this in

Procedure

A urine sample from both mother and child should have been collected and brought to the clinic for checking. These bottles should be no more than ¾ full. If these pre-dose samples are not available you will have to obtain a urine sample from both mother and child **before** opening the tracer water doses. The 'pre-dose' urine sample is the most important sample of the study and should be treated as such. The respondent should store this sample and subsequent ones in the containers provided, preferably in their fridge or alternatively in a cool, dry environment such as an unheated garage. It is vitally important that the pre-dose is uncontaminated by the tracer water itself. For this reason the pre-dose samples must be obtained and stored in capped vials before the dosing bottles are opened.

With a colleague check that the respondent identity number agrees with that on the dosing kit. **The kits are tailor made for the participants and must only be used for the intended mother and child**.

Copy the pre-dose collection time information onto the appropriate sections of the urine sample collection form.

Administering the dose to the mother: -

1) Weigh all the mother's dosing materials, which will include the dosing bottle, tracer water dose plus top and straw, to 1 decimal place and record the weight on their collection form.
2) Ask the mother to drink the tracer water dose, without spilling it, using the straw provided. **Record the date and time of dosing on the urine collection form.**
3) Once the water is drunk squash the straw inside the bottle and replace the top.

4) Reweigh the empty dosing bottle, top and straw (and wrapper) and record this weight also on the collection form to 1 decimal place.

The bottle and straw do not need to be kept and can be disposed of in normal household rubbish.

Administering the dose to the child: -

Where applicable, the mother will have been asked to bring one of her child's bottles with her for dosing. The bottle should be dry, empty and ready for use. If this bottle is not available or not in a suitable condition for use, e.g. dirty or wet, then please use one of the disposable bottles already provided to the clinic by HNR. Depending on the child, a feeding tube and syringe or just the syringe provided by HNR can also be used to administer the tracer water dose. The dose can be fed to the child for up to 1 hour to maximise the intake.

***Please specify the drinking vessel used on the urine collection form.**

If using a child's drinking bottle:

1) Weigh the empty dosing bottle and teat and record on the collection form to 1 decimal place.
2) Carefully transfer the tracer water contents of the dosing bottle provided into the child's drinking bottle.
3) Weigh the child's drinking bottle with the dose in it to 1 decimal place and record this weight on their collection form.
4) Ask the mother to feed the child the water trying to avoid spillage as much as possible. **Record the date and start time at which the child drinks the water on the urine collection form. Feeding the child the dose may be continued for an hour to maximise the dose drunk.**
5) Once the water is consumed reweigh the child's empty bottle and record this weight also on the collection form.

*Please note - although it is preferable that all the dose is drunk, even if none of the dose is drunk or only a little of the dose, please continue with the protocol and re-weigh the bottle containing the leftovers to allow the determination of the actual amount consumed. *Please do not force-feed the child just to ensure total consumption. **We can still determine the breast milk intake so long as the mother has consumed her dose.**

If using a syringe and/or feeding tube:

1) Weigh the empty syringe and/or feeding tube and record on the collection form to 1 decimal place.
2) Transfer the tracer water contents of the dosing bottle provided into an empty plastic drinking cup. Using the syringe provided, carefully draw up the tracer water into the syringe. Please ensure that all of the tracer water is drawn up.
3) Weigh the syringe containing the tracer water (plus the feeding tube if used) to 1 decimal place and record this weight on their collection form.
4) Ask the mother to slowly push the plunger and feed the child with the tracer water through the syringe. If using the feeding tube then attach this on the mother's finger using the tape provided and carry on using the syringe as above.

Try to avoid spillage as much as possible. **Record the date and start time at which the child drinks the water on the urine collection form.**

5) Once finished re-weigh the child's empty syringe and/or feeding tube. Record this weight also on the collection form.

*Please note – although it is preferable that all the dose is drunk, even if none of the dose is drunk or only a little of the dose, please continue with the protocol and re-weigh the syringe containing the leftovers and/or feeding tube used to allow the determination of the actual amount consumed. *Please do not force-feed the child just to ensure total consumption. **We can still determine the breast milk intake so long as the mother has consumed her dose.**

Any problems during dosing must be recorded on the urine collection form e.g. child was sick, spillage etc. It is important to be honest and provide as much detail as possible when recording this to enable valid analysis. If possible an estimation of any dose losses should be made.

If the child's own bottle was used this can be rinsed out following reweighing, and given back to the mother for her to clean as normal. The disposable bottle or syringe and/or feeding tube (if used), and the bottle that contained the dose should be disposed of with the clinic's normal rubbish.

Before the mother leaves the clinic

Hand out the breastfeeding diary to the mother, go through the diary prompt sheet and explain how to fill in the diary. You can use the trial page to practice.

Please advise that this should be completed for the next 14 days along with the collection of the urine samples.

Please print your name and sign the urine sample collection form. Photocopy and retain for future use.

Pack the sample collection kits including the already collected pre-dose urine samples, with the items supplied by HNR (urine sample collection form, urine sample collection instructions, 14 x mother's glass urine collection and storage bottles for post dose daily urine collections labelled days M1 to M14 and storage box, 14 x child's glass urine collection and storage bottles for post dose daily urine collections labelled days B1 to B14 and storage box, cotton wool, 15 x syringes (14+1 spare), 1 x spare pair of plastic forceps, pen and elastic bands along with 15 x plastic disposable cups) into the cooler bags provided.

Contact Details

All dose requests, sample returns, problems and queries should be directed to one of the following contacts at HNR:

- Marilena Leventi (Tracer water study manager)
- Priya Singh (Tracer water study assistant)
- Dr Jill Sommerville (Survey co-ordinator)
- Dr Les Bluck (Senior Scientist, stable isotopes research)

They can all be contacted **during normal office hours** via HNR reception, on **01223 426356** and by asking to speak to one of the above contacts. The people above will be contacted in order of appearance if no contact is specified.

Email addresses for the contacts are also provided below:

- Marilena Leventi Marilena.Leventi @mrc-hnr.cam.ac.uk
- Priya Singh Priya.Singh @mrc-hnr.cam.ac.uk
- Dr Jill Sommerville Jill.Sommerville @mrc-hnr.cam.ac.uk
- Dr Les Bluck Les.Bluck@mrc-hnr.cam.ac.uk

HNR address: Human Nutrition Research
Elsie Widdowson Laboratory
120 Fulbourn Road
Cambridge
CB1 9NL

Protocol 2.0 Tracer water BODY COMPOSITION Protocol

Body composition and Fluid Intake – Protocol for Dose Administration

Introduction

All mothers who report no degree of breastfeeding, or who decline to participate in the breast milk volume assessment will be asked whether they are willing to participate in the body composition and fluid intake part of the study. For this a sample of urine is required from the child, and then the child is given an oral dose of tracer water. The parent will then obtain further urine samples from the child, one a day for five consecutive days after drinking the tracer water, which together with the pre-dose makes a total of six urine samples in all. The urine samples will be sent to HNR for analysis.

If this protocol is completed, protocol 1.0 will not apply.

Before the Clinic Visit

The parent will have been asked for verbal consent to participate, and if they have agreed they will have been supplied with a pre-dose collection kit for their child. On arrival at the clinic the parent should have brought with them:

- 1 x sample of the child's urine
- Details of when the sample was collected should be written on both the bag label and the urine bottle storage container
- One of her child's usual feeding bottles (dry, empty and ready for use)

The clinic should have received Annex 19B, 20B and a tracer water dosing kit from HNR comprising:

- 5 x glass urine collection and storage bottles for child's post dose daily urine collections (labelled days C1 to C5)
- 1 x child's dosing bottle containing a pre-weighed amount of tracer water
- 1 x printed urine collection form
- 1 x printed urine collection instructions
- Cotton wool
- 6 x syringes (5+1 spare) to squeeze urine out of cotton wool
- 1 x pen
- Elastic bands to secure full box

The dosing bottle should be inspected for leakage against a 'fill line' and the whole kit should preferably be stored refrigerated (but NOT frozen) or in a cool place if not possible to do so.

*** Please note: The child's dosing kit should be taken out of the fridge at least an hour before the clinic visit to allow the dose to reach room temperature.**

During the Clinic Visit

Discuss and gain consent for the dosing procedure with the mother and witness the signature on the consent form. The form must be correctly filled in before any further part of the protocol can be performed.

The body composition and fluid intake components of the clinic visit are to:

- Ensure that formal *written* consent from the mother is obtained for her child before administering the dose
- Check that the pre-dose sample has been properly obtained
- Weigh the child
- Dose the child
- Hand over the equipment required for the mother to complete the method protocol for post-dose urine collection

Procedure

A urine sample from the child should have been collected and brought to the clinic for checking. The bottle should be no more than ¾ full. If this pre-dose sample is not available you will have to obtain a urine sample from the child **before** opening the tracer water dose.

The 'pre-dose' sample is the most important sample of the study and should be treated as such. The respondent should store this sample and subsequent ones in the containers provided, preferably in their fridge or alternatively in a cool, dry environment such as an unheated garage. It is vitally important that the pre-dose is uncontaminated by the tracer water. For this reason the pre-dose sample must be obtained and stored in a capped vial before the dosing bottle is opened.

Check with a colleague that the participant identity number agrees with that on the dosing kit. **The kit is tailor made for the respondent and must only be used for the intended child.**

Copy the pre-dose collection time information onto the appropriate sections of the urine sample collection form.

Administering the dose to the child: -

The mother will have been asked to bring one of the child's bottles with her for dosing. The bottle should be dry, empty and ready for use. If this bottle is not available or not in a suitable condition for use, e.g. dirty or wet, then please use one of the disposable drinking bottles already provided to the clinic by HNR. Depending on the child, a feeding tube and/or syringe provided by HNR can also be used to administer the tracer water dose. The dose can be fed to the child for up to 1 hour to maximise the intake.

***Please specify the drinking vessel used on the urine collection form. If using a child's drinking bottle:**

1) Weigh the empty dosing bottle and teat and record on the collection form to 1 decimal place.
2) Carefully transfer the tracer water contents of the dosing bottle provided into the child's drinking bottle.
3) Weigh the child's drinking bottle with the water in it to 1 decimal place and record this weight on their collection form.
4) Ask the mother to feed the child the water trying to avoid spillage as much as possible. **Record the date and start time at which the child drinks the water on the urine sample collection form.**

5) Once the water is consumed reweigh the empty bottle and record this weight also on the collection form to 1 decimal place.

*Please note – although it is preferable that all the dose is drunk, if this is not possible and half (50%) of it is consumed, please reweigh the syringe containing any leftovers and feeding tube used to allow the determination of the actual amount consumed. Please do not force-feed the child just to ensure total consumption. **In this protocol only: In the event that less than half the dose has been drunk please do not continue with the protocol and please do not ask the parent to collect the urine samples.**

If using a syringe and/or feeding tube:

1) Weigh the empty syringe and/or feeding tube and record on the collection form to 1 decimal place.
2) Transfer the tracer water contents of the dosing bottle provided into an empty plastic drinking cup. Using the syringe provided, carefully draw up the tracer water into the syringe. Please ensure that all of the tracer water is drawn up.
3) Weigh the syringe containing the tracer water (plus the feeding tube if used) to 1 decimal place and record this weight on their collection form.
4) Ask the mother to slowly push the plunger and feed the child with the water through the syringe. If using the feeding tube, attach this on the mother's finger using the tape provided and carry on using the syringe as above. Try to avoid spillage as much as possible. **Record the date and start time at which the child drinks the water on the urine sample collection form.**
5) Once finished reweigh the child's empty syringe and/or feeding tube. Record this weight also on the collection form to 1 decimal place.

*Please note – although it is preferable that all the dose is drunk, if this is not possible and half (50%) of it is consumed, please reweigh the syringe containing any leftovers and/or feeding tube used to allow the determination of the actual amount consumed. Please do not force-feed the child just to ensure total consumption. **In this protocol only: In the event that less than half the dose has been drunk please do not continue with the protocol and please do not ask the parent to collect the urine samples.**

Any problems during the dosing <u>must</u> be recorded on the urine sample collection form e.g. child was sick, spillage etc. It is important to be honest and provide as much detail as possible when recording this to enable valid analysis and if possible an estimation of any dose losses should be made.

If the child's own bottle was used this can be rinsed out and given back to the mother for her to clean as normal. The disposable bottle or syringe and/or feeding tube (if used), and the bottle that contained the dose should be disposed of with the clinic's normal rubbish.

Before the mother leaves the clinic

Please print your name and sign the urine sample collection form. Photocopy and retain for future use.

Pack the sample collection kit including the already collected pre-dose urine sample with the items supplied by HNR (urine collection form, urine collection instructions, 5 x glass urine collection and storage bottles for post dose daily urine collections labelled

days C1 to C5 and storage box, cotton wool, 6 x syringes (5+1 spare), 1 x spare pair of plastic forceps, pen and elastic bands) into the cooler bag provided.

Contact Details

All dose requests, sample returns, problems and queries should be directed to one of the following contacts at HNR:

- Marilena Leventi (Tracer water study manager)
- Priya Singh (Tracer water study assistant)
- Dr Jill Sommerville (Survey co-ordinator)
- Dr Les Bluck (Senior Scientist, stable isotopes research)

They can all be contacted **during normal office hours** via HNR reception, on **01223 426356** and by asking to speak to one of the above contacts. The people above will be contacted in order of appearance if no contact is specified.

Email addresses for the contacts are also provided below:

- Marilena Leventi Marilena.Leventi @mrc-hnr.cam.ac.uk
- Priya Singh Priya Singh @mrc-hnr.cam.ac.uk
- Dr Jill Sommerville Jill.Sommerville @mrc-hnr.cam.ac.uk
- Dr Les Bluck Les.Bluck @mrc-hnr.cam.ac.uk

HNR address: Human Nutrition Research
Elsie Widdowson Laboratory
120 Fulbourn Road
Cambridge
CB1 9NL

Protocol 3.0 Infant Length Measurement

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.

Equipment

You will need:

- A Rollameter baby measure mat
- Kitchen roll

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. Only trained staff are authorised to perform the measurement.

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. For hygiene purposes, lay one layer of kitchen roll on the mat.

3. 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. 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). Move the child's head so that Frankfort Plane is in a position at right angles to the floor/table. 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.

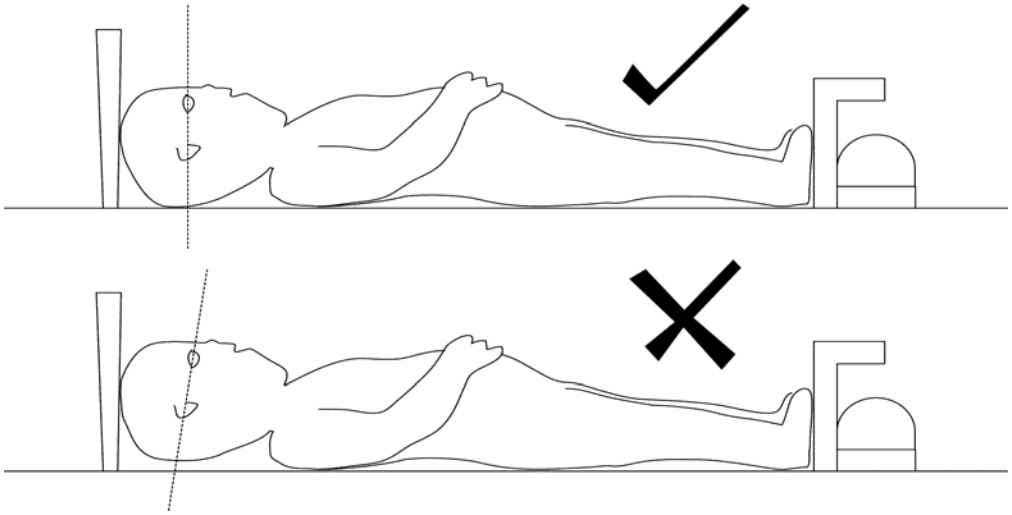


Figure 1 The infant Frankfort Plane

6. Straighten the child's leg(s) by holding the legs by the ankle(s) 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.

The measurement is read from the red cursor in the tape window. The measurement is recorded in centimetres and millimetres to the nearest millimetre on the clinic measurement record card. If the measurement lies between two millimetres then you should round to the **nearest even millimetre.**

Protocol 4.0 Mother's Height Measurement

Equipment

Height should be measured using a stadiometer (fixed wall height measure) to the nearest 0.1cm. The stadiometer must be checked, and any problems rectified or reported.

Preparing the Mother

Height should be measured bare-footed. Headwear must be removed. Only trained staff are authorised to perform the measurement.

Procedure

1. Ask the parent of the participant 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 parent to stand underneath it. Double check that you have assembled the stadiometer correctly.

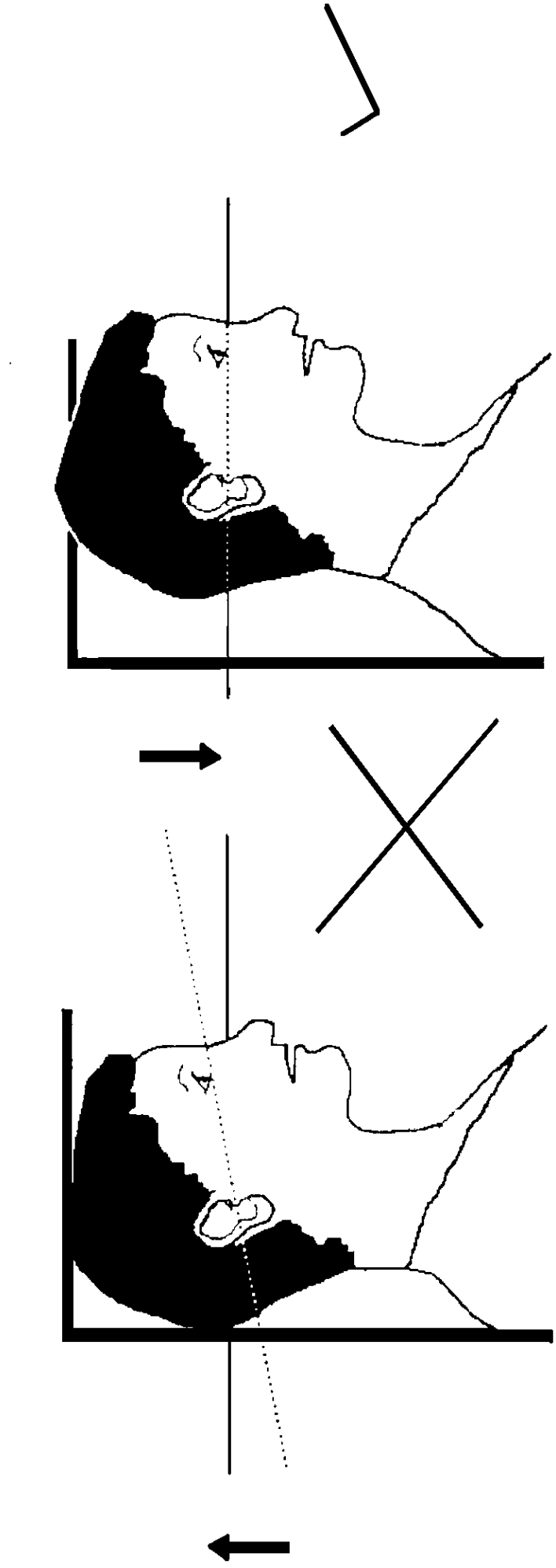
3. The parent should stand with their feet flat on the centre of the base plate, feet together and heels against the rod. The parent's back should be as straight as possible, preferably against the rod but **NOT** leaning on it. They should have their arms hanging loosely by their sides. They should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

4. Move the parent'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 parent to keep their eyes focused on a point straight ahead and to breathe in deeply. It can be difficult to determine whether the stadiometer headplate is resting on the parent's head. If so, ask the parent to tell you when s/he feels it touching their head by raising a hand.

6. Ask the parent to step forwards. If the measurement has been done correctly the parent will be able to step off the stadiometer without ducking their head. Make sure that the head plate does not move when the parent 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 parent's height in centimetres and millimetres. You may at this time record the parent's height onto the clinic measurement record card. Please note any problems or difficulties on the data collection form.



8. Height must be recorded in centimetres and millimetres, e.g. 176.5 cms. If a measurement falls between two **millimetres,** it should be recorded to the **nearest even millimetre.**

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.

Protocol 5.0 Weight Measurement in Adults and Children

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. The method for weighing the participant in this study is to weigh the parent/guardian alone and then with the infant and a subtraction will be undertaken.

Exclusion criteria
Participants are excluded from this measurement if they are:

- 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.

Preparation
Weight should be measured without heavy outer garments such as jackets and cardigans, heavy jewellery, and with empty pockets. Only trained staff are authorised to perform the measurement.

Equipment
Weight should be measured using a Seca scale, Birmingham, UK. to the nearest 0.1 kg. The scales must be checked, and any problems rectified or reported.

Please check which scales you have been provided with and make sure that you are familiar with how they operate.

Calibrating the scales
The scales should be recalibrated at regular intervals (as per NHS SOPs) to ensure that they provide accurate measurements.

Procedure for adults
1. Weigh the parent/guardian on a hard and even surface if possible. Carpets may affect measurements.

2. Ask the parent/guardian 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 display 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 parent/guardian 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 parent/guardian 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 parent/guardian 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 parent/guardian moves excessively while the scales are stabilising you may get a false reading. If you think this is the case reweigh the parent/guardian.

6. The scales are calibrated in kilograms and 100 gram units (0.1 kg). Record the reading before the parent/guardian steps off the scales.

7. If the parent/guardian wishes, you can tell them their measurement.

8. Note any problems or difficulties on the data collection form.

Procedure for children

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. Weigh the adult as normal following the protocol as set out above. Record this weight.

3. Weigh the adult and child together and record this. Calculate the difference between the two weights to get the child's weight.

4. If the parent/guardian wishes, you can tell them the weight of their child.

Or

If the clinical research facility/hospital has a calibrated SECA baby scale, this can be used to weigh the child. Ensure this is calibrated regularly, as per local standard operating procedures .

Protocol 6.0 Head Circumference Measurement

Introduction

- Measurement of head circumference (occipital-frontal circumference) at birth and where required is a routine part of the infant's growth assessment.
- For your information: normal term newborn head circumference is 33 to 38 cm.

Responsibility

- It is the responsibility of all staff to follow the standard operating procedures as outlined in this document. It is also expected that all staff review the document at regular intervals to ensure they are up to date with current practises. Only trained staff are authorised to perform the measurements.

Equipment

- A Child Growth Foundation disposable measuring tape.

Procedure

- Ensure tape measure is correctly assembled and intact before and after each use. Tapes will be changed if calibration fails and/or tape is torn.

- Explain the procedure to the parent/carer.

- Position the child on mothers lap facing the nurse or lay the child on the changing mat. Do not leave unattended in any position they may roll off from.

- Place the tape measure around the child's head at its largest diameter above the eyebrow ridges, just above the point where the ears attach and around the occipital prominence (back of the head).

- Take **3 measurements** on each child. Note the average circumference to the nearest 0.1cm. Note any problems or difficulties on the data collection form.

- Record the head circumference on the clinic measurement record card.

Protocol 7.0 Measurement of Skinfold Thickness

Introduction

- Around half the fat in the body is located directly beneath the skin (subcutaneous fat), and its thickness provides some indication of total body fat.
- Subscapular, Triceps, Quadriceps and Flank skinfold thickness can be measured.

Responsibility

- It is the responsibility of all staff to follow the standard operating procedures as outlined in this document. It is also expected that all staff review the document at regular intervals to ensure they are up to date with current practises. Only trained staff are authorised to perform the measurements. To remain a competent, trained member of staff, it is required to measure 4 children a month. If this is not possible, practice on colleagues/family to maintain proficiency.

Equipment

- The Holtain Tanner Skinfold Caliper

Procedure

- Ensure the caliper is calibrated and zero measuring prior to each clinic. Report if inaccurate.
- Explain the procedure to the parent/carer. Demonstrate the procedure on the back of parents hand.
- Ask parent/carer to remove child's upper clothing. Ensure first that the room is warm and draught-free, do not keep the infant exposed longer than necessary, and do not leave them unattended in any position they may roll off from.
  Subscapular Skinfold:
    - Lay the infant prone on the parents/carers lap or on the changing mat on the bed. If they are old enough the measurement should be taken in the sitting position.
    - The skinfold is taken at the oblique angle below the left scapula.
    - Use your right hand to hold the calipers horizontally and apply the jaws of the calipers so they sit either side of the exact point. Slowly and gently release the caliper handle.

  Triceps Skinfold:
    - Extend the infants arm at the elbow and hold it firmly with your left hand covering the elbow. The skinfold is measured halfway between the acrominal process and the olecranon.
    - Use your right hand to hold the calipers horizontally behind their arm, and apply the jaws of the caliper so they sit either side of the exact point. Slowly and gently release the caliper handle.
- During each measurement, the caliper needle should initially fall quickly and then gradually come to rest. Take the reading as soon as the needle has stopped moving.
- Take three measurements at each site and record the results in millimeters on the clinic measurement record card.
- Record any problems or difficulties on the data collection form.

Clean the equipment with normal detergent unless the baby has an infection, in which case refer to the hospital's infection control policy and clean as per policy.

Protocol 8.0 Blood Sampling Protocol

Introduction

The blood samples taken will be used to measure various analytes, including iron, the levels of fat-soluble vitamins and haematology measures including white blood count, haemoglobin and platelets etc.

Exclusion criteria

Participants are excluded from this measurement if they are:

- Infants living in institutions, e.g. children's homes, hospitals
- Infants of people with no fixed address
- Infants with low birth weight (<2kg) and those with congenital abnormalities that affect feeding
- Infants who cannot be accompanied by a parent or legal guardian during the procedure

These infants should already be excluded by the time they reach the clinic visit.

Equipment and consumables

The blood samples will be collected using a syringe and the Sarstedt monovette blood collection system. You will be provided with the following equipment:

- 1.2ml EDTA monovette
- 2.7ml Serum monovette
- 5ml syringe
- 23g Butterfly needle
- Tourniquet
- Alcohol swabs
- Cotton wool
- Ametop gel
- Dressing for use with gel
- Pre-paid and pre-addressed envelope with the appropriate packaging for posting the EDTA Monovette to Addenbrooke's Hospital
- Blood tracking forms for Serum sample
- Addenbrooke's blood form to track the EDTA sample
- Labels (pre-printed) for blood monovettes, blood tracking forms and consent forms

IMPORTANT INFORMATION

Before starting the blood sampling procedure:

Ensure the parent has consented to at least **one (or both)** of the following:

1. Blood results to be sent to the parent
2. Blood result to be sent to their GP

If consent has not been given to at least **one** of the above statements please ensure Section D of the consent form is complete. If section D of the consent is not complete you must **NOT** continue with the blood sample.

Blood sampling procedure

The child will have a 4ml, non fasting blood sample taken. The parent or guardian must be present throughout the blood sampling procedure and can assist to distract the child during the procedure. Samples may be taken from the arm, hand, leg or foot with the parent/guardian's consent.

It is expected that most blood samples will be taken at the first attempt. However, a second attempt is permitted if the parent is willing.

1. Explain the procedure to the parent/guardian and allow time for questions. Ensure that they have been given and understood the following information leaflets:
    - Ametop gel leaflet
    - Why provide a blood sample leaflet

2. Before taking blood, you must ensure that the child's parent/guardian has fully understood the ourpose of the blood sampling and the protocols for taking it and that written consent has been given.

3. Ensure the name of the legal parent/guardian and the name and Study ID of the child is clearly written in the space provided at the top of the consent form. Check the DOB on the label corresponds with the participant and that label **CON** has been placed in the appropriate place on the consent form.

4. Ensure each statement has been initialled by the legal parent/guardian and that they have signed and dated in the appropriate place at the bottom of the consent form. Consent to notifying GP of blood results is optional.

5. It is equally as important for you to sign and date the consent form in the appropriate place at the bottom of the consent form.

6. Wash your hands and apply gloves. Ensure equipment is fully prepared and within your reach.

7. Position the child carefully on the parent/guardian's lap so that they are facing you.

8. Ask the parent to remove or displace any clothing that the child is wearing from the area selected for venepuncture.

9. Check with the parent/guardian that the infant is not allergic to plasters or latex.

10. Apply Ametop gel to the selected area for venepuncture and apply a dressing to keep the gel firmly in its place.

11. Whilst you are waiting for the Ametop gel to take effect, you can carry out other study procedures and/or label the blood monovettes and blood tracking forms with the following labels:

Item	Label
Serum monovette	SEN
EDTA monovette	EN
Addenbrooke's blood form	Adx1
Addenbrooke's blood form	Adx2
Addenbrooke's blood form	Adx3
Blood tracking form	BTF
Consent form	CON
Serum1 label for microtube	SE1 Pass to lab
Serum2 label for microtube	SE2 Pass to lab

12. Ensure the correct label goes on the correct monovettes and microtubes.

13. **Line up the top of the barcoded 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 enable the lab to be able to see where the serum lies in the monovette after centrifugation. If this area is covered, the lab may not be able to successfully aliquot the required number of fractions.

14. Ensure the laboratory labels (SE1 and SE2) and the mauve and white lidded microtubes get passed to the lab with the blood samples.

15. When the Ametop gel has taken effect (after 20 minutes), a tourniquet can be applied (if required) and the area cleaned with an alcohol swab.

16. Using your dominant hand, puncture the skin with the needle angled at 30-40 degrees (the bevel of the needle should be uppermost) and tape to the arm. Observe for blood flow and collect the required amount of blood as directed. If the first attempt is unsuccessful, a second attempt is permitted – **ensure the parent is willing.**

17. The syringe is attached directly to the butterfly needle and filled to 4ml. Then transfer the blood to the monovette tube. The monovette systems should be used according to manufacturers' instructions (training will be given to the nurses/phlebotomists who are not familiar with the Sarstedt monovette system).

18. Monovettes are to be filled in priority order as follows:

Priority Order	Monovette	Monovette Top Colour
1	EDTA	Red
2	Serum	White

***NOTE* A minimum of 1ml is required in the EDTA monovette for any analysis to be undertaken.**

19. The tourniquet will be released (if applicable) and the butterfly needle removed and placed directly in the sharps bin. Apply pressure with a cotton wool ball before applying a plaster/dressing.

20. Once filled and capped, the monovettes should be mixed immediately by inverting several times.

21. Any contaminated waste generated should be disposed of appropriately.

22. Advise the parent/guardian how and when to remove the plaster/dressing and about bruising. To reduce any infection risk, the parent or guardian should wash their hands before removing the plaster/dressing and the plaster/dressing should be kept on for at least 15 minutes after the blood sample has been taken. Infants may initially display some redness at the site of venepuncture, however, this should soon disappear. If the redness persists for more than 2 days or appears to get worse then the parent/guardian should seek medical advice. Similarly with bruising, no action is required unless it gets worse, in which case medical advice should be sought.

23. Ensure that the Addenbrooke's blood form for the EDTA monovette has the label **Adx1** affixed in the appropriate place on the top sheet of the carbonised booklet and label **Adx2** on the second sheet and affix **Adx3** on the third sheet of the carbonised booklet in the appropriate places and fill in the **date and time the sample was taken**.

24. The labelled red top EDTA monovette should be put in the rigid plastic tube with absorbent lining and then inside the box provided. Together with the labelled and completed Addenbrooke's blood form (with all 3 copies of the carbonised booklet), both items should be put in the pre-paid and labelled jiffy bag and then mailed to Addenbrooke's hospital. (Due to samples arriving 24 hours later, please do not post on a Friday, or any day where the arrival day will be a day that the lab is closed i.e. bank holidays). Furthermore, the EDTA blood sample must be posted to Addenbrooke's the same day so the blood must be taken in time to make the same day's post.

25. The blood tracking form for the white top serum monovette should be completed whether or not a sample is obtained. The form should **always** have the following:
    - The label **BTF** affixed in the appropriate place
    - The study ID number of the child

If a blood sample is **OBTAINED**, please fill out the following:
- The date the sample was taken
- The time the blood sample was taken
- The location of venepuncture – for attempt 1 and 2 (if applicable)
- The blood sample outcome for attempt 1 and 2
- Which blood monovettes were obtained
- Whether the EDTA monovette blood sample was sent to Addenbrooke's hospital

If a blood sample was **ATTEMPTED** but not obtained, please fill out the following:

- The date the sample was taken
- The time the blood sample was taken
- The location(s) of venepuncture
- Reason for declining Attempt 2 (if applicable)
- The blood sample outcome
- Select 'NO' where it asks which blood samples were obtained

If a blood sample was **REFUSED**, please fill out the following:

- Select 'NO' where it asks which blood samples were obtained
- Ask parent reason for not wanting to do the blood component and update clinic database with reason for refusal.

26. The labelled white top Serum monovette should be taken to the processing laboratory together with the labelled and completed blood tracking form, labels SE1 and SE2 and the microtubes.

Please remember to fill in the time of delivery of samples to the laboratory.

Any queries about processing laboratory issues and consumables or general problems should be directed to one of the following contacts at HNR:

- Priti Mistry – Research Assistant 01223 437616
(Priti.Mistry@mrc-hnr.cam.ac.uk)
- Sue Fisher – Volunteer Suite Manager 01223 437615
(Susan.Fisher@mrc-hnr.cam.ac.uk)

HNR Reception: 01223 426356

H.7. Ending the Clinic Visit

- Remind the parent that a NatCen interviewer will call mid way through the urine collection to arrange pick up of the urine samples, if applicable.

- Give bravery certificate to the participant as appropriate:
  - o 'has been very brave and given blood' – If a blood sample was **Obtained**
  - o 'has been very brave and attempted to give blood' – If a blood sample was **Attempted** but not obtained

- Give promissory note(s) to the parent of the participant as appropriate:
  - o £10 if the participant has completed the skinfold thickness testing and physical measurements
  - o £30 for attempting/obtaining the blood sample.

  Please note that the promissory notes for the breast milk, fluid intake and body composition via isotopically stable water component will be given by the NatCen interviewer when they go to collect the completed urine samples.

- Check and collect the expenses claim form (if applicable)

- At the end of the clinic session, the following documents need to be **faxed** to HNR on **01223 437559**:
  - o Completed consent forms – All 3 pages
  - o Completed clinic measurement record card
  - o For participating participants, **EITHER** completed breast milk volume measurements **OR** completed body composition and fluid intake measurements
  - o The blood sample tracking form whether the blood sample has been collected or not

- Update the clinic database on **all** clinic days* with the following:
  - o Date and time of clinic attended
  - o The date that the expense form was received by the clinic
  - o Completed components of the clinic visit
  - o Participant status e.g. attended appointment, cancelled, no show

  *Occasionally, you may need to update the database on a non clinic day e.g. if a participant wants to re-arrange an appointment and contacts the clinic directly.

- If you are experiencing technical problems and are unable to update the database – you **must** inform Jonathan Last/Priti Mistry at HNR as soon as possible on 01223 426356.

- Send the **original** signed consent forms, clinic measurement record cards, blood tracking forms for those who **Attempted** or **Refused** a blood sample and the expense claim forms weekly to HNR by Special Delivery.

- Do not send the completed blood sample tracking forms for participants where a blood sample was **Obtained**. These need to be kept with the Serum microtubes and sent together at a later date on dry ice – please refer to Laboratory Manual.

H.8. Emergency Contact / Adverse Events

All adverse events **must** be logged and reported as per local procedures by:

1. In the event of an emergency/adverse event, contact the local Principal Investigator in the first instance. Name and emergency contact numbers have been given to the clinic in advance.

2. Secondly, in an emergency/adverse event, ensure that Jill Sommerville (Study Co-ordinator) or Polly Page (Head of Operations) is informed as soon as is reasonably possible on 01223 426356.

3. Additionally, an adverse events report form* **must** be completed and faxed within 24hrs of the adverse event.

Where appropriate, serious adverse events will be reported to MREC as per standard ethics procedures.

*Adverse events report forms will be given to the clinic in advance. For reference, an adverse events report form is provided overleaf.

PROTECT PRIVATE
The National Infant Diet and Health Study

ADVERSE EVENTS REPORT FORM

Clinic visit date _____ Clinic name _____

Participant ID _____

EVENT DETAILS

Where did the event take place? (please tick)

In the clinic ☐

Elsewhere ☐ Please state location _____

When did the event take place? Date_____ Time_____

When was the clinic made aware of the event? Date_____ Time_____

Who reported the event? _____

To whom? Name _____ Role _____

Who was involved in the event? Please name all, including staff and witnesses

Were any procedures being carried out prior to the event? (e.g. venepuncture)

Yes ☐ No ☐

If yes, please state _____

Did any of the following occur to the participant? (please tick all that apply)

Bruising	☐	Wrong dose	☐	Hospital stay exceeding 24hrs	☐
Bleeding	☐	Nausea/Vomiting	☐	Other, please state	
Infection	☐	Loss of conciousness	☐		
Pain	☐	Needed resuscitation	☐		

DESCRIPTION OF EVENT

Please give as much detail as possible including any significant factors leading to the event

ACTION DETAILS

Include any advice/treatment/referral given to the participant and also any follow up plans by the clinic

Has the event been reported within your organisation in accordance with local procedures?

Yes ☐ No ☐

If not, please give reasons why

Please give details of any further action to be taken and to whom the event was reported

Hospital details (please tick)

Referred ☐ Attended ☐ Treated ☐ N/A ☐

Hospital treatment:

Was the event related to the study? (please tick)

Definitely ☐
Probably ☐
Possibly ☐
Unlikely ☐
Unrelated ☐
Unknown ☐

Severity of injuries (if applicable)

Minor ☐
Major ☐
Fatal ☐
Reportable ☐

NOTE: We may be required to report this event to the project steering committee and/or external ethics committee

Reported by Name _____ Sign _____

Date _____

Once completed, please fax IMMEDIATELY to HNR on 01223 437 559

H.9. Study Contact Details

Any general queries about the study should be directed to HNR:

- Priti Mistry – Research Assistant 01223 437616
  (*Priti.Mistry@mrc-hnr.cam.ac.uk*)
- Jill Sommerville – Survey Co-ordinator 01223 426356
  (*Jill.Sommerville@mrc-hnr.cam.ac.uk*)
- Dr Ken Ong – Survey Doctor 01223 769207
  (*ken.ong@mrc-epid.cam.ac.uk*)

HNR Address
MRC Human Nutrition Research
Elsie Widdowson Laboratory
120 Fulbourn Road
Cambridge
CB1 9NL

HNR Reception Tel: 01223 426356

X. Laboratory Manual

Blood Processing and Storage Protocol

A brief summary of services required

- ***Samples delivered*** to laboratory
- ***Spin samples*** to yield serum
- ***Pipette*** various aliquots into microtubes provided
- Complete ***blood sample tracking form***
- ***Freeze and store*** microtubes until a member of the HNR team arranges collection by courier

A detailed protocol for processing the blood samples is provided overleaf. From start to end the processing should take no longer than 1 hour including 20 min for centrifugation. Ideally, processing should be completed within 2 hours of the blood clotting successfully.

National Infant Diet and Health Study

Laboratory Procedures

Blood Processing and Storage Protocol

Contents

Appendices

1. Receipt of samples

The National Infant Diet and Health Study nurse(s) will take the blood sample to the laboratory as soon as is convenient after the clinic session has finished. Please make sure that a designated person is available to receive and deal with samples (unless the nurse is also processing the samples).

On receipt in the laboratory enter the time received on the blood sample tracking form (see Addendum B for reference). The serum monovette should be left for approximately 1 hour after venepuncture at room temperature to clot. It is very important that the blood clots properly before the monovette is centrifuged. The blood sample tracking form should be checked to see what time the sample was taken.

For each participant, the lab will receive a package from the nurse containing a Monovette (1.1), microtubes for sample storage (1.2), labels (1.3) and a blood sample tracking form (1.4).

1.1 Receipt of samples

The number of monovettes per participant is shown in the table below:

Age Group	Monovette				Colour Top
	Number	Volume (ml)	Monovette Type	Label	
4-18 Months	1	2.7	Plain Serum	SEN	White

1.2 Microtubes (1.5ml) for specimen storage

The nurse will hand over a pack of microtubes for aliquoting. The number of microtubes in the pack you receive is outlined in the table below:

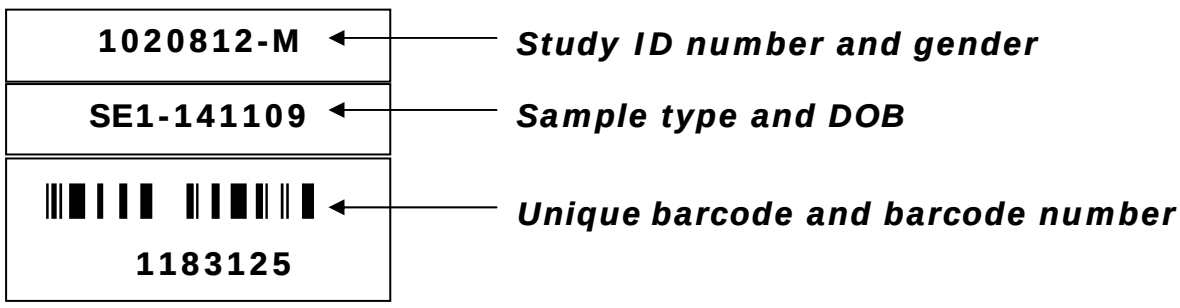
Age Group	Microtubes		Use	Label
	Number of empty microtubes	Colour of lid		
4-18 Months	1	Mauve	Serum fraction	SE1
	1	White	Serum fraction	SE2

Please ensure that when labelling the microtubes, the labels correspond to the microtube cap colour.

1.3 Labels

A set of printed barcoded labels with the participant's study ID number, gender, sample type, DOB and barcode number will be provided for each participant. If you receive more than one set of blood samples on the same day ensure that you use the **correct** set of labels for each participant and for each microtube.

Example of barcoded label



The set of labels provided is correct for the number of aliquots obtained from a participant. The second line of the label, which shows the sample type, corresponds with the aliquoting scheme on the flow chart (see Addendum A for quick reference) and the blood sample tracking form (see Addendum B) provided with each set of samples.

1.4 Blood sample tracking form

The nurse will pass on a blood sample tracking form (BTF) for the lab to fill in (see Addendum B). First, ensure the time that the laboratory received the sample is completed on the BTF. The processing table in Section 2 of the form should be completed after the serum monovette has been centrifuged and serum aliquoted.

Please use this document to note any problems with the samples on receipt, any problems with processing the samples, to record sample processing end times as well as the number and volume of sub-samples obtained and the time at which the samples were placed in the freezer for storage.

Where a partial volume has been collected, please indicate clearly in **µl** how much was obtained i.e. 100µl

2. Equipment Needed

Pipettes

Please use calibrated piston pipettes wherever possible. Volumes indicated are guidelines but note that it is necessary to record the volume of each aliquot if only a partial volume is obtained (please refer to Addendum B).

Centrifuge

Whenever possible all centrifugation steps should be conducted at 4˚C. If this is not possible please **ensure the sample and associated fractions are kept cool after the blood has clotted** e.g. by keeping the sample on ice and pre cooling the centrifuge buckets and blocks in a fridge.

Freezer*

Please freeze the samples in an upright position in the Sarstedt 9x9 aliquot boxes provided for long-term storage and subsequent shipment to HNR.

* Freezer must be of the non-self-defrosting type

3. Processing Procedures

The serum monovette should be processed as soon as practicable after the blood has clotted properly (approximately 1 hr).

3.1 Spin monovette for 20 minutes at 2000g at 4°C to yield serum.

3.2 While the monovette is spinning, place the labels (SE1 and SE2) on the microtubes for serum storage, so that the bar-code runs the length of the tube. All microtubes should be labelled with the appropriate barcoded label.

3.3 Aliquoting (see Addendum A)

Monovette (Plain Serum)
Using the table below, pipette all the serum from the serum monovette in the **priority order** as follows; recording the volumes on the blood sample tracking form.

Priority Order	Label	Colour of Lid	Volume
1	SE1	Mauve	500µl
2	SE2	White	500µl

Take great care not to transfer any cells into the microtubes; if necessary re-centrifuge the sample to obtain additional serum.

Please note that the volumes specified should be followed and carefully recorded. The most important information is the **total volume** in **µl** in each microtube. If you can't measure this with the pipette, record the volume as closely as possible from the graduations on the microtube. The graduation 0.5 on the microtube is the equivalent to 500µl. If there is not sufficient serum for SE2, please do not attempt to transfer serum from SE1. SE2 is only to be filled if any serum is left after the full volume of **500µl** has been transferred to SE1.

Place all serum microtubes on ice if they cannot be transferred to the freezer immediately.

Please don't forget to fill in the blood sample tracking form. The form must be faxed to HNR on the same day, that is after completion of sample processing

(Fax no: 01223 437559)

4. Blood Sample Tracking Form

Please record the required information on the blood sample tracking form. Take a copy for your own files and fax the completed blood sample tracking form to HNR. Please retain the original blood sample tracking form with the respective samples until they are ready to be transferred by courier to HNR at the pre-arranged date. Do not send these forms separately. They will need to be packaged with the serum microtubes on dry ice.

5. Dispatch

5.1 Once blood processing for the National Infant Diet and Health Study has started in your lab, a member of HNR will be in touch to arrange a mutually convenient time for the samples to be collected. This will be on a monthly basis, unless the number of samples is very low, in which case they will be collected as appropriate.

5.2 Couriers will be arranged for door-to-door delivery wherever possible. We will arrange for the courier to deliver one or more polystyrene boxes containing dry ice to you and to collect these boxes once the samples have been packed (see Addendum C for instructions on packing samples).

5.3 Please ensure that all the samples in this consignment are for the **National Infant Diet and Health Study**, and are placed in the secondary packaging provided (Bio-hazard bags), to avoid any possibility of leakage during transport.

5.4 Please place all the **original** blood sample tracking forms of the samples and any unused ID labels in a plastic bag, between the inner thermal box and outer cardboard box. Please keep a copy of the blood sample tracking forms in your laboratory until the end of the survey, in case any information goes astray.

5.5 Do not seal around the lid of the cardboard box completely, as CO_2 gas must be able to escape.

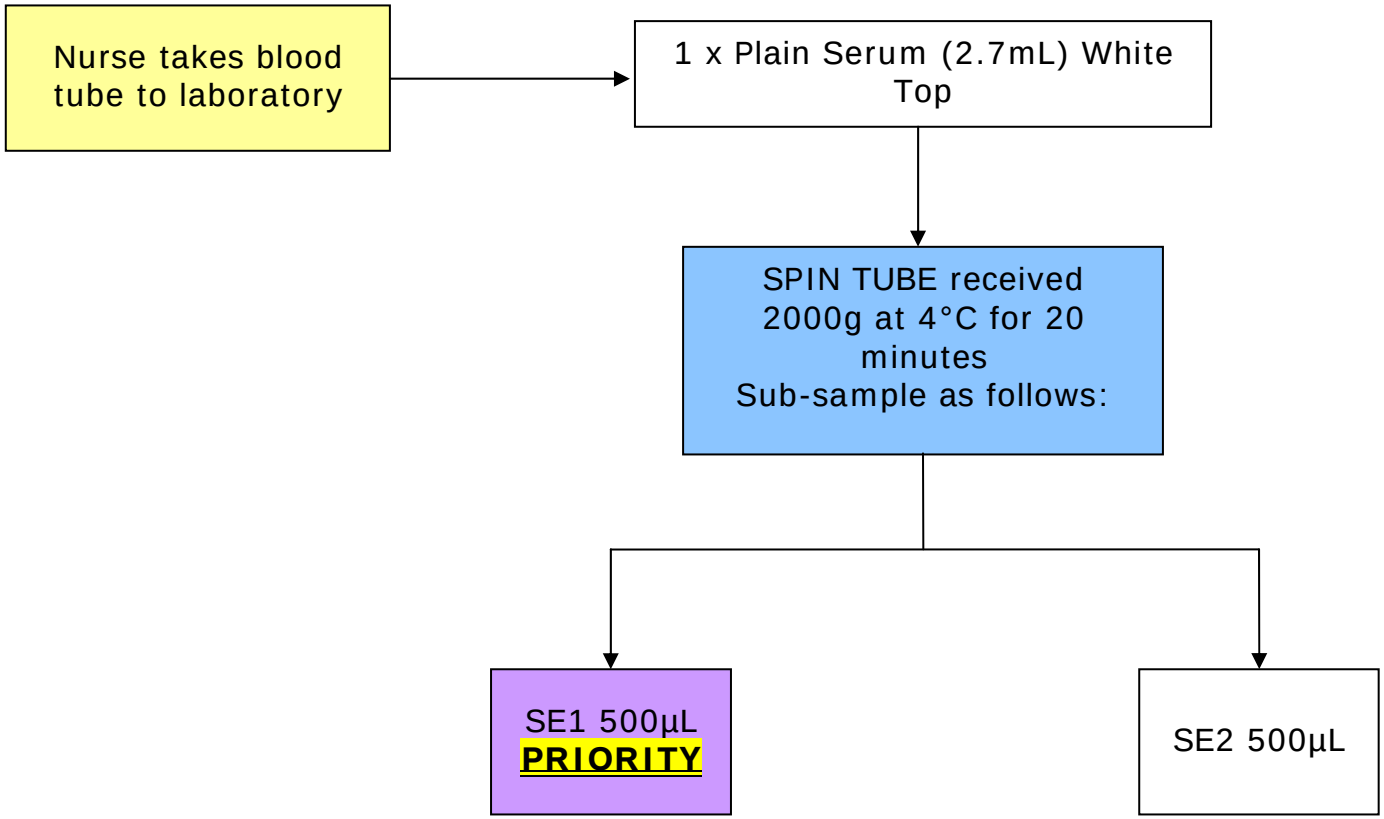
5.6 Ensure package is addressed to:

MRC Human Nutrition Research
National Infant Diet and Health Study samples
Elsie Widdowson Laboratory
120 Fulbourn Road
Cambridge CB1 9NL

If you have any queries, please contact the Research Assistant
Priti Mistry at HNR 01223 437616/426356
or by email Priti.Mistry@mrc-hnr.cam.ac.uk

Thank you for your assistance

Addendum A. Flow Chart for Processing Blood Samples for Participants V2.0



Addendum B. Blood Sample Tracking Form

National Infant Diet and Health Study
BLOOD SAMPLE TRACKING FORM

Place label BTF here

Section 1: Blood collection

Study ID number: | | | | | | | |

Date sample taken: D D M M Y Y Y Y

Time sample taken: H H M M 24 hr clock

Attempt 1 – Location Arm/Hand/Leg/Foot Circle as appropriate

Attempt 2 – Not applicable/Agreed*/Declined** Circle as appropriate

Attempt 2* – Location Arm/Hand/Leg/Foot Circle as appropriate

Attempt 2** – Decline reason: Please tick as appropriate

Child was distressed		No suitable veins	
Parent changed mind		Clinician advised against	
Other (specify):			

Blood sample outcome: Please tick as appropriate	Attempt 1	Attempt 2
No problem		
Incomplete sample		
Collapsing/poor vein		
Couldn't find vein		
Baby moving		
Other (specify)		

Blood sample obtained: EDTA Y N SERUM Y N Please tick

EDTA tube sent to Addenbrooke's: YES NO

Section 2: Processing

Time of arrival at lab: H H M M 24 hr clock

Following lab instructions, please indicate completion of processing for the following:

Tube	Label	Time (24 hr clock)	Volume (tick one)	Partial Volume (µl)
Serum (500µl)	SE1	H H M M	Full Partial	
Serum (500µl)	SE2	H H M M	Full Partial	

Comments on processing:

Time samples placed in the freezer: H H M M 24 hr clock

Please refer to clinic manual for further guidance

Addendum C. Instructions for the dry ice shipment of National Infant Diet and Health Study blood specimens to HNR Cambridge

Overview

Samples processed and stored for the National Infant Diet and Health Study will be shipped at agreed regular intervals from the laboratory, to MRC Human Nutrition Research in Cambridge (HNR).

HNR will inform you when the samples will need to be sent back. A pre-paid and pre-labelled cardboard box containing a thermal box with dry ice and packaging for the transport of the frozen samples will be sent over night to the laboratory. The courier used is Davies International.

On receiving the box it is the responsibility of designated laboratory staff to pack up samples as per protocol. The courier will deliver before lunch on the pre-arranged pick-up date and a 2-hour window will be agreed for the collection of packaged samples ready for over-night delivery to HNR Cambridge.

Protocol

1. A member of the National Infant Diet and Health Study team (HNR) will confirm the number of samples ready for shipment with you so that the courier can be instructed as to the appropriate quantity of secondary packaging required.

2. HNR will make all the arrangements for the collection of the samples on a pre-agreed date. The samples will be collected from you on a Tuesday, Wednesday or Thursday of the agreed week.

3. A thermal box marked and labelled for the return journey to HNR Cambridge will be delivered to the named contact at the laboratory by courier.

4. The outer cardboard box provided contains the following:

   - **Inner thermal box with dry ice**
   - **Sealable biohazard bag**

   Each sealable biohazard bag will take up to 2 Sarstedt aliquot boxes (9 x 9 aliquots)

   The thermal box you receive will vary in size depending on the number of samples to be shipped. For example, if you have told us that you are currently storing Sarstedt aliquots boxes of samples we will instruct Davies International to provide the appropriate size thermal box and dry ice.

   If for any reason, there doesn't seem enough packaging provided please only pack the appropriate number of samples as per packaging provided.

Once you have informed HNR about the mismatch we will arrange for another shipment.

5. Open the top of the cardboard box carefully and remove the biohazard bag.

6. The frozen samples are to be kept in the Sarstedt aliquot box and placed directly in the biohazard bag (max 2 Sarstedt aliquot boxes per bio bag) along with the absorbent strip and sealed as per the instructions on the bag.
NB: If no absorbent strip is provided please use a couple of sheets of blue roll or equivalent.

7. Remove half the dry ice from the box and retain. Pour the contents in to the thermal box. Place the sealed biohazard bag on top of the dry ice and pour the remaining dry ice over the bag to top up the box. **DO NOT** over fill the box and **DO NOT** seal the thermal box with any tape.

8. The blood sample tracking form (originals; one for each set of samples) should be placed in a plastic sleeve on top of the thermal box, i.e. between the inner thermal box and outer cardboard box. The top flaps of the outer cardboard box are then sealed with parcel tape. **DO NOT** tape over all edges of the cardboard box so that CO_2 can escape during transport.

9. The box will be picked up on the same day it is delivered at a pre-arranged time and couriered to HNR over night.

10. When the samples arrive at HNR, the laboratory will be informed of their arrival and any problems will be reported.

11. For any queries about the above please contact:

Priti Mistry – Research Assistant
Priti.Mistry@mrc-hnr.cam.ac.uk
Phone: 01223 437616
HNR Reception: 01223 426356

Many thanks for your cooperation and assistance with this important national study

National Infant Diet And Health Study

Bravery Award

has been very brave and given blood

Sign:..... Date:.....

National Infant Diet And Health Study

Bravery Award

_____

has been very brave and attempted to give blood

Sign:..... Date:.....

NATIONAL INFANT DIET AND HEALTH STUDY

Clinic Measurement Record Card

ID: | | | | | | | |

DOB: _____

SEX: _____

CHILD'S PHYSICAL MEASUREMENTS

WEIGHT | . | kg (to the nearest 0.1)

LENGTH | . | cm (to nearest 0.1)

HEAD CIRCUMFERENCE	1	.	cm (to nearest 0.1)
	2	.	cm
	3	.	cm
		.	**average**

CHILD'S SKINFOLD MEASUREMENTS

TRICEPS	1	.	mm (to nearest 0.1)
	2	.	mm
	3	.	mm
		.	**average**

SUBSCAPULAR	1	.	mm (to nearest 0.1)
	2	.	mm
	3	.	mm
		.	**average**

MOTHER'S MEASUREMENTS

WEIGHT | . | kg (to the nearest 0.1)

HEIGHT | . | cm (to the nearest 0.1)

THE NATIONAL INFANT DIET AND HEALTH STUDY

Our ref: Study ID xxxxxxx

Name
Address line 1
Address line 2
Address line 3
Address line 4

Dear ……..

I am the paediatric phlebotomist/nurse working on the National Infant Diet and Health Study. You recently agreed to a clinic visit and an appointment was made. Unfortunately, you missed your appointment.

I would be grateful if you could telephone our survey team on freephone 0800 6785 625*, so that we can arrange a more convenient time for you to participate in the clinic visit. I look forward to meeting with you then.

*Calls from mobiles may be charged.

MRC Human Nutrition Research

National Infant Diet and Health Study

Breast Milk Volume Assessment (Tracer Water to Mother and Child)

Respondent ID Number ☐☐☐☐☐☐☐☐☐

Dose bottle numbers/details …….

Date written consent obtained ☐☐ ☐☐ ☐☐☐☐

Mother Information

Mother's weight on day of dosing ☐☐.☐☐kg

Date dose taken: DAY ☐☐ MONTH ☐☐ YEAR ☐☐☐☐ Time dose taken: HR ☐☐ MINS ☐☐ am/pm?

Weight of dosing materials before drinking ☐☐☐.☐ g
(bottle+screw cap+water+straw)

Weight of dosing materials after drinking ☐☐☐.☐ g
(bottle+screw cap+any remaining water+straw)

Child Information

Child's weight on day of dosing ☐☐.☐☐kg

Date dose taken: DAY ☐☐ MONTH ☐☐ YEAR ☐☐☐☐ Time dose taken: HR ☐☐ MINS ☐☐ am/pm?

Please specify drinking vessel used for dosing (tick as appropriate):

Child's own bottle ☐ Bottle provided at clinic ☐ Syringe+feeding tube ☐

Other (please specify)…….

Weight of empty chosen drinking vessel ☐☐☐.☐ g

Weight of chosen drinking vessel + added dose water before drinking ☐☐☐.☐ g

Weight of chosen drinking vessel + any remaining dose after drinking ☐☐☐.☐ g

Were there any losses whilst drinking the dose? Yes / No (please circle)

If losses occurred, what happened? (E.g. spillage, dribbling, positing)……..

Please estimate how much of the dose you think was lost - ……

Breast milk diary discussed, explained and placed: Y ☐ N ☐
(tick as appropriate)

Nurse name (Please print):_____Nurse signature:_____

MRC Human Nutrition Research – National Infant Diet and Health Study

Breast Milk Volume Assessment (Tracer Water to Mother and Child)

Day	**Mother's Urine Sample Label**	**Date (dd/mm/yy)**	**Time of sample collection**	***Morning* (Please ✓)***	***Afternoon* (Please ✓)***	***Comments***
Pre-Dose	Pre-M0					
1	M1					
2	M2					
3	M3					
4	M4					
5	M5					
6	M6					
7	M7					
8	M8					
9	M9					
10	M10					
11	M11					
12	M12					
13	M13					
14	M14					

Day	**Child's Urine Sample Label**	**Date (dd/mm/yy)**	**Time of last nappy change**	**Time of sample collection**	***Morning* (Please ✓)***	***Afternoon* (Please ✓)***	***Comments***
Pre-dose	Pre-B0						
1	B1						
2	B2						
3	B3						
4	B4						
5	B5						
6	B6						
7	B7						
8	B8						
9	B9						
10	B10						
11	B11						
12	B12						
13	B13						
14	B14						

Note: For collections at 12 o'clock mid-day, tick afternoon; at 12 o'clock mid-night, tick morning.

MRC Human Nutrition Research

National Infant Diet and Health Study

Body Composition and Fluid Intake (Tracer Water to Child)

Respondent ID Number | | | | | | | | | |

Dose bottles number/details .....

Date written consent obtained | | | | | | | | | | |

Child Information

Child's weight on day of dosing | | | . | | | kg

DAY MONTH YEAR

Date dose taken: | | | | | | | | Time dose taken: | | | | am/pm?

Please specify drinking vessel used for dosing (tick as appropriate):

Child's own bottle ☐

Bottle provided at clinic ☐

Syringe + feeding tube ☐

Other (please specify).....

Weight of empty chosen drinking vessel | | | | . | | g

Weight of chosen drinking vessel + added dose water before drinking | | | | . | | g

Weight of chosen drinking vessel + any remaining dose after drinking | | | | . | | g

Were there any losses whilst drinking the dose? Yes / No (please circle)

If losses occurred what happened? (E.g. spillage, dribbling, positing) .....

.....

Please estimate how much of the dose you think was lost - .....

Nurse name (Please print):.....

Nurse signature:.....

MRC Human Nutrition Research – National Infant Diet and Health Study

Body Composition and Fluid Intake (Tracer Water to Child)

Day	Child's Urine Sample Label	Date (dd/mm/yy)	Time of last nappy change	Time of sample collection	*Morning* (Please ✓)*	*Afternoon* (Please ✓)*	*Comments*
Pre-dose	Pre-C0						
1	C1						
2	C2						
3	C3						
4	C4						
5	C5						

Note: For collections at 12 o'clock mid-day, tick afternoon; at 12 o'clock mid-night, tick morning.