# Ghana 2014
# Iodine Survey – Training Manual

## Contents

# Using ODK Collect on the Android Device – for All Field Staff

Data collection will be conducted using the Android device you will be issued with at the start of the training. Please ensure that you take good care of the Android device. Your team supervisor may require the devices to be handed in for safety at the end of each day – this is dependent on the specific project protocol.

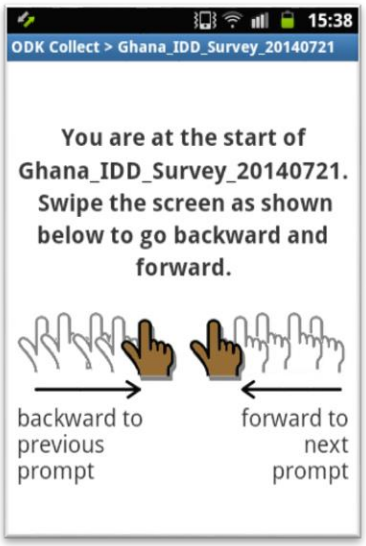
The ODK collect app will be present on your main home screen. Tap the symbol 

to open the app. The form (questionnaire) will already be loaded and the phone set to connect to your project's server. Your field supervisor will manage any requirement to load new forms from the server.

# General Use of Android Device

## Navigation

The screenshot below shows the start of the Ghana IDD Survey on an Android phone. To move forward you should swipe from right to left and to move backwards to the previous question you should swipe from left to right as indicated.




The user can decide whether to navigate the form using swipes or using forward and backward buttons. This should be left up to the user to decide what they feel most comfortable with. Users who are not familiar with touch screen devices may prefer to use labelled buttons rather than horizontal swipes.

If using the horizontal swipe option, you may find that the screen moves forward when you are scrolling down a screen. Just move back again and make sure the scrolling down motion is as vertical as possible. To switch between using swipes or using forward and backward buttons do the following:

- Go to **General Settings** (bottom right-hand side from the screen) and scroll down to the **User Interface** section and select **Navigation**.
- Select one of the following options:
    - Use horizontal swipes
    - Use forward/backward buttons
    - Use swipes and buttons

If using the forward/backward buttons they will appear at the bottom of the screen. Images in this manual do not show these buttons.

The only other setting within this menu that you may change is the **text font** size. DO NOT change any other settings.

### Battery Conservation

The device's battery should last for most of a day's work. To help ensure the battery lasts the day, please ensure that the following are switched **off** during the day:

- Wi-Fi
- Bluetooth
- Data Network

It is helpful to leave GPS on during the day. When you first switch GPS on, it takes a while to pinpoint your location. For this reason, please switch on your GPS ~15-30 minutes before you begin the first form of the day.

During the first few days, you should monitor the device's battery before and after each interview. If a device is below 50% after ½ the interviews for the day are complete, (or when you take your lunch-break), you should charge your phone during the lunch-break using, in order of preference:

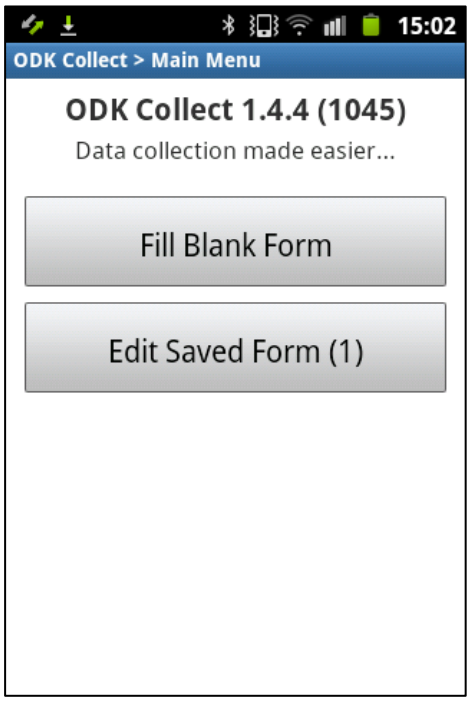
- An available wall plug
- Your team's in-car charger
- Your portable battery pack

30-60 minutes charging at lunch-time should be enough to give enough of a boost to allow you to use the device for the rest of the day. Remember to fully charge your device every evening!

Once you have become familiar with the device, you will get a feel for how often you need to charge it and how long it takes to charge.

### Using ODK Collect

To start a new form, tap the first option '**Fill Blank Form'**. Choose the 'form **Ghana_IDD_Survey**.



Note that the form name is likely to include a date. Unless updates have been downloaded there should be just the one form on your device. Once the form is loaded, you will see a screen similar to the one shown earlier. As previously instructed swipe right to move to the next question and swipe left to move to the previous question.

### *Types of Question*

As you work through the questionnaire you will come across the following types of question.

- Barcode
  - This will appear on the screen as a button labelled **Get Barcode**. Click on the button and scan the relevant barcode as instructed. You will need to turn your phone to landscape to scan the code and a reasonable light source is required.
- Integer
  - When a numeric value is expected – e.g. age of respondent – the numeric keypad will appear on the phone
- Text
  - Where a text response is expected – e.g. name of respondent – the standard letter keyboard will appear.
- Multiple Choice (select one)
  - Multiple choice questions where only one response is possible, will have the options displayed with radio buttons (round buttons).
- Multiple Choice (select multiple)
  - For questions where several responses are possible, the options will be displayed with check boxes (square boxes)
- GPS
  - When you are required to record the GPS coordinate a button will appear on the screen labelled **Record Location**.
- Confirmation
  - There are times when confirmation is required and in these cases you will need to tick the check box before you can move on. For example after you enter the household size and the number of males in the household, the system will calculate the number of females and ask you to confirm the calculated value.

### *Validation Logic*

The form has been written to include many automatic validation checks. If you enter a response that the form recognises as impossible, you will not be able to continue. An error message will briefly appear indicating the reasons for the invalid answer. To force the message to appear for longer, swipe forwards 3-4 times in a row.

### *Skip Patterns*

When completing the form, not every question will be relevant to the particular respondent. Questions that should be skipped due to the respondent's previous answers will not be shown to you.

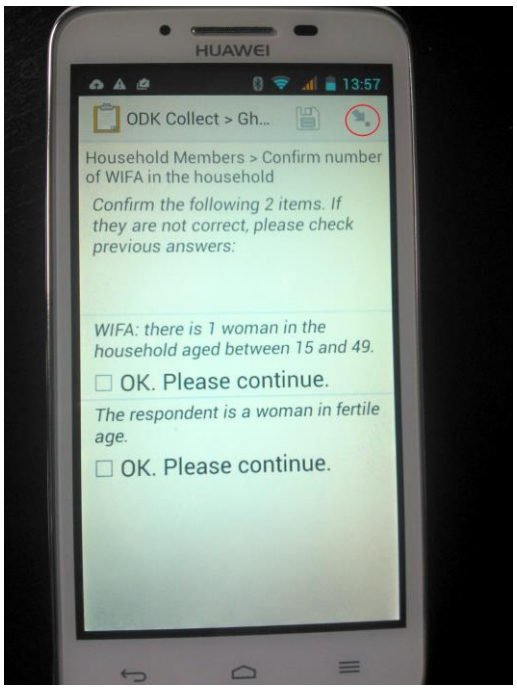
During the training, you will learn the complete structure of the questionnaire, including the skip patterns.

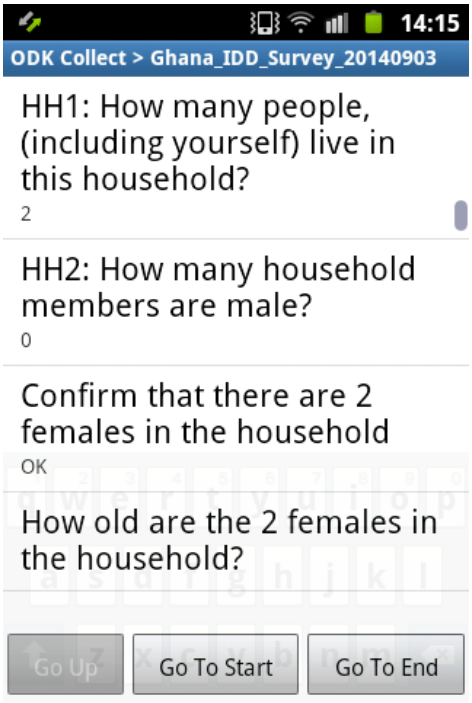
### *Jumping Throughout the Questionnaire*

If you need to jump back to change a previous answer, you can access the full list of currently active questions by tapping the 'Go To Prompt'  .

You will see a list of every question currently active. Any answers you have entered will be shown in small text under the question label text. Examples of how this may look are given below. The first image here shows an example of the type of phone you will be using and the **Go to Prompt** icon is shown in the top right hand corner.

Tap any question to be taken to that question.




Note – many questions are only relevant if certain answers are given to previous questions. For this reason, you may not see every single question in this list, as it only shows the *currently relevant* questions (based on answers given so far)

### *Saving an Incomplete Questionnaire*

You may not complete an interview in one sitting. If you need to save an incomplete form, tap the 'menu' button on your device and choose 'save form'. Alternatively click the **Save** icon in the top right hand corner. It will also prompt you to save your changes when you close a form.

You can close a form by pressing the 'back' button on your device. It will give you 2 options – for any real interview, always choose Save Changes. If you choose 'Ignore Changes' you will lose all data entered into that form since you last saved.

### *Basic Form Management*

Incomplete and complete forms are stored on the device. You can access all saved forms within the ODK Collect app by going to the main menu and tapping 'Edit Saved Form'. This list contains both non-finalised and finalised forms. This way, a form marked as finalised **but not yet uploaded** can still be edited.

Do not upload the forms during the day. The field supervisor will be responsible for doing this after checking them every evening.

### Purpose and use of the barcodes

There are three types of barcode sheets: PSU, household (HH) and WIFA (urine). PSU sheets will be retained by the supervisor to label PSU-level packages of salt (boxes) and urine (bags) at the end of the day.

Each interviewer will be allocated HH and WIFA barcode labels for the specific households they have been assigned within the PSU. The PSU codes consist of a single letter – this will be "G" for the main survey or "T" for the training and pilot – followed by 3 digits.

Household codes are 2-digit codes – there will be 16 households for each PSU and the barcode labels for households include both the PSU code and the household code. Thus code "G00102" is for household 02 within PSU G001. Within PSU G001, codes will range from G00101 to G00116.

There are 3 labels with the same code provided for each household (one household per row). One label is for the consent form, one is for the household salt sample collection bag and one is spare (or to be used in the questionnaire if the use of a paper version of the questionnaire is ever required).

WIFA codes are also 2-digit codes. The number of WIFA present and who consent to provide urine samples in each household is unknown in advance, therefore codes have been allocated for up to six women per household and additional “spare” codes are available should there be more than 6 WIFA consenting to give urine within one HH (details on their use will be provided during the training).

Barcode labels for WIFA urine samples include the PSU code, the household code and the WIFA ID code. Thus code "G0010203" is for WIFA 03 within household 02 within PSU G001. Within PSU G001, household 01, WIFA codes will range from G0010101 to G0010106.

There are 4 labels with the same code provided for each WIFA (one WIFA per row). One label is for the urine collection cup, two are for each of the two 2ml urine storage and transport tubes and one is spare (or to be used in the questionnaire if the use of a paper version of the questionnaire is ever required).

An overview of the barcodes, examples of structure and information on their use is given in the following pages:

## Overview of Barcodes for Iodine Surveys - Ghana

## PSU Codes (4 digits: G001 to G132)

**Field Supervisor use only**

| | **Use of each label** | | |
|---|---|---|---|
| **PSU ID** | PSU level salt samples – stick to the bag containing all salt samples from the PSU | PSU level urine samples – stick to the bag containing all urine samples from the PSU | Spare |
| **PSU # G001** | PSU=G001 G001 | PSU=G001 G001 | PSU=G001 G001 |
| **PSU # G002** | PSU=G002 G002 | PSU=G002 G002 | PSU=G002 G002 |

## Unique Household Codes (PSU digits plus 2 digit household code (01 to 16))

e.g. G00103 = 3rd household in PSU 1; G12511 = 11th household in PSU 125

Interviewers should each have a set of these barcodes corresponding to each household allocated for interview.

Examples below are for households 01 and 02 from PSU G001

**Use of each label**

| **Unique HH ID** | Consent form – stick to form then scan at the start of the household visit | Salt sample – stick to salt collection bag and scan | Spare *(or for paper version of the form if ever required)* |
|---|---|---|---|
| **PSU #G001 HH # 01** | PSU=G001 HHID=01 G00101 | PSU=G001 HHID=01 G00101 | PSU=G001 HHID=01 G00101 |
| **PSU #G001 HH # 02** | PSU=G001 HHID=02 G00102 | PSU=G001 HHID=02 G00102 | PSU=G001 HHID=02 G00102 |

## Unique WIFA Codes (PSU digits plus 2 digit household code plus 2 digit code for woman ID)

e.g. G0010302 = 2nd woman in fertile age in the 3rd household in PSU 1; G1251101 = 1st woman in fertile age in the 11th household in PSU 125

Interviewers should each have a set of these barcodes corresponding to each household allocated for interview.

Examples below are for WIFA ID 01 and 02 from household 01, PSU G001

**Use of each label**

| **Unique WIFA ID** | Urine collection cup – stick to the cup and scan the square code | Urine 2ml tube (#1) – stick to the tube and ensure code matches that on the collection cup | Urine 2ml tube (#2) – stick to the tube and ensure code matches that on the collection cup | Spare *(or for paper version of the form if ever required)* |
|---|---|---|---|---|
| **PSU #G001 HH # 01 WIFA # 01** | G0010101 | G0010101 | G0010101 | G0010101 |
| **PSU #G001 HH # 01 WIFA # 02** | G0010102 | G0010102 | G0010102 | G0010102 |

## Spare WIFA Codes

There are enough unique WIFA codes to allow for 6 urine samples from each household.

In the unlikely situation where there are more than 6 eligible women in a household, there are special codes to use. The PSU for these codes is G999, the household code is between 94 and 99 and the woman ID is between 01 and 99. The ODK system will tell you when you use one of these spare codes and it will automatically link the PSU and HH codes to the correct codes for that woman. Additional information will be provided on this scenario during training.

**Spare WIFA Codes – these are for households where urine samples are taken from more than 6 women.**

| **Unique WIFA ID** | Urine collection cup – stick to the cup and scan the square code | Urine 2ml tube (#1) – stick to the tube and ensure code matches that on the collection cup | Urine 2ml tube (#2) – stick to the tube and ensure code matches that on the collection cup | Spare *(or for paper version of the form if ever required)* |
|---|---|---|---|---|
| **PSU #G999 HH # 99 WIFA # 01** | G9999901 | G9999901 | G9999901 | G9999901 |
| **PSU #G999 HH # 99 WIFA # 02** | G9999902 | G9999902 | G9999902 | G9999902 |

As an example let's assume there is a household where there are 7 women in fertile age giving urine samples. Also assume that this household is in PSU 23 and is the 10th household in that PSU. Thus the household ID would be G02310. As the urine samples are collected the first 6 will be allocated WIFA codes 01 to 06 corresponding to this household but the 7th WIFA will be allocated one of the spare codes. The sample collection data for this household would look something like this:

| PSU ID | HH ID | WIFA # | Main respondent? Y/N | Age | Pregnant Y/N? | Sample taken Y/N? | WIFA Code |
|---|---|---|---|---|---|---|---|
| G023 | 10 | 1 | Y | 40 | N | Y | G0231001 |
| G023 | 10 | 2 | N | 35 | N | Y | G0231002 |
| G023 | 10 | 3 | N | 33 | N | Y | G0231003 |
| G023 | 10 | 4 | N | 31 | N | Y | G0231004 |
| G023 | 10 | 5 | N | 25 | Y | Y | G0231005 |
| G023 | 10 | 6 | N | 18 | N | Y | G0231006 |
| G023 | 10 | 7 | N | 16 | N | Y | G9999901 |

When the data are analysed we will know that the sample with code G9999901 is for a woman in household G02310.

## Completing the Questionnaire

### Introduction

In this section of the training manual we will work through the questionnaire as it will appear on your Android device. We will work through section by section pointing out where there are skips or validation checks. There are a couple of points to note regarding how the questionnaire appears on the mobile device.

1. We have tried to set up the form so that instructions or questions for the enumerator are shown in *italics* whereas text in **bold** indicates question text that should be read to the respondent.

### Starting a new questionnaire

- To start a new questionnaire open ODK Collect and choose **Fill Blank Form**.
- Select the appropriate Survey – this will be **Ghana_IDD_Survey** followed by the date in the form YYYYMMDD - from the list – there is likely to be just the one Survey file available but if there are several (updates may have been made recently) please select the file with the most recent date.

The form will then load and the **Welcome Screen** – similar to that shown below – will appear.

- Swipe from right to left to move forward (or use the forward/backward buttons if this was the option selected).


### Identification Panel

In the Identification Panel you will be setting the key identifiers for the questionnaire and any samples collected from this household. This will include scanning the barcode for the household and you will have been allocated a set of barcode labels to use for each specific household.

### Barcodes

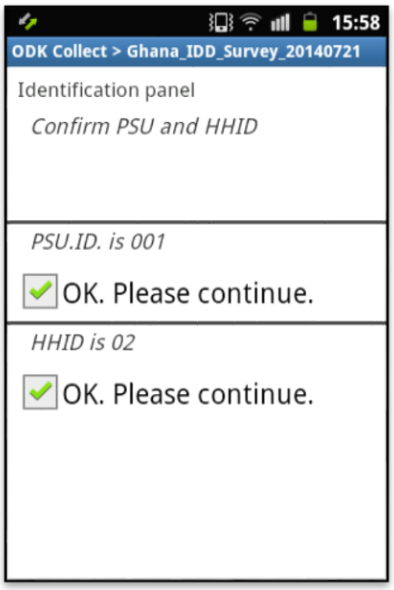
When you reach the screen shown in the image below you should take one of the household barcode labels (check it is correct for the household being visited) and stick it onto a consent form to be used in this household. Scan the code for the current household from the consent form. It is very

important that you scan the correct code (scanning the label on the consent form will make it easier to scan the correct code).


You will need to use your phone in landscape mode to scan the barcode. Once scanned, the code will appear on the screen and you will have the chance to try again if it is not correct.

On the next screen you are asked to confirm the IDs for the PSU and for the household; ODK extracts these components from the scanned image.

- Tick both **OK** boxes as shown below if the codes are correct. Otherwise swipe from left to right to move backwards and rescan the code.




On the next screen you are asked to enter your unique identification code. This is a code that you will be given during the training or just after to uniquely identify you as the enumerator. Enter the code then swipe from right to left.

The next screen is where you record the GPS coordinates. You should have the GPS on your phone switched on and clicking on **Record Location** will find this information. This may take a while but you can interrupt the process by pressing **Record Location** while it is still loading. As it loads it will let you know the accuracy. If possible try to get accuracy higher than 12m, although in some areas you

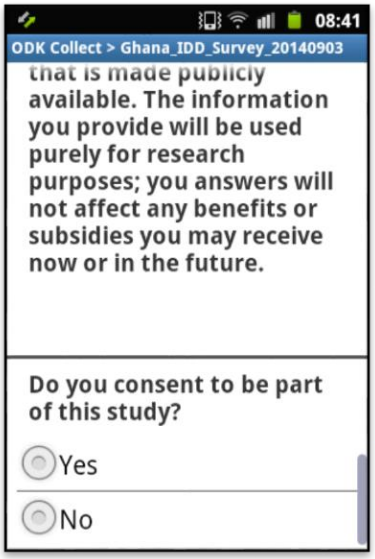
might have problems getting this level of accuracy. Standing outside the building may help if this is feasible to do without interrupting your initial rapport with the household members.

### Seeking Consent

The next section is where you seek consent from the respondent. There will be a separate consent form (on paper) for the most senior household member to sign on arrival at the household. In addition to this household consent, there is a screen on the mobile device with information for you to read. This is the time where you explain to the potential respondent what the survey is all about and ask whether or not they consent to be a part of the study. You should mention that there are three levels of consent, for responding to some questions about their household and some diet-related information, for requesting a salt sample from the household and, if relevant, for requesting urine samples from the women in fertile age in the household. Remember a respondent has the right to agree to answer questions but refuse to allow the salt and/or urine samples to be collected.

You should also be prepared to answer any questions they may have at this stage.

Ask the potential respondent whether she/he consents to be part of this study and record this as appropriate on both the hard copy form and at the bottom of the consent page on the phone screen – see image below. If she/he does not wish to be part of the study see if it is possible for another household member to participate instead and read the same information to them.




If the respondent answers **No** then the next screen will move you to the end of the questionnaire where you will be asked to save the form and exit.

If the respondent answers **Yes**, you will move on to the selection of the respondent.

### Selection of the respondent

There are 3 options for the respondent and these are listed in order of priority – i.e. you should prioritise interviewing the wife of the head of the household (or the head of household if female), then if they are not present or are unwilling to participate, then enquire whether there are any women in fertile age in the household who would consent to participate (if there is a choice, then select the most senior woman). Only choose option 3 (any other adult member of the household) if there is nobody currently in the household matching options 1 or 2 who is willing to participate. Ideally respondents should be aged 18 years or more.

Ask for and record the name of the respondent then say whether this person is male or female. Note that if you have selected the respondent category as option 1 or 2 then the gender question will not appear.

Next ask for and record the age of the respondent in completed years. There is a range check on the age so it will only allow respondents aged between 15 and 110 years*. If you have already said that the respondent is a woman of reproductive age then the age range will be restricted still further to be between 15 and 49.*

Questions IN4, IN5 and IN6 are about the education level of the respondent. In question IN4 ask whether the respondent has ever attended school or college. In IN5 ask whether she/he is currently attending school or college and in IN6 ask whether she/he has 5 or more years of education. *Note questions IN5 and IN6 will not appear if the response to IN4 is No.*

### Household Members

The next section is where you complete age and gender information about household members.

For the purposes of this survey a household is defined as: One person or a group of people (not necessarily related) eating from the same pot.

In HH1 ask how many people live in this household. In HH2 ask how many household members are male. ODK will then calculate the number of women in the household and you should confirm this with the respondent. *Note questions HH2 onwards relating to age, gender and education will not appear if there is only one member of the household (the respondent) since you have already collected this information.*

On the next screen you will divide the males (men and boys) in the household into the following age groups:

0-11 months (<1 year)
12-23 months (1 - <2 years)
24-59 months (2 - < 5 years)
5 to 14 years
15 to 19 years
20 to 49 years
50 years or more

This screen will be skipped if there are no males in the household. Note each age group has a default value of 0 and you will need to remove the zero before entering the correct value. All age groups must have a value, so the value zero needs to be displayed unless altered to indicate that at least one male in that age group is present.

ODK will then check to ensure all males in the household have been accounted for.

The next screen will be a similar screen with the age groups of the females (women and girls) in the household. *Note, If there are no females in the household then this screen will be skipped.*

The validation rules for this section include checking that you have allocated at least one person to the age/gender group that the respondent fits into.

For large households this section can be confusing and not easy to see on the phones. We have provided some labels with pre-printed age/gender tables that you can stick into your log books and complete before transferring this information to the phone.

An example of this table is shown below:

| Age-Group | Male | Female |
|---|---|---|
| 0-11 months | | |
| 12-23 months | | |
| 24-59 months | | |
| 5 to 14 years | | |
| 15 to 19 years | | |
| 29 to 49 years | | |
| 50 years or more | | |

Complete this form if you find it easier and then transcribe the information to your phone.

On the final screen for this section you are asked to confirm the number of women in fertile age in the household (i.e. the number of women aged between 15 and 49) and to confirm whether or not the respondent is a woman in this age range.

### Short Birth History

The purpose of the short birth history is to determine whether a child, born to a current household member within the last 5 years, has since died. Importantly, the questions have been designed to avoid asking directly whether a child has died.

On the first screen you ask how many live births there have been to current household members within the last 5 years. Note this includes children born to current household members who might have been living elsewhere at the time of the birth and does not include children born to a member of the household who now lives somewhere else. Note also that we are asking about live births so this should not include still births or miscarriages.

Note that if no live birth to a current household member in the past 5 years then the rest of this section will be skipped.

For each of the live births you then ask for the year of birth. ODK will automatically loop round the year of birth question for each of the live births. Note if more than one child was born in the same year you would just enter that same year for the appropriate number of times. This includes twins, triplets or non-siblings. The year of birth must be between 2009 and 2014.

The system then goes round each child asking the question in the form

"For the child born in 2012: Where are they now?"

It is very important here that you **do not** read out the options “alive/dead” but interpret the response appropriately, e.g. if the response is that they are with their grandmother, then record the response as “alive”.

Note that if more than one child was born in the same year then the same question will appear once for each child. You may have a situation for example where twins were born in 2012, one twin is still alive but the other has died. You will be asked the question above twice (once for each twin), for one of these questions you should give the response as "Alive" and for the other give the response as "Dead" – the order of the responses here does not matter as we are simply trying to ascertain whether or not a young child has died in the last 5 years.

Once the loops have been completed ODK will use your responses to determine whether or not a child has died and will ask you to confirm that.

### Schooling

There are two questions in this section. Note, the first question, which asks whether there is a household member with more than 5 years or schooling, will be skipped if the respondent has already said that she/he has more than 5 years of schooling.

The second question asks if there is a child in the household aged between 5 and 14 years who does not attend school. *Note, this question will be skipped if there is no child in the household in this age range.*

### Living Standards)

The living standards section asks about type of fuel, type of flooring and type of assets of the household.

The first question is simply a Yes/No question asking whether or not the household has electricity. The second question asks about fuels that are used for cooking. This is a multiple response question (note the square check boxes) and you can select as many responses as apply.

For the next question you should say which type of flooring is in the dwelling. You should be able to answer this question from observation. The available options correspond to a very basic floor, a rudimentary floor or a more finished floor. Specifically these options are:

1. Natural floor (earth/sand/dung)
2. Rudimentary floor (wood planks, palm/bamboo)
3. Finished floor (parquet or polished wood, vinyl or asphalt strips, ceramic tiles, cement, carpet)
4. Other

Question 4 lists a set of household assets. Tick all the items that are owned by the household.

### Water, Sanitation and Hygiene

This section covers the primary sources of drinking water and the toilet facility used by household members. The first question asks about the main source of drinking water. The number of responses is restricted to 2 – if you select more than 2 options and try to move forward the system will tell you that the response is invalid.

The second question asks what the household *usually* does to the selected main water source(s) (if anything) to make it safer to drink. *Note, this question will be skipped if the only source of water mentioned is bottled or sachet water.*

Question 3 asks for the type of toilet facility usually used by household members – only one response is allowed here.

Question 4 asks whether the toilet facility is shared with other households. Note in some situations there is a compound comprising several households – if there is just one toilet facility shared between all the households in the compound then the response here should be "Yes".

Question 5 asks about the disposal of faeces from children in the household aged less than 2 years. *Note, if there are no children of this age in the household then this question will be skipped.*

Question 6 asks for the respondent's views on when it is appropriate to wash hands with soap. For this question do not read out the options but it is okay to prompt the respondent by asking "Anything else?" once they have given their initial response. Note that this is a multiple response question.

For question 7 you should ask if you can see where household members most often wash their hands. Options 1 or 2 should be chosen if you were able to see the washing facilities. Otherwise choose the most appropriate option from 3, 4 or 5.

### Awareness and Practices related to IDD and Iodised Salt

The next section is about awareness and practices related to iodine deficiency and iodised salt. There are 12 questions in the complete section.

Question 1 asks whether the respondent has heard of iodine deficiency. *Note, if the response is "no" you will skip automatically to question 5.*

For question 2 you should ask the respondent to list the benefits of having a good iodine status. For this question please do not suggest answers but select options according to the response given. This is a multiple response question so several options can be selected. You may prompt for “anything else” while making it clear that one response is also sufficient.

Note here that one of those options is *"Don't know any"*. You will not be able to select this option if you have also selected other options.

For question 3 you should ask whether the respondent knows of any way to prevent iodine deficiency. *Note, if the response is "No" you will skip to question 5.*

Question 4 asks for the most effective way to prevent iodine deficiency in the respondent’s opinion. If the response is "Other" you will be asked to specify the response given on the following screen. *Note, if the response is “use iodised salt” you will skip to question 6.*

Question 5 asks whether they have heard of iodised salt. *Note, if the response is "No" then you will skip to the next section.*

Question 6 asks where the respondent heard about iodised salt. For this question please do not suggest answers but select options according to the response given. This is a multiple response question so several options can be selected. You may prompt for “anything else” while making it clear that one response is also sufficient.

As with earlier questions of this type if you select the option *"Don't know"* you will not be able to select any of the other options.

In question 7 you ask whether they currently use iodised salt for cooking in the household. *Note, if you select "Yes" or "Don't know" then you will skip to question 9.*

In question 8 you should ask for the most important reason for not using iodised salt for cooking. For this question you can only select a single option. Do not suggest answers, however if the respondent mentions more than one reason then probe to find the most important reason.

Questions 9 and 10 are the same as 7 and 8 but for table salt. In other words salt added by household members to food after its preparation, e.g. during the meal.

Questions 11 and 12 relate to negative feelings that household members might have about iodised salt. In question 11 ask whether anyone has any negative feelings about iodised salt and if the response is "Yes" enter the main reason for these negative feelings in question 12. *Note, if the response to question 11 is No or Don't know you will skip to the next section.* You should not question why the respondent has these negative feelings nor should you try to persuade them otherwise, but rather just record what they say.

### Use of Iodised Salt

The next section is where you find out about the salt currently used in the household. At the end of this section you will be asking if you can take a sample of salt for analysis.

In the first question ask whether the salt they are currently using for cooking is in the original packaging. Note, if the response is that there is no salt in the house at the moment then you will skip to question 8.

If the salt is still in the original packaging please ask to see it as this will help to confirm responses for some of the questions that follow.

In question 2 ask whether the salt was obtained in a sealed package. If the salt is in its original packaging, try to confirm the response with the packaging. *Note, if the response is "No" or "Don't know" then you will skip to question 5.*

Question 3 asks for the brand of salt currently used to cook meals in the household. The question includes the following common brands:

- U2
- Shifu
- Anapunna
- Concord
- Gino
- Panbros

There are also options for "*No brand*", *"Other brand"* and *"Don't know"*. Again if possible please confirm the response given against the salt packaging. If the salt has been transferred to a different container ask whether the respondent recalls the brand name from the time it was obtained. If the brand does not correspond to one of the listed brands then choose *"Other brand"*.

Question 4 asks whether the salt currently used to cook meals in the household is labelled as iodised salt either with a logo or a label. Again if the salt is still in the original packaging you should try and confirm the response.

Question 5 asks whether the respondent specifically looked for or asked for iodised salt when they obtained the salt currently being used. Note, if the response is *"No"* you will skip to question 8.

Question 6 asks how the respondent knew the salt was iodised. The response "Salt was tested for iodine" means that someone at the point of purchase/donation conducted a field test for iodine in the salt.

(Note: question 7 is not being used in Ghana but the question numbering has been retained to match other countries – therefore there is no question labelled as IS7).

Questions 8 asks the respondent to provide an estimate of how regularly salt for consumption by the household is purchased. You should clarify that this does not include salt for livestock feed or any non-edible use. *Note, if the response is "don't use salt" then you will skip to the next section – clearly in such a case you would not be able to collect a salt sample for analysis.*

Question 9 asks the respondent to give the average quantity of salt purchased, again this should be specified as salt for human consumption. If the household generally purchases a large amount for both human and say livestock consumption, probe to obtain an approximate estimate of the proportion used for human consumption and make a note in your field notes about the quantities, etc.

For question 10 you should ask whether you can have a sample of the salt used to prepare the previous evening's meal. If no salt was used in preparing the meal the previous evening then ask for a sample of the most commonly used cooking salt in the household.

Explain that you would like to do a quick test now to see if the salt contains iodine but would also like to take a sample to be tested more accurately in a laboratory in order to assess access to iodised salt for the whole population.

If the respondent refuses to give a sample please ask about and record the reason for the refusal – remember they have a right to refuse and you must not attempt to coerce them in any way.

Note that one of the possible responses to the first question in this section is that there is no salt in the house. If this is the case then question 10 and all questions related to the salt sampling, will be skipped and you would automatically be moved directly to the next section.

### *Salt Sample*

You will have been provided with a large long handled spoon for taking the salt sample. This should be wiped using clean tissue before sampling salt from each household.

Depending on the amount of salt and the container it is in, try to mix the salt a little then take 3 to 4 spoonful of salt (approximately 50g) from the middle of the container and place it in the Ziploc salt collection bag. Be careful not to touch the salt in the container with your hands.

Label the bag with the barcode label that matches the label you scanned at the start of the interview. This will include the ID for the PSU and the ID for the household.

At this point you will be asked to confirm that a salt sample was collected then asked to "Get Barcode". Scan the code on the salt bag in the same way that you did for the label on the consent form. It is important that you scan the code on the bag at this point in order to check that it is correctly labelled. Note you have 3 barcode labels for each household; you will probably only need two of these but the third has been provided as a spare.

Once you have scanned the code, ODK will check that this matches the code scanned at the start of the interview. If it does not match an error message will appear asking you to check the codes. In this case please move back to the previous screen and rescan the code after checking you have used the right one.

Note: you should scan the code after you have attached the label to the bag containing the salt sample. This is to help ensure that results from the lab can be correctly matched to the household data. If you used the wrong label, stick the correct one on top of it so that only one is visible. Since there is a spare label for each household the initial use of the label from another household will not leave that household short.

**Note:** you may come across cases where there is very little salt in the household so you are unable to take a full 50g sample. In these cases ask if you can take a teaspoonful to perform a quick test in the field.

### *Performing a Rapid Field Test*

As part of your field kit you will have a Field Test Kit for testing approximate salt iodine levels in the field. The kit consists of:

- 2 ampoules each containing test solution
- 1 red ampoule containing recheck solution
- A small salt collection scoop
- An instruction sheet
- A colour chart with circular colour spots

The ampoules should be prepared in advance to make sure the top of one test solution and the recheck solution are pierced using either a pin or a drawing pin. Mark the lid of the pre-prepared test solution with a marker pen so it is clear which one to use first.

Take approximately half a teaspoon of the collected salt (using the tip of the spoon to avoid touching the salt). Place this on a piece of white paper.

Squeeze 2-3 drops of the test solution (clear bottle) onto the surface of the salt. The reaction will liberate the iodine in the salt, and depending on the iodine content, the solution may change the colour of the salt.

Where a colour change is observed, compare the intensity of the colour with the colour chart and record the approximate iodine content (in parts per million, ppm) as more than 0ppm but less than 15ppm or as 15ppm or more.

If for some reason the salt was not tested, then record the reason.

If the result of the test was negative, i.e. there was no colour change; you should record the result as “Not iodised 0ppm” which will take you to instructions to perform a retest.

To perform a retest: Take a new small salt sample from the bag. Squeeze 2-3 drops of the recheck solution (from the red ampoule) onto the salt before adding 2-3 drops of the original test solution on top. Record the result of the retest. If the retest was not done please state the reason.

The Ziploc bag should be sealed and put into your field pack to be given to the field supervisor at the end of the day.

### Fortifiable Oil

In this section you ask about the type of edible oil used in the household (to assess nationwide access to vitamin A-fortified or potentially fortifiable edible oils).

The first question asks for the main brand of edible oil consumed in the household. This is the oil that is used on most days for most meals in the home. Ideally one response will be more helpful however where the respondent says that two types are used equally then select both of these. We have

allowed only up to 2 responses to this question. If 2 brands are selected, questions 2, 3 and 4 will be repeated for each brand.

In question 2 you ask about the type of oil – note the brand name will appear in the question text on the phone. For example if Gino oil was the brand selected in question 1, then question 2 will appear as:

FF2: Can you tell me the type of the Gino oil?

Available options are:

1. Coconut oil
2. Red palm oil
3. Unrefined palm oil
4. Groundnut oil
5. Shea butter
6. Sunflower oil
7. Soybean oil
8. Vegetable blend oil
9. Other
88. Don't know

In question 3 you ask where they usually get this particular brand of oil from. Again the brand will appear in the question text on the phone. Note that one of the options for this question is *"Made it at home"*. If this option is chosen, question 4 will be skipped.

Finally question 4 asks whether the oil is usually packaged or open when they get it.

As above, if two brands of oil were selected in question 1 then the questions on type and purchase will loop round again for the second brand.

### Frequency of Consumption of Key Foods Contributing to Salt Intake

In this section you will be asking about foods that would contribute to overall salt intake to see what additional iodine the population may receive if all the salt used in processed foods and condiments is iodised. The target foods are bouillon, instant noodles and tomato paste. We start with the first two questions about bouillon.

You may need to emphasise that the question is about the personal consumption by the respondent, although this will not be used in any manner which associates the information with him/her individually.

In question 1 ask how many days in the last week (7 days) the respondent consumed food in the home that had been prepared using Bouillon. For this question you should probe for the use of bouillon or similar stock in any form, e.g. cube, stick, sachet, and its use in the preparation of fried rice as well as in stock. Examples of bouillon brands include Ryco, Maggi and Onga. *Note, if the respondent doesn't know or they didn't use bouillon in the last week you will skip to question 3.*

In question 2 ask how many meals each day on average were prepared using bouillon.

Questions 3, 4 and 5 are about instant noodles. Question 3 asks for the number of days in the last week that they consumed instant noodles such as Indomie. *Note, if the response is "No days" or "Don't know" then you will skip to question 6*. Otherwise ask the respondent how many packages of noodles she/he personally consumes on days when noodles are eaten. For question 5 ask whether they use the spice sachet to season the instant noodles. This refers to the sachet of dry spices

included in the noodle packet or cup. If the respondent says they use it every time but only part of the sachet, then code as “usually/only use part of the sachet”.

Questions 6 and 7 refer to consumption of tomato paste. In question 6 ask for the number of days in the past 7 that they consumed food prepared using tomato paste. *Note, if the response is "No days" or "Don’t know" then you will skip to question 8.* Question 7 asks how many meals on average are prepared using tomato paste on days when this is used.

Finally for this section ask for the number of days in the last 7 that food was consumed away from the home or that vendor-cooked food was eaten at home.

### Dietary Diversity

The next section is concerned with the range of foods that the respondent has eaten and we are looking for the variety in types of foods eaten by the respondent (not other household members) in the last 24 hours. The food categories are as follows:

1. Plain water
2. Sweetened or flavoured water, minerals, malt drinks, tea or infusion, coffee, liquor, beer, light soup
3. Any food made from grain such as millet, wheat, barley, sorghum, rice, maize
4. Any food made from fruits or vegetables that have yellow or orange flesh such as carrots, pumpkin, squash, orange sweet potatoes, ripe mangoes or papaya
5. Any dark green leafy vegetables (Kontomire, Gboma, cassava leaves, alefu, ayoyo, Bokoboko, bean leaves)
6. Any food made from roots or tubers such as white potatoes, white yams, cassava, onion beets, tiger nuts
7. Any food made from lentils, beans, peas, nuts or seeds
8. Any other fruits or vegetables (coconut, eggplant, tomatoes, peppers, avocado, lemon, green mango, banana)
9. Liver, kidney, heart or other organ meat
10. Any meat such as beef, pork, goat, cat, dog, guinea fowl, grass cutter, rat, chicken, duck
11. Fresh or dried fish, shellfish or seafood, snails, insects, crabs
12. Cheese, yoghurt or other milk products including powdered milk
13. Eggs
14. Sugary foods such as sugar cane, sweets, candies, chocolate, cakes or biscuits
15. Any food prepared with red palm oil (e.g. palm nut soup)
16. Any food prepared with other oil, fat or butter

There is also an option for "*No food or drink consumed in the previous 24 hours*" - you will not be able to select this option if you have already selected one or more of the other options.

Although the introduction to the question reads simply as: “Since this time yesterday did you have any of the following to eat or drink?” This question should NOT be asked in this way followed by reading out all the categories. The information provided will most likely be incomplete and the process of reading all categories tedious for the respondent.

Instead the question needs to be asked by working backwards through the previous 24 hours, asking what the respondent ate or drank at each meal or snack between meals and ticking off the categories as they come up. It is important that you are very familiar with the list of options and categories so that you can complete this section efficiently and not take up too much of the respondent’s time. For example, let's assume the interview is taking place early afternoon (i.e. after lunch). The questions might go as follows:

| Question | Response | Probe | Additional response | Action (tick options) |
|---|---|---|---|---|
| What did you consume for lunch? | Soup with a bread roll and a glass of water | What was in the soup? | Lentils and tomatoes | 7 (lentils),<br>8 (tomatoes)<br>1 (water)<br>3 (bread roll) |
| | | Was the soup made with red palm oil? | Yes | 15 (red palm oil), |
| | | Did the bread roll have butter or spread on it? | Yes, butter | 16 (butter in the roll) |
| Did you eat or drink anything between breakfast and lunch – if so, what? | Only a cup of tea | | | 2 (tea) |
| | | Did the tea have milk in it? | Yes, powdered milk | 12 (powdered milk) |
| | | Did you have any kind of biscuit or fruit with the tea? | No | |
| What, if anything, did you have for breakfast? | Porridge made with finger millet and milk | | | Note: options 12 (milk) and 3 (finger millet) already ticked |
| | | Did you have any fruit or anything else with that? | Just papaya | 4 (papaya) |
| Did you eat or drink anything between your evening meal last night and breakfast and if so what? | Just tea and a chocolate biscuit | | | 14 (chocolate biscuit)<br>Note: other options already ticked |
| What about your evening meal last night – what did you eat and/or drink then? | Rice and fish in a palm oil sauce | | | 11 (fish) |
| | | Were there any vegetables in the sauce or otherwise included in the meal, if so what? | Carrots, onions and bean leaves | 4 (carrots)<br>6 (onions)<br>5 (bean leaves)<br>Note: Other options already ticked |

| Question | Response | Probe | Additional response | Action (tick options) |
|---|---|---|---|---|
| Did you eat or drink anything yesterday afternoon, between lunch and your evening meal? | Banana and a cup of coffee | Anything else to drink or eat during that time? | Only water | Note: All options already ticked |

At the end of this example exchange the options should look like this with just 3 options remaining unticked.

- ✓ 1. Plain water
- ✓ 2. Sweetened or flavoured water, minerals, malt drinks, tea or infusion, coffee, liquor, beer, light soup
- ✓ 3. Any food made from grain such as millet, wheat, barley, sorghum, rice, maize
- ✓ 4. Any food made from fruits or vegetables that have yellow or orange flesh such as carrots, pumpkin, squash, orange sweet potatoes, ripe mangoes or payaya
- ✓ 5. Any dark green leafy vegetables (Kontomire, Gboma, cassava leaves, alefu, ayoyo, Bokoboko, bean leaves)
- ✓ 6. Any food made from roots or tubers such as white potatoes, white yams, cassava, onion beets, tiger nuts
- ✓ 7. Any food made from lentils, beans, peas, nuts or seeds
- ✓ 8. Any other fruits or vegetables (coconut, eggplant, tomatoes, peppers, avocado, lemon, green mango, banana)
- ☐ 9. Liver, kidney, heart or other organ meat
- ☐ 10. Any meat such as beef, pork, goat, cat, dog, guinea fowl, grass cutter, rat, chicken, duck
- ✓ 11. Fresh or dried fish, shellfish or seafood, snails, insects, crabs
- ✓ 12. Cheese, yoghurt or other milk products including powdered milk
- ☐ 13. Eggs
- ✓ 14. Sugary foods such as sugar cane, sweets, candies, chocolate, cakes or biscuits
- ✓ 15. Any food prepared with red palm oil (e.g. palm nut soup)
- ✓ 16. Any food prepared with other oil, fat or butter

### Household Hunger Scale (Food Security)

There are 9 occurrence questions in the Household Hunger Scale that represent a generally increasing level of food insecurity (access) together with an indication of how frequently these events may have occurred.

All questions refer to the previous 30 days (month) and (in contrast to the previous section) address the situation of all household members, including adults, adolescents and children. Some inquire about the respondent's perception of food vulnerability (e.g. "did you worry . . . ") and others ask about behaviour (e.g. did you or any household member have to eat fewer meals . .. ").

Each question appears on a separate screen and all questions have the following 4 options:

0. Never
1. Rarely

2. Sometimes
3. Often
88. Don't know/no answer given

In general **Rarely** would be 1 or 2 days in the month, **Sometimes** would be between 3 and 10 days in the month, and **Often** would be more than 10 days in the month.

Answer each question in turn recording the relevant response each time. Do not read the pre-coded frequency options out each time but interpret the best option based on the respondent's reply. If the respondent has difficulty replying then you can encourage a response by reading the list of options again.

The questions all start with *"During the past 30 days"* and continue as follows:

1. Have you been worried that your household would not have enough food?

This question is the only one that asks the respondent to report their personal experience with uncertainty and anxiety about acquiring food during the previous month. You should also remind the respondent of the definition of a "household". Mention that this definition of household applies to all the questions with that term.

2. For lack of resources (e.g. money), were you or any member of your household unable to eat the kinds of foods that you usually like to consume?

Preference can refer to the form of a particular food (i.e., whole rice vs. broken rice), type of staple (i.e., millet vs. corn) or a high quality food (i.e., a piece of meat or fish). Preferred foods can be those considered nutritionally higher quality or not. The term "lack of resources" will be discussed and agreed upon during the training. You should remind the respondent that they should answer on behalf of all household members.

3. For lack of resources, did you or any member of your household eat the same thing every day?

This question asks about dietary choices related to variety – i.e., whether the household had to eat an undesired monotonous diet (little diversity in the different types of foods consumed). The description of what a might be considered a monotonous diet, will be discussed and agreed upon during the training.

4. For lack of resources, did you or any member of your household eat foods that you preferred not to eat?

This question asks whether any household member had to eat food that they found socially or personally undesirable due to a lack of resources. Often these are foods or food preparations that are consumed only under hardship. Different people may consider different foods to be undesirable, so it is best not to provide examples here at first. The respondent needs to answer on behalf of all household members, according to his or her own perception of the types of food household members ate during the previous four weeks. If more encouragement is required, you may give some examples as reviewed and agreed during the training.

5. For lack of food, did you or any member of your household eat a smaller meal than you felt you needed?

This question asks whether the respondent felt that the amount of food (any kind of food, not just the staple food) that any household member ate in any meal during the past four weeks was smaller

than they felt they needed due to a lack of resources. The respondent should answer according to his or her perception of what constitutes enough food for the needs of the household members.

6. For lack of food, have you or any other household member reduced the number of meals usually consumed per day?

This question asks whether any household member, due to lack of food, had to eat fewer meals than the number typically eaten in the food secure households in their area. The respondent needs to answer on behalf of all household members, as for all these questions.

7. For lack of food, have you or any member of your household gone to bed hungry?

This question asks whether the respondent felt hungry at bedtime because of lack of food or whether the respondent was aware of other household members who were hungry at bedtime because of lack of food.

8. Was there ever no food at all in your household because there was not the means to get more?

This question asks about a situation in which the household has no food to eat of any kind in the home. This describes a situation where food was not available to household members through the households' usual means (e.g., through purchase, from the garden or field, from storage, etc.).

9. For lack of resources, did you or any member of your household go a whole day without eating anything?

This question asks whether any household member did not eat from the time they awoke in the morning to the time they awoke the next morning due to lack of food.

### Urine Collection

For the next section your aim will be to collect urine samples from all women in the household who are in fertile age. Explain that you would like to request a sample of urine from all women in the household aged between 15 and 49. Explain that these samples will be taken for laboratory testing to assess the level of iodine. Reassure the respondent and any eligible women in the household that the results will not be used in any way that would identify individuals. The outcome will be used to assess the iodine status of the population and will help to inform national policy on methods of preventing iodine deficiency. *Note, this section will be skipped if there are no women in fertile age currently living in the household.*

Please remember that individuals have the right to refuse and must not be coerced into providing a sample against their will.

Earlier in the interview you collected information on the age groupings of all household members and the ODK system will remind you of the number of women in the household aged between 15 and 49. Ask the respondent how many of these women are currently present. Note the response cannot be greater than the number of women in fertile age living in the household.

Ask all women in fertile age who are currently present to come and collect a cup to provide a sample of urine. Instructions on how to collect the urine sample and secure the lid will be provided during the training by staff from the NMIMR laboratory, Legon University.

The next section of the ODK system will repeat for each woman. Click **OK** to continue.

The first question is for you to say whether this woman is the main respondent. Note that this question will only appear if you have previously said that the respondent is a woman in fertile age.

Also this question will appear for all women; please ensure that only one is selected as the main respondent.

For question 2 ask the woman how old she is. *Note, this question will not appear if this woman is the main respondent as we already know the age of the main respondent.* Note there is a restriction on the age entered – it must be between 15 and 49.

For question 3 ask whether the woman is pregnant or possibly pregnant. This is for information and later analysis of the data separately for pregnant and non-pregnant women.

In question 4 say whether or not you are taking a urine sample from this woman. If the response is *"No"* then say why a sample was not taken (Refused or Other).

If a sample has been collected from the current woman the screen will instruct you to ensure the urine sample is correctly labelled. It must be labelled with the PSU and Household IDs that were set at the start of the interview and with a unique identifier for the woman. The system will tell you which code to use for the woman.

You will have codes for up to 6 women in each household.

The next page shows an example of a sheet of WIFA codes. There are codes for 2 households on each sheet (which may be pre-cut before starting work in each PSU, in which case codes for each household will be on separate sheets) and for 6 women in each household. You will have 4 labels for each woman. The PSU and HH IDs appear in the header of each column of labels. Make sure you select the correct label. Stick the label on the sample collection cup and scan it from the cup (NOT from the sheet of labels) before handing it to the woman. Because of the size of the labels **you will need to scan the data matrix code (the square one)** rather than the barcode – the barcode will be scanned in the lab. The data matrix code and the barcode contain identical information.

Once you have scanned the code and moved forward the ODK system will check that you have scanned the correct code. If you receive an error here please go back and check that you have the right code.

| PSU=G001 HHID=01 | | PSU=G001 HHID=02 | |
|---|---|---|---|
| WIFA=01 | G0010101 G0010101 G0010101 G0010101 | WIFA=01 | G0010201 G0010201 G0010201 G0010201 |
| WIFA=02 | G0010102 G0010102 G0010102 G0010102 | WIFA=02 | G0010202 G0010202 G0010202 G0010202 |
| WIFA=03 | G0010103 G0010103 G0010103 G0010103 | WIFA=03 | G0010203 G0010203 G0010203 G0010203 |
| WIFA=04 | G0010104 G0010104 G0010104 G0010104 | WIFA=04 | G0010204 G0010204 G0010204 G0010204 |
| WIFA=05 | G0010105 G0010105 G0010105 G0010105 | WIFA=05 | G0010205 G0010205 G0010205 G0010205 |
| WIFA=06 | G0010106 G0010106 G0010106 G0010106 | WIFA=06 | G0010206 G0010206 G0010206 G0010206 |

You will then move onto the next WIFA in the household (if there is one).

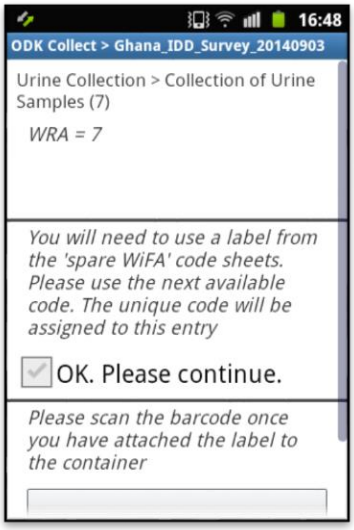
You will again be asked whether this woman is the main respondent. Please make sure you only selected "Yes" for one woman – i.e. the main respondent and select "No" for all other women.

The same questions as before will appear as for the previous woman and, if a sample is taken, the system will instruct you as to which barcode label you should use.

### *More than 6 samples*

As mentioned you have codes for up to 6 urine samples per household. However, you may come across a household where there are more than 6 women in fertile age. To deal with this situation we have produced a number of "spare" codes.

As you go through this section complete the first 6 women as already described. For the 7th woman, answer questions 1 to 4 in the usual way but when you come to assigning a label you will need to use a label from the "Spare WIFA" code sheets. Please use the next available code from the "Spare" sheet that you have been allocated. These "spare" codes are all unique. The PSU ID for these codes has been set as "G999" and the Household ID will be between 94 and 99.




### *Important hygiene note for urine collection*

For personal hygiene reasons and to prevent any cross contamination of iodine between the salt sample collected and urine sample, it is essential that you do not come into contact with the urine, transfer any to the phone screen or let the urine samples come into contact with the salt samples.

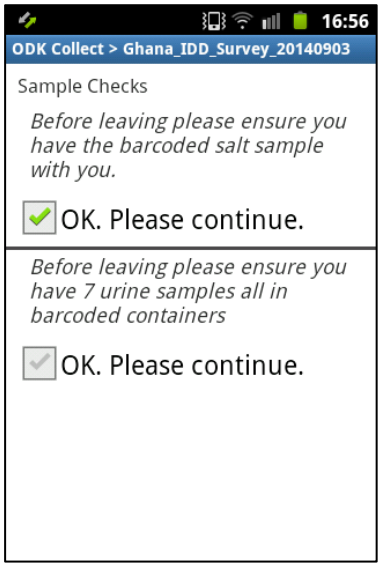
Therefore urine cups should be labelled and scanned for each woman immediately before being handed to the woman. Each interviewer should have a bag/box where women can put the completed urine sample (this also preserves the dignity for the woman that she doesn't have to "hand over" the sample). The outside of this container should remain free from urine contamination however if in doubt, wear gloves to transport it between households.

### End of Interview Checks

You have now reached the end of the interview. Remember to thank the respondent and remember to take any salt and urine samples you have collected.

If a salt sample has been collected the ODK system will remind you to take it with you and to make sure it is barcoded.

If any urine samples have been collected the system will calculate the number collected and remind you to ensure you have all samples and they are all barcoded.




Finally save and finalise the form. Please make sure you ***only finalise completed forms***; if you need to return to the household at a later time then save the form but do not finalise it.

At the end of the day your supervisor will carry out some checks on the data and will upload it to the aggregate server.

## Household Checklist

For each PSU you will have a Household Checklist as shown below. As you work through the interviews you have been allocated you should complete this form. Enter the Household ID in the first column, then in the second column add a tick if you have started the interview. If consent is refused then put a tick in the **Refused** column, otherwise leave this column blank. Once the interview is complete you should tick in the **Interview Completed** column. Note: if you have a tick in the **Refused** column you should not have a tick in the **Interview Complete** column.

For some households you may need to revisit; this could be because there was no one at home at your first visit, because you were unable to complete the whole questionnaire in one visit or the head of household refused and you wish to try again with the team supervisor accompanying you. Please record the number of revisits in the appropriate column.

If you have collected a salt sample please tick in that column, otherwise leave it blank. Then record the number of urine samples collected entering zero where appropriate.

If you have any comments about the household, you should add these in the final column – if you need more space please use your log book.

Remember to enter the number for the PSU and your own unique interviewer ID that you will be given during the training.

If you make a mistake please clearly cross through the error and initial it.

**Example Household Checklist**

| PSU = | G | | | | INTERVIEWER ID | | | |
|---|---|---|---|---|---|---|---|---|

**Mark columns with tick/check ✓ or a number (for # revisits and # urine samples)**

| HH # | Interview-started | Interview completed | Refused | # of Revisits | Salt sample | # Urine samples | Comments |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
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