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2. Data and Sample Collection in PRECISE-DYAD

PRECISE-DYAD is an observational cohort study of women, and, when relevant, their living children, who participated in PRECISE in The Gambia and Kenya. Participants in PRECISE-DYAD will complete between three and four study visits, from the time they are enrolled until three years (if applicable within the 2-year data collection). We will follow-up women who have suffered either a stillbirth or child death using the same protocol administered by specifically trained surveillance staff. In addition, we will follow up children who lost their mother after they were born.

Visits overview

Visit 3 at 24 months

During this visit, both mother and child will be asked to provide clinical and non-clinical data. We will also evaluate pelvic floor health following childbirth and its impact on everyday life for those women previously enrolled in the nested study at visit 1.

The total child development will be scored and the likelihood of moderate to severe vision, hearing, communication, and motor impairment will be evaluated. Children will be screened for epilepsy episodes and in case they are screened positive, a further questionnaire will be asked to the caregiver. Children with communication and motor impairment will be further assessed for moderate to severe behavioural problems/autism and health-related quality of life. Finally, we will assess the maternal child interaction by video recording, which includes a measure of maternal looking, voice and touch.

Sample collection in visit 3 includes maternal and child blood samples (finger prick or venepuncture), as well as stool sample from the child and a urine sample from the mother.

Visit 4 at 36 months

During this visit, both mother and child will be asked to provide clinical and non-clinical data. The total child development will be scored and the likelihood of moderate to severe vision, hearing, communication, and motor impairment will be evaluated. Children will be screened for epilepsy episodes and in case they are screened positive, a further questionnaire will be asked to the caregiver. Children with communication and motor impairment will be further assessed for moderate to severe behavioural problems/autism and health-related quality of life.

Sample collection in Visit 4 includes maternal and child blood samples (finger prick or venepuncture).
3. Introduction to the PRECISE-DYAD Training Manual

All research projects differ in their aims and how they are run, it is therefore essential that even the most experienced research staff undergo study-specific training.

This manual is intended to provide PRECISE-DYAD specific training for research staff in how to consent women and collect the requisite data and samples for the project; the manual can also be used as a reference guide or refresher course.

4. Participant Identification Numbers

The study PTIDs comprise 8 digits, separated by a hyphen. The first three digits are based on the international dialling code of each country, to identify which country a participant has been recruited in; the following five digits are then separated by a hyphen and were randomly generated when first assigned to the participants in PRECISE.

Once consented and enrolled in PRECISE-DYAD, women will continue to use the study identification numbers allocated to them in PRECISE, which they will retain for the duration of the study.

3 digit country code – 5 digit unique number e.g. 054-03454

5. Basics of Data and Sample Collection

The timing of data and sample collection is very important, it is therefore essential that the date and time on the tablet are checked each morning before data collection starts to ensure the data is correct.
In addition, all data detailed in this manual is essential to the study. Please ensure that ALL questions are answered carefully, do not skip questions, and that you have entered the correct information. Check what you have typed/entered before saving the data.

In addition, it is essential that women are asked for her study ID before data collection starts for that particular visit. Her data must not be collected under a different ID. PRECISE-DYAD data will be collected in ODK-X. When you first log in to ODK-X, you will be presented with the following screen, click on DYAD-Enrolment.

6. PRECISE-DYAD: Search for a participant

PRECISE-DYAD will be recruiting pregnant women who are part of the PRECISE study.

Enter the participant’s study ID, phone or name in the search bar and her record will be displayed. Select the participant’s ID to access her records.

7. DYAD Confirmation

This form only needs to be completed once at the time a participant’s records are opened for data collection for the first time. If this form has already been completed at a previous visit this screen will not display. If no data has been collected for a participant in a previous visit (for example, if the participant is joining PRECISE-DYAD at visit 3 or visit 4), the Dyad Confirmation will open automatically.
The Open Data Kit page will display, click either Next on the top right corner or Go to next prompt on the bottom left corner of the screen to proceed.

1. Are you sure you want to proceed with PTID 220-11111?  
   Possible response options: Yes, no  

Select “yes” if this is the correct participant and you want to access her records. If this is not the correct participant, select “no” and you will be directed to the participant list. This question will only be shown the first time you select a participant for the DYAD study.

Click Next on the top-right corner of the screen and then Finalize (Complete) on the Open Data Kit page.

8. Landing Page

At the top of the Landing Page you can find navigation tabs that include the participant’s profile, each of the DYAD visits, and the Verbal Autopsy questionnaire.
Use these tabs to navigate between screens.

9. DYAD Profile

You will be first presented with the DYAD profile page providing the participant’s contact information. If you need to update the participant’s contact details, click on ‘No, need to update’. You will be presented with a screen where you can update the participants details.

If the information is up-to-date, select ‘Yes, accurate’ and the full DYAD profile will display.
9a. DYAD Summary

The “DYAD Summary” page contains information collected in PRECISE so you won’t be able to modify any of the fields. The summary includes information to identify the participant, (such as her name, PTID and HDSS), as well as information about her pregnancy during PRECISE. In addition, it provides you with the ideal dates when the woman and her child should be returning to the facility for their next PRECISE-DYAD visit and if they were selected for a case-control study.

<table>
<thead>
<tr>
<th>Device ID</th>
<th>8232aa5b222618e5</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTID</td>
<td>254-55555</td>
</tr>
<tr>
<td>Mental Health (Final)</td>
<td></td>
</tr>
<tr>
<td>QoC Case (Final)</td>
<td></td>
</tr>
<tr>
<td>Pelvic Floor Case (Final)</td>
<td></td>
</tr>
<tr>
<td>QoC Control (Final)</td>
<td></td>
</tr>
<tr>
<td>Pelvic Floor Control (Final)</td>
<td></td>
</tr>
<tr>
<td>Cohort</td>
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</tr>
<tr>
<td>Full Name</td>
<td>KCL Test Data 5</td>
</tr>
<tr>
<td>HDSS</td>
<td></td>
</tr>
<tr>
<td>Date of delivery</td>
<td></td>
</tr>
<tr>
<td>Gestational age at delivery</td>
<td></td>
</tr>
<tr>
<td>Number of Babies</td>
<td>2</td>
</tr>
<tr>
<td>Delivery location</td>
<td></td>
</tr>
<tr>
<td>Ideal date of PRECISE-DYAD visit 1 (6 weeks, 6 months)</td>
<td></td>
</tr>
<tr>
<td>Date of PRECISE-DYAD visit 1</td>
<td>2021-06-29</td>
</tr>
<tr>
<td>Weeks postpartum at PRECISE-DYAD visit 1</td>
<td></td>
</tr>
</tbody>
</table>
9b. DYAD Randomisation

At visit 1, a subset participant can be selected will answer the Quality of Care and Pelvic floor questionnaires based on their pregnancy outcomes.

If the participant is selected for one of the questionnaires as a case or control, the DYAD randomisation table above will be notified with “1”

If the participant is not selected, the DYAD randomisation table above will be notified with “0”

In the example above, the participant is selected for as a case for pelvic floor questionnaire and for mental questionnaire. However she is not selected for Quality of Care questionnaire.
10. PRECISE-DYAD Visit 3 and Visit 4

Click on the DYAD Visit 3 or DYAD Visit 4 tab on the top of the landing page to open the screen. Start with the first form, "DYAD Visit – Enrolment", and then work your way through each of the forms to complete the woman and child’s visit. It is important you work through them in order to ensure the correct questions appear in the subsequent tables.
When you open a form, the questions will first appear in yellow with a red dot next to them. Once you select an answer, the questions will turn blue with a green dot next to them. If the answer triggers follow-up questions, these will appear only after you have selected the answer.

At the bottom of each form, you will find a progress bar showing the number of questions answered and the total number of questions in each form.

10a. DYAD Visit - Enrolment

In the “DYAD Visit – Enrolment” form, we aim to collect information that will determine participants’ eligibility for phone interviews, or whether in case of death, the mother will participate without the child or vice versa. The answers provided in this section will determine which forms are automatically displayed for participants and/or children depending on their circumstances.

This must be completed for every visit, since the circumstances of participants and their children may change from one visit to the next. This form can be completed when you contact the participant for her DYAD visit, either on the phone or when you visit her at their home to schedule their DYAD visit.

1. Has the mother/caregiver enrolled to DYAD?
   Possible response options: yes; yes, but child has died; yes, but one of the twins has died; yes, but one of the twins was a stillbirth; yes, but mother has died; yes, but pregnancy was lost (miscarriage/stillbirth); no, woman does not want to participate; no, woman has lost to follow-up; no, woman has died; no, child has died; no, one of the twins has died; no, one of
the twins was a stillbirth; no, both woman and child have died; no, pregnancy was lost (miscarriage/stillbirth))

Select “yes” if you are enrolling both mother and child to this DYAD visit, then ask the participant the following questions:

i) Will the mother attend the health facility? (Possible response options: Yes, no).

If the mother will attend the health facility, both mother and child are eligible, and mother and child tables will display.

If the mother and child will not attend the health facility, ask the participant/caregiver if they have consented to answer a few questions on the phone. If they have consented to phone interview, mother and child are eligible for phone interview and only the phone interview tables will display. Please refer to the dedicated Phone Interview manual for details on how to carry out interviews by phone.

If they have not consented for phone interview, the woman and child are not eligible to participate. This will terminate the questionnaire and they will not be asked any further questions.

Select “Yes, but child has died” or “yes, but one of the twins has died” or “yes, but one of the twins was a stillbirth” or “yes, but pregnancy was lost (miscarriage/stillbirth)” if the mother agrees to enrol to this DYAD visit even though her child/one of her child(ren) has died or the pregnancy was lost.

If the child has died or pregnancy is lost, the mother is eligible and only the mother tables will display.

In case the woman had twins and one of them has died or was a stillbirth, the mother and surviving twin are eligible so mother and child tables will display.

Show empathy and express your condolences (i.e. “Our sincere condolences to you and your family for the unfortunate loss of your baby”) before asking the mother the following questions:

i) Which twin has died? (Possible response options: Baby ID-01, Baby ID-02)

This question will only display if the mother had twins and one of them has died. Ask the mother if the baby who died was her first born (ID-01) or the second born (ID-02) and type the answer in the box.

ii) When did the child die? Record the date using the calendar option or select “don’t know date”). If the participant does not know when the child died, ask how old the child was when they died. The following questions will display:

a. How old was the child – select appropriate option below? Select “Days”, “Months” or “Years” from the drop-down list as appropriate, then and enter the age of the child in the number box below.

iii) Which twin was a stillbirth? (Possible response options: Baby ID-01, Baby ID-02)
This question will only display if the mother had twins and one of them was a stillbirth. Ask the mother if the stillborn baby was her first born (ID-01) or the second born (ID-02) and type the answer in the box.

a. **What was the date of birth?** Record the date using the calendar option or select “don’t know date”). If the participant does not know the date of delivery, ask how many weeks or months the pregnancy was.

In the event that the mother lost her pregnancy, the following question will display.

iv) **When was the pregnancy lost?** Record the date using the calendar option or select “don’t know date”). If the participant does not know when the pregnancy was lost, ask how many weeks or months the pregnancy was.

v) **Do you agree to be contacted for a verbal autopsy?** *(Possible response options: Yes, no, don’t know).* Explain that verbal autopsies are interviews that help us understand the causes and circumstances around their loss. With this information, we hope to help improve the care of mothers and babies in the future. She would be contacted by a member of PRECISE staff to arrange the interview, which takes about 45 minutes at the facility or her home at her own convenience. Select don’t know if the person would like more time to think about it.

In PRECISE-DYAD, we would like to have the opportunity to follow-up PRECISE children who have lost their mothers. If the mother has died, the child’s caregiver can consent for the child to be enrolled in the study.

Select “Yes, but mother has died” if the caregiver has enrolled the child to this DYAD visit but the mother has died. Show empathy and express your condolences. (i.e. “Our sincere condolences to you and your family for the loss”), before asking the following questions:

i) **When did the mother die?** Record the date using the calendar option.

ii) **Do you agree to be contacted for a verbal autopsy?** *(Possible response options: Yes, no, don’t know).* Explain that verbal autopsies are interviews that help us understand the causes and circumstances around their loss. With this information, we hope to help improve the care of mothers and babies in the future. He/she would be contacted by a member of PRECISE staff to arrange the interview, which takes about 45 minutes at the facility or his/her home at his/her own convenience. Select don’t know if the person would like more time to think about it.

iii) **Will the caregiver attend the health facility?** *(Possible response options: Yes, no).* Ask the caregiver if they will bring the child to the health facility for the study visit. If they respond “yes”, the child is eligible to participate and only the child forms will display.

If they will not attend the health facility, ask the caregiver if they consent to answer a few questions about the child health over the phone. If they have consented to phone interview,
the child is eligible for phone interview and only the phone interview tables relevant to the child will display. If they have not consented for phone interview, the child is not eligible to participate. This will terminate the questionnaire and the caregiver will not be asked any further questions.

Select “No, mother does not want to participate” if the mother does not want to participate in DYAD. This will terminate the questionnaire, a message indicating that the woman and child are not eligible to participate will display.

Select “No, mother is lost to follow-up” if the mother has not been enrolled because she is lost to follow-up (for example you could not contact her during the time window of the visit), the woman and child are not eligible to participate.

Note: Woman can be lost to follow-up for one visit and come back for the next one. Fill in the end of report table to provide the reason why she is lost to follow-up and try contact her again for the next visit.

Select “No, mother has died” if the mother has died, and the caregiver does not want the child to participate in the study. Show empathy and express your condolences. (i.e. “Our sincere condolences to you and your family for the loss”) before asking the following questions:

i) When did the mother die? Record the date using the calendar option.

ii) Do you agree to be contacted for a verbal autopsy? (Possible response options: Yes, no, don’t know). Explain that verbal autopsies are interviews that help us understand the causes and circumstances around their loss. With this information, we hope to help improve the care of mothers and babies in the future. She/he would be contacted by a member of PRECISE staff to arrange the interview, which takes about 45 minutes at the facility or his/her home at his/her own convenience. Select don’t know if the person would like more time to think about it.

Select “no, child has died” or “no, one of the twins have died” or “no, one of the twins was a stillbirth” or “no, pregnancy was lost (miscarriage/stillbirth)” if her child has died or the pregnancy was lost, and the mother does not want to participate to the study. Show empathy and express your condolences. (i.e., “Our sincere condolences to you and your family for the loss”), before asking the following questions:

i) Which twin has died? (Possible response option: Baby ID-01, Baby ID-02)

This question will only display if the mother had twins and one of them has died. Ask the mother if the baby who died was her first born (ID-01) or the second born (ID-02) and type the answer in the box.

ii) When did the child die? Record the date using the calendar option or select “don’t know date”). If the participant does not know when the child died, ask how old the child was when they died. The following questions will display:
a. How old was the child? – select appropriate option below? Select “Days”, “Months” or “Years” from the drop-down list as appropriate, then enter the age of the child in the number box below.

iii) Which twin was a stillbirth? (Possible response options: Baby ID-01, Baby ID-02)

This question will only display if the mother had twins and one of them was a stillbirth. Ask the mother if the stillborn baby was her first born (ID-01) or the second born (ID-02) and type the answer in the box.

a. What was the date of birth? Record the date using the calendar option or select “don’t know date”). If the participant does not know the date of delivery, ask how many weeks or months the pregnancy was.

In the event that the mother lost her pregnancy, the following question will display.

iv) When was the pregnancy lost? Record the date using the calendar option or select “don’t know date”). If the participant does not know when the pregnancy was lost, ask how many weeks or months the pregnancy was.

v) Do you agree to be contacted for a verbal autopsy? (Possible response options: Yes, no, don’t know). Explain that verbal autopsies are interviews that help us understand the causes and circumstances around their loss. With this information, we hope to help improve the care of mothers and babies in the future. She/he would be contacted by a member of PRECISE staff to arrange the interview, which takes about 45 minutes at the facility or his/her home at his/her own convenience. Select don’t know if the person would like more time to think about it.

Select “No, both mother and child have died”, show empathy and express your condolences. (i.e. “Our sincere condolences to you and your family for the loss”) before asking the following questions:

i) When did the mother die? Record the date using the calendar option.

ii) When did the child die? Record the date using the calendar option or select “don’t know date”. If the participant does not know when the child died, ask how old the child was when they died. The following questions will display:

a. How old was the child? – select appropriate option below? Select “Days”, “Months” or “Years” from the drop-down list as appropriate, then enter the age of the child in the number box below. Enter the age of the child in the number box,

iii) Do you agree to be contacted for a verbal autopsy? (Possible response options: Yes, no, don’t know). Explain that verbal autopsies are interviews that help us understand the causes and circumstances around their loss. With this information, we hope to help improve the care of mothers and babies in the future. She/he would be contacted by a member of PRECISE
staff to arrange the interview, which takes about 45 minutes at the facility or his/her home at his/her own convenience. Select don’t know if the person would like more time to think about it.

Click **Next** on the top-right corner of the screen and then **Finalize (Complete)** on the Open Data Kit page. In the next screen, the participant’s ID record will appear with a **check** next to it.

If you don’t have all the information to finalise the form, select **Save (Incomplete)**. In the next screen, the participant’s ID record will appear with a **minus** next to it to indicate that you can go back to the form later to finalise it.

You will be directed back to the landing page. Select the next form in Visit 3/Visit 4 to continue collecting data. Click on “**DYAD General Information**” to complete the next section.
10b. DYAD General Information

The **General Information** form collects information about the mother and child’s living and social situation. This form will be asked at every DYAD visit.

It is possible that the child is attending the visit with someone other than their mother or primary caregiver. The questions should be asked to the mother herself if she is attending the visit, or to the person attending the visit with the child if the mother/primary caregiver is not present.

<table>
<thead>
<tr>
<th></th>
<th>General Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Visit Date</td>
</tr>
<tr>
<td>2</td>
<td>Interviewer/data collector ID</td>
</tr>
<tr>
<td>3</td>
<td>Who is answering the questions today?</td>
</tr>
<tr>
<td>4</td>
<td>Are you the primary caregiver?</td>
</tr>
<tr>
<td>5</td>
<td>Where is today’s data collection taking place?</td>
</tr>
<tr>
<td>6</td>
<td>Is the child present at the visit?</td>
</tr>
<tr>
<td>7</td>
<td>What is your mother tongue? (In Gambia only)</td>
</tr>
<tr>
<td>8</td>
<td>Have you moved to a new house since your last visit?</td>
</tr>
<tr>
<td>9</td>
<td>Did the child move to a different household?</td>
</tr>
<tr>
<td>10</td>
<td>How many people over 18 live with the child?</td>
</tr>
<tr>
<td>11</td>
<td>How many people under 18 live with the child?</td>
</tr>
<tr>
<td>12</td>
<td>Have your divorced / separated from partner?</td>
</tr>
<tr>
<td>13</td>
<td>Has the mother/primary caregiver divorced / separated from partner?</td>
</tr>
<tr>
<td>14</td>
<td>Does the father live with the child?</td>
</tr>
<tr>
<td>15</td>
<td>Are you in a new relationship?</td>
</tr>
<tr>
<td>16</td>
<td>Is the mother/primary caregiver in a new relationship?</td>
</tr>
<tr>
<td>17</td>
<td>Are you pregnant?</td>
</tr>
<tr>
<td>18</td>
<td>Is the mother/primary caregiver pregnant?</td>
</tr>
<tr>
<td></td>
<td>Question</td>
</tr>
<tr>
<td>---</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>19</td>
<td>Have you given birth since the last visit?</td>
</tr>
<tr>
<td>20</td>
<td>Has the mother/primary caregiver give birth since the last visit?</td>
</tr>
<tr>
<td>21</td>
<td>Have you started employment / returned to school?</td>
</tr>
<tr>
<td>22</td>
<td>Has the mother/primary caregiver started employment / returned to school?</td>
</tr>
<tr>
<td>23</td>
<td>Has the person providing for the child lost income?</td>
</tr>
</tbody>
</table>

1. **Visit Date**

   Record the date the visit is taking place using the calendar.

2. **Interviewer/data collector ID**

   Enter your ID in the text box.

3. **Who is answering the questions today?**
   
   Possible response options: biological mother; biological father; sibling ≥18 years old; sibling <18 years old; grandparent; aunt/uncle/cousin; other (specify).

   Record the person(s) who is answering the questionnaire today.

4. **Are you the primary caregiver?**
   
   Possible response options: Yes, no

   Ask the mother/person attending the visit if they are the primary caregiver of the child. By primary caregiver, we mean the person who is living in the same household as the child for the last 6 months, is responsible for taking care and looking after the child. Bear in mind that it is possible that the mother is not the primary caregiver, as well as it is possible that the person attending this visit with the child is not their primary caregiver.

   Select the appropriate option. If the person answering the questions today is not the primary caregiver, ask them who the primary caregiver is. (Possible options: biological mother; biological father; sibling ≥18 years old; sibling <18 years old; grandparent; aunt/uncle/cousin; other). Select only one option from the list provided. If they list more than one person, prompt by asking who is living in the same household as the child for the last 6 months and has the greatest responsibility for taking care of the child.

5. **Where is today’s data collection taking place?**
   
   Possible response options: study facility – Kenya – Rabai, Mariakani; The Gambia – Farafenni, Illiassa, Ngenyen, Sanjal; on the phone (in Kenya only), other
Record the place where data collection is taking place today by selecting the appropriate option. If data collection is taking place somewhere not listed in the options, select “Other” and specify where in the text box.

6. **Is the child present at the visit?**  
   *Possible response options: Yes, no.*  

Indicate if you have seen the child at the visit today.

7. **What is your mother tongue? (In The Gambia only)**  
   *Possible response options: Wolof, Mandinka, Fulla.*

Record the interviewee’s answer. All the questionnaires will be displayed in the selected language.

8. **Have you moved to a new house since your last visit?**  
   *Possible response options: Yes, no, don’t know.*

Ask the mother/interviewee if she/they have move home since the most recent visit. If they respond “yes” or “don’t know”, ask the following additional question:

   i) **In which village do you live in now?**

Ask the woman the name of the village where she lives now and select it from the list. If the woman does not know the name of her village, select “don’t know” at the bottom of the list. If the name of the woman’s village is not listed as a response option, select “Other” at the bottom of the list and use the address textbox underneath to write down the name of the village along with the rest of her address.

9. **Did the child move to a different household?**  
   *Possible response options: Yes, no*

This question is only asked if the person answering the questions today is not the primary caregiver. Record the interviewee’s response by selecting the appropriate option.

If they respond that the child has moved to a different household, ask the following additional questions:

   i) **Did the child relocate with a different care giver?** *(Possible response options: Yes, no). Record the mother’s/interviewee’s response by selecting the appropriate option. If the child relocated with a different caregiver, even temporarily, select yes.*

   ii) **Did the child go into care home?** *(Possible response options: yes, no). Record the interviewee’s response by selecting the appropriate option.*
10. How many people over 18 live with the child?

Record the mother’s/interviewee’s response in the number box.

11. How many people under 18 live with the child?

Record the mother’s/caregiver’s response in the number box.

12-13. Have you (has mother/primary caregiver) divorced / separated from partner (the father of your child)?

Possible answers: Yes, no

We want to know if the mother/primary caregiver has divorced or separated from their partner since discharge or last PRECISE-DYAD visit. Depending on who is answering the questions today, the question will be phrased to be asked directly (have you) or indirectly (has the mother/primary caregiver). Record the interviewee’s answer by selecting the appropriate option.

14. Does the father live with the child?

Possible response options: Yes, no

Ask the interviewee if the father lives in the same household as the child. If the father is the primary caregiver this question will be skipped.

If the father does not live with the child, ask if the following question:

i) Is the father still alive? (Possible response options: Yes, no). Record the interviewee’s response by selecting the appropriate option.

15-16. Are you (is the mother/primary caregiver) in new relationship?

Possible answers: yes, no

We want to know if the mother/primary caregiver is in a new relationship since discharge or last PRECISE-DYAD visit. Depending on who is answering the questions today, the question will be phrased to be asked directly (are you) or indirectly (is the mother/primary caregiver). Record the interviewee’s answer by selecting the appropriate option.

17-18. Are you (is the mother/primary caregiver) pregnant?

Possible answers: Yes, no

We want to know if the mother/primary caregiver is pregnant. Depending on who is answering the questions today, the question will be phrased to be asked directly (are you) or indirectly (is the mother/primary caregiver). Record the interviewee’s answer by selecting the appropriate option.
19-20. Have you (did the mother/primary caregiver) given birth since the last visit?  
*Possible answers: yes, no*

We want to know if the mother/primary caregiver has given birth since the last PRECISE-DYAD visit. Depending on who is answering the questions today, the question will be phrased to be asked directly (have you) or indirectly (has the mother/primary caregiver). Record the interviewee’s answer by selecting the appropriate option.

21-22. Have you (has the mother/primary caregiver) started employment / returned to school since you gave birth?  
*Possible response options: Yes, no*

We want to know if the mother/primary caregiver has started employment and/or returned to school since discharge or last PRECISE-DYAD visit. Depending on who is answering the questions today, the question will be phrased to be asked directly (have you) or indirectly (has the mother/primary caregiver). Record the interviewee’s answer by selecting the appropriate option.

23. Has the person providing for the child lost income?  
*Possible answers: yes, no.*

Record the interviewee’s response by selecting the appropriate option. If the child is no longer alive, this question will not be displayed.

Once you have completed all the fields in the form, select “Mark Section as complete” at the bottom of the form and click “Next” on the top right corner of the page. You will then be directed to the landing page, where the form you have just completed will appear with a check next to it.

10c. DYAD Visit 3 and Visit 4 - Mother

Click on “DYAD Visit 3- Mother” or “DYAD Visit 4 – Mother” on the main screen. You will be directed to the List of Sections page, which displays all the forms you need to complete for that visit. All the questions on these forms should be asked directly to the mother if she is present. If the mother is not attending the visit, the forms on the “DYAD Visit 3 – Mother” or “DYAD Visit 4 – Mother” section will not be displayed.

Start with the first form in the list of sections and work your way through the questions in order. Once you have completed all the fields in a form, select “Mark Section as complete” at the bottom of the form and click “Next” on the top right corner of the page. You will be directed to the landing page where the form you just completed will turn green. If you haven’t completed the full form and will require more information later, do not tick “Mark as complete” at the bottom of the form. The form on the landing page will remain red.
Click on the next form to continue collecting data.

COVID-19

This form collects information about COVID-19 symptoms during the COVID-19 pandemic. It is essential that this form is completed at every PRECISE-DYAD visit a woman makes to the facility. Questions 1 to 5 will be asked to all women at every visit. If the woman answers “yes” to question 5, questions 6-27 will be asked.

All the questions on the form should be asked directly to the mother if she is present. If the mother is not attending the visit, this form should be skipped.

<table>
<thead>
<tr>
<th>Maternal symptoms</th>
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<tbody>
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<td>23</td>
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<tr>
<td>Maternal symptoms</td>
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<tr>
<td>24. Have you had any red/purple sores or blisters on your feet, including your toes?</td>
</tr>
<tr>
<td>25. Do you have any of the following symptoms: confusion, disorientation or drowsiness?</td>
</tr>
<tr>
<td>26. Do your eyes have any unusual eye- soreness or discomfort (e.g. light sensitivity, excessive tears, or pink/red eye)?</td>
</tr>
<tr>
<td>27. Have you been skipping meals?</td>
</tr>
<tr>
<td>28. Are there other important symptoms you want to share with us?</td>
</tr>
</tbody>
</table>

**Maternal symptoms**

1. **Have you received a COVID-19 vaccine?**
   
   Possible response options: Yes, no

   Ask the woman if she has been vaccinated against COVID-19. Record her answer by selecting the appropriate option.

   If she has been vaccinated, ask her the following questions:

   i) **From which company was the vaccine?**

   Record her answer in the text box or select “don’t know”. You can probe the woman by listing the following vaccine manufacturers: Pfizer, Oxford/Astra-Zeneca, Moderna, Gamaleya (Russia), Janssen (Johnson & Johnson), Sinovac (China), Sinopharm (China), Coronavac (China).

   ii) **How many doses have you received?**

   Ask the woman how many times she has received the vaccine. Record her answer in the number box or select “don’t know”. For each of the doses, record the date in which she received it using the calendar.

2. **Have you EVER been exposed to someone with documented or suspected COVID-19 infection (such as co-workers, family members, or others)?**
   
   Possible response options: Yes, documented COVID-19 cases only, Yes, suspected COVID-19 cases only, Yes, both documented and suspected COVID-19 cases, not that I know of.

   Ask the woman if she has ever been exposed to someone with documented or suspected COVID-19 infection (such as co-workers, family members, or others) and record her answer by selecting the appropriate option.

3. **Do you think you have already had COVID-19, but were not tested?**
Possible response options: yes, no

Ask the woman if she thinks she has had COVID-19 already but were not tested and record her answer by ticking the appropriate “yes” or “no” box.

4. How much have you been isolating over the last week?

Possible response options: I have not left the house, I rarely leave the house and when I do, I have little interaction with other (e.g., for exercise), I rarely leave the house but had to visit somewhere with lots of people (e.g., hospital/clinic, groceries), I have to leave the house often and am in contact with other people (e.g., still working outside the house or using public transport)

Ask the woman how much she has been isolating over the last week. Record the woman’s response by selecting the appropriate option.

5. Have you had a test for COVID-19?

Possible response options: yes, no

Ask the woman if she has had a test for COVID-19 and record her answer by ticking the appropriate “yes” or “no” box.

6. How do you physically feel right now?

Possible response options: I feel physically normal, I’m not feeling quite right

Ask the woman how she feels physically at present. Record her answer by selecting the appropriate option.

If the woman answers that she feels physically normal, this will be the last question of the form. If she answers I’m not feeling quite right, continue to ask her questions 6-27 of this questionnaire.

7. Do you have a fever or feel too hot?

Possible response options: yes, no

Ask the woman if she has a fever or if she feels too hot. Record her answer by ticking the appropriate “yes” or “no” box.

8. Do you have chills or shivers (feel too cold)?

Possible response options: yes, no

Ask the woman if she has chills or shivers (i.e., feel too cold). Record her answer by ticking the appropriate “yes” or “no” box.
9. **Was the woman’s temperature measured?**  
   *Possible response options: Yes, no.*

Select the appropriate option. If the woman’s temperature has been measured, record the measurement in °C in the corresponding number box.

10. **Do you have a consistent cough (coughing a lot for more than an hour, or 3 or more coughing episodes in 24 hours)?**  
    *Possible response options: yes, no*

Ask the woman if she has a consistent cough (i.e. coughing a lot for more than an hour, or 3 or more coughing episodes in 24 hours). By “3 or more coughing episodes in 24 hours”, we mean in a 3 or more episodes in a day. Record the woman’s answer by ticking the appropriate “yes” or “no” box.

11. **Are you experiencing unusual fatigue?**  
    *Possible response options: yes, no*

Ask the woman if she is experiencing unusual fatigue (i.e. more tired than usual). Record her answer by ticking the appropriate “yes” or “no” box.

12. **Do you have a headache?**  
    *Possible response options: yes, no*

Ask the woman if she has a headache and record her answer by ticking the appropriate “yes” or “no” box.

13. **Have you felt nausea or experienced vomiting?**  
    *Possible response options: yes, no*

Ask the woman if she has nausea or experienced vomiting. Record her answer by ticking the appropriate “yes” or “no” box.

14. **Are you experiencing dizziness or light-headedness?**  
    *Possible response options: yes, no*

Ask the woman if she is experiencing dizziness or light-headedness. Record her answer by ticking the appropriate “yes” or “no” box.

15. **Are you experiencing unusual shortness of breath or having trouble breathing?**  
    *Possible response options: yes, no*
Ask the woman if she is experiencing unusual shortness of breath or having trouble breathing. Record her answer by ticking the appropriate “yes” or “no” box.

16. Do you have a sore or painful throat?
   Possible response options: yes, no

Ask the woman if she has a sore or painful throat and record her answer by ticking the appropriate “yes” or “no” box.

17. Do you have a loss of smell/taste?
   Possible response options: yes, no

Ask the woman if she has lost her sense of smell or taste and record her answer by ticking the appropriate “yes” or “no” box.

18. Do you have an unusually hoarse throat?
   Possible response options: yes, no

Ask the woman if she has an unusually hoarse throat and record her answer by ticking the appropriate “yes” or “no” box.

19. Are you feeling an unusual chest pain or tightness in your chest?
   Possible response options: yes, no

Ask the woman if she is feeling an unusual chest pain or tightness in her chest and record her answer by ticking the appropriate “yes” or “no” box.

20. Do you have unusual abdominal pain or stomach-ache?
   Possible response options: yes, no

Ask the woman if she has felt any unusual abdominal pain or stomach-ache and record her answer by ticking the appropriate “yes” or “no” box.

21. Are you experiencing diarrhoea?
   Possible response options: yes, no

Ask the woman if she is experiencing unusual diarrhoea and record her answer by ticking the appropriate “yes” or “no” box.

22. Do you have unusual strong muscle pains or aches?
Ask the woman if she has unusual strong muscle pains or aches and record her answer by ticking the appropriate “yes” or “no” box.

23. Have you had raised, red, itchy, welts on the skin or sudden swelling of the face or lips?  
Possible response options: yes, no

Ask the woman if she has raised, red, itchy, welts (i.e. marks or scars) on the skin or sudden swelling of the face or lips and record her answer by ticking the appropriate “yes” or “no” box.

24. Have you had any red/purple sores or blisters on your feet, including your toes?  
Possible response options: yes, no

Ask the woman if she has had any red/purple sores or blisters on her feet, including her toes and record her answer by ticking the appropriate “yes” or “no” box.

25. Do you have any of the following symptoms: confusion, disorientation or drowsiness?  
Possible response options: yes, no

Ask the woman if she has felt confusion, disorientation or drowsiness and record her answer by ticking the appropriate “yes” or “no” box.

26. Do your eyes have any unusual eye-soreness or discomfort (e.g. light sensitivity, excessive tears, or pink/red eye)?  
Possible response options: yes, no

Ask the woman if she has felt any unusual eye-soreness or discomfort (e.g. light sensitivity, excessive tears, or pink/red eye). Record her answer by ticking the appropriate “yes” or “no” box.

27. Have you been skipping meals?  
Possible response options: yes, no

Ask the woman if she has been skipping meals because she has lost appetite (hasn’t felt hungry) or because she was too unwell to eat and record her answer by ticking the appropriate “yes” or “no” box.

28. Are there other important symptoms you want to share with us?  
Possible response options: yes, no
Ask the woman if there are any other important symptoms she wants to share and record her answer by ticking the appropriate “yes” or “no” box. If the woman answers “Yes”, record the symptoms she describes in the text box.

**Contraception and Pregnancy Intention**

This questionnaire asks women about their decisions to use contraception, the different types of contraception they may use and their knowledge of their side effects, as well as the timing and duration of use of any chosen contraceptive methods. There are two versions of this questionnaire: one for women who are not pregnant and another one for pregnant women.

**Contraception and Pregnancy Intention**

The Contraception and Pregnancy questionnaire will only display for women who are not known to be pregnant (for women who answered “no” or “don’t know” to question 19 in the General Information form). If the woman answered “yes” to question 19 in the General Information form, the questions relating to contraception in this table will not display, and only the “Pregnancy intention” questions will display. The phrase ‘The mother is NOT pregnant’, will display at the start of the table so that you are reminded to check that the correct table has displayed.

<table>
<thead>
<tr>
<th>Contraception and Pregnancy Intention</th>
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</table>

1. **Are you or your partner currently doing something or using any method to delay or avoid getting pregnant?**  
   *Possible response options: Yes, no*

Ask the woman if her and/or her partner are doing anything or using any contraceptive method to delay or avoid getting pregnant and record her answer by selecting the appropriate option.

If she is unsure, you can give examples from the following list: intra uterine device; injectables; implants; pill; condom; female condom; emergency contraception; standard days method; lactational amenorrhea (breastfeeding during the first 6 months) method; rhythm method; withdrawal; other modern method; other traditional method.

Record the participant’s response by selecting the appropriate option.

2. **Are you or your partner sterilised?**  
   *Possible response options: Yes, respondent sterilised only; yes, partner sterilised only; yes, both sterilised; no, neither sterilised*

Ask the woman if her and/or her partner have ever been sterilised and record her answer by selecting the appropriate option. If the woman answers “yes” only, you can ask for further information by using the probe: “Who is sterilised, you or your partner?”

If the woman answers “yes, respondent sterilised only” OR “yes, both sterilised”, the following question will display:

   i) **Did you consent to be sterilised?** *(Possible response options: Yes, no, don’t know, do not want to answer)*

If the woman is sterilised, or both her and her partner are sterilised, ask her if she gave her consent or permission to be sterilised and record her answer by selecting the appropriate option. If the woman does not know if she is sterilised select “don’t know”. If she does not wish to answer, select “do not want to answer”.

If the woman answers “yes, respondent sterilised only” OR “yes, both sterilised” to question 2, the form finishes here.
3. Which method are you currently using?
   Possible responses: intra uterine device; injectables; implants; pill; condom; female condom; emergency contraception; standard days method; lactational amenorrhea method; rhythm method; withdrawal; other modern method; other traditional method.

This question will display for women who replied “Yes” to question 1 only. Ask the woman which method(s) of contraception she is currently using to avoid pregnancy. Record responses by ticking the appropriate box(es) for all responses she mentions.

If the woman is not sure or needs to be prompted, you can ask her: Just to check, are you or your partner doing any of the following to avoid pregnancy? Possible response options: deliberately avoiding sex on certain days, using a condom, using withdrawal or using emergency contraception? Record all responses she mentions.

4. Since what month and year have you been using (CURRENT METHOD) without stopping?

This question will display only if the woman answered “yes” to question 1. Ask her what month and year she began using her current method of contraception without stopping or taking any breaks. If the woman mentioned using more than one method of contraception in Question 3, ask her what month and year she began using each method of contraception without stopping. Record the month and year or date that she began using each method.

If the woman is unsure, you can use the probe to ask her: For how long have you been using (CURRENT METHOD) now without stopping? RECORD MONTH AND YEAR (OR DATE) RESPONDENT STARTED USING METHOD WITHOUT STOPPING. (Enter month, year, or date provided).

5. When you started using (CURRENT METHOD), were you told of any side effects or problems you might have with the method?
   Possible responses: Yes, No

This question will only display only if the woman answered “yes” to question 1. Ask her if she was told what to do if she experienced any side effects (for example, bleeding in between periods of menstruation, nausea, or sore breasts) or problems (for example, the method failing) with using each contraceptive method she mentioned in Question 3. The question will display separately for each method selected in Question 3.

6. Were you told what to do if you experienced side effects or problems?
   Possible responses: Yes, No

This question will display only if the woman answered “yes” to question 1. Ask her if she was told what to do if she experienced any side effects (for example, bleeding in between periods of menstruation, nausea, or sore breasts) or problems (for example, the method failing) with using each contraceptive method she mentioned in Question 3.
Following this question, the next question to display will be question 8.

7. Have you ever used a method to delay or avoid getting pregnant?
   *Possible responses: (Yes, no, don’t know, do not want to answer)*

This question will display only if the woman answered “no” to Question 1. Ask the woman if she has ever used a method to delay or avoid getting pregnant (before this pregnancy). If the woman answers “yes”, the following additional questions will display:

i) Which was the method that you last used? (Possible responses: intra uterine device; injectables; implants; pill; condom; female condom; emergency contraception; standard days method; lactational amenorrhea method; rhythm method; withdrawal; other modern method; other traditional method.)

Ask the woman the last method(s) she used and record the appropriate answer.

ii) Why did you stop using the (METHOD)? (Possible response options: Side effects, husband away, health issues, became pregnant while using the method, stopped to become pregnant, another reason)

Ask the woman why she stopped using this/these method(s) and record responses specified. If she selects “another reason”, record the reason she specifies in the text box provided. If she responds that she deliberately stopped to become pregnant, the following question will display:

iii) How many months did it take you to get pregnant after you stopped using (method)?

Ask the woman how long it took her to become pregnant after she stopped using the method(s). Record the number of months specified.

8. Now I have some questions about the future. Would you like to have another child, or would you prefer not to have any more children?
   *Possible responses: have another child, no more, undecided/Don’t know.*

Ask the woman if she would like to have another child, or if she would prefer not to have any more children. This question seeks to understand the woman’s intentions around pregnancy. We would like to understand whether or not she would like to become pregnant again in the future. She can want or desire to become pregnant or have another child, even if she is not physically able to. If she answered “no more”, the next question to display will be Question 10.

9. How long would you like to wait to have another child?
   *Possible responses: Months (number box), Years (number box); Soon/now; Other (Specify); Do not know; Do not want to answer.*
This question asks about birth spacing. Ask the woman how long she would like to wait before having another child. Record the woman’s response and enter the number of months or years if applicable.

10. Do you think you will use a contraceptive method to delay or avoid pregnancy at any time in the future?
   Possible responses: (Yes, no, don’t know, do not want to answer)

This question will not display for women who replied “yes” to question 1. Ask the woman if she will consider using a contraceptive method or device to delay or avoid pregnancy in the future. It is possible that the woman may both desire to have another child/ more children, and to use a contraceptive method in the future. It is also possible that a woman may not desire to have any more children, but may not use contraception in the future. Record the woman’s response by selecting the appropriate option.

11. Who usually makes the decision on whether or not you should use contraception?
   Possible responses: (Participant; husband/partner; participant and husband/partner jointly; other, please specify)

Ask the woman who usually makes the decision on whether or not she uses contraception. Record the appropriate responses. If she selects “Other”, please record the reason(s) she specifies. Most often “other” will refer to some other person (e.g., mother-in-law, etc.), but could also be religious beliefs, or traditional/ cultural beliefs.

Pregnancy intention questions – For pregnant women only

This section of the questionnaire only display for women for women who are currently pregnant. Similar to the questions above, it asks women about their intention to become pregnant in the future and about their decisions around the use of contraception.

Note: The phrase “The mother is pregnant”, will display at the start of the section so that you are reminded to check that the correct table has displayed.

<table>
<thead>
<tr>
<th>Pregnancy Intention - only for pregnant women</th>
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<tbody>
<tr>
<td>12. Now I have some questions about the future. [After the child you are expecting now,] would you like to have another child, or would you prefer not to have any more children?</td>
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<tr>
<td>13. After the birth of the child you are expecting now, how long would you like to wait before the birth of another child?</td>
</tr>
<tr>
<td>14. Do you think you will use a contraceptive method to delay or avoid pregnancy at any time in the future?</td>
</tr>
</tbody>
</table>
15. **Who usually makes the decision on whether or not you should use contraception?**

12. **Now I have some questions about the future. [After the child you are expecting now,] would you like to have another child, or would you prefer not to have any more children?**

   *Possible responses: (have another child, no more, undecided/Don’t know, do not want to answer)*

Ask the woman if she would like to have another child after this pregnancy, or if she would prefer not to have any more children. Record the woman’s response by selecting the appropriate option. This question seeks to understand the woman’s intentions around pregnancy. We would like to understand whether or not she would like to become pregnant again in the future. If the woman answers “no more”, the next question to display will be Question 14.

13. **After the birth of the child you are expecting now, how long would you like to wait before the birth of another child?**

   *Possible responses: (Months→ Record the number of months if specified; Years→ Record the number of years if specified; Soon/now; Other → Record when she specifies; Do not know; Do not want to answer)*

This question asks about birth spacing. Ask the woman how long she would like to wait before having another child after this pregnancy. Record the woman’s response and enter the number of months or years in the text box provided if applicable.

14. **Do you think you will use a contraceptive method to delay or avoid pregnancy at any time in the future?**

   *Possible responses: (Yes, no, don’t know, do not want to answer)*

Ask the woman if she will consider using a contraceptive method or device to delay or avoid pregnancy in the future. Record the woman’s response by selecting the appropriate option. It is possible that the woman may desire to have another child/ more children, and to use a contraceptive method in the future. It is also possible that a woman may not desire to have any more children, but may not use contraception in the future. Record the woman’s response by selecting the appropriate option.

15. **Who usually makes the decision on whether or not you should use contraception?**
Possible responses: (Participant; husband/partner; participant and husband/partner jointly; someone else; other, please specify)

Ask the woman who usually makes the decision on whether or not she uses contraception. Record the appropriate responses. If she selects “Other”, please record the reason(s) she specifies in the text box provided. Most often “other” will refer to some other person (e.g., mother-in-law), but could also refer to religious beliefs, or traditional/cultural beliefs.

Environment and Water, Sanitation and Hygiene (WASH)

In this section we ask participants questions about their household, the building in which the woman herself lives and sleeps in.

This form will only open if the mother or the baby/child have moved since their last visit.

<table>
<thead>
<tr>
<th>Home Environment</th>
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<tbody>
<tr>
<td>1 What is the primary construction material of the housing unit’s exterior walls?</td>
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<tr>
<td>2 What is the primary fuel source your household uses for heat? Question for The Gambia only.</td>
</tr>
<tr>
<td>3 What is the primary fuel source your household uses for cooking?</td>
</tr>
<tr>
<td>4 What is the primary fuel source your household uses for lighting?</td>
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</tbody>
</table>

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<th>Additional Grameen PPI</th>
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<tbody>
<tr>
<td>5 Does your household own any irons?</td>
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<tr>
<td>6 Additional household questions for Kenya only</td>
</tr>
<tr>
<td>7 Additional household questions for The Gambia only</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>WASH: Water, sanitation, and Hygiene</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 What is the main source of drinking water used by members of your household?</td>
</tr>
<tr>
<td>9 What is the main source of water used by members of your household for other purposes such as cooking and handwashing?</td>
</tr>
<tr>
<td>10 Where is that water source located?</td>
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<tr>
<td>11 How long does it take for members of your household to go there, get water and come back?</td>
</tr>
</tbody>
</table>
12. What kind of toilet facility do members of your household usually use?

13. Where is this toilet facility located?

14. Do you share this facility with others who are not members of your household?

15. Where do you or other members of your household most often wash your hands?

16. Do you have any soap or detergent or ash/mud/sand in your house for washing hands?

Home environment

1. What is the primary construction material of the housing unit’s exterior walls?
   
   Possible response options: Stone & mortar, metal sheeting, reinforced concrete, brick, cement bricks, logs, earth, mud or earth bricks, mud & straw, wood sheeting, tin/cardboard/paper or sacks, thick plastic, thin plastic, reeds/sticks/bamboo or palm, thick fabric, thin fabric, other (specify)

   By exterior walls, we mean the walls which hold up the building, support the roof and protect the inside of the building from the weather. Record what the exterior walls of the woman’s house are built with by selecting the appropriate response. If the woman’s response is not covered by the options on the list, select “Other” and use the text box provided to record her response.

2. What is the primary fuel source your household uses for heat? – The Gambia only
   
   Possible response options: None, low-voltage electricity from grid (legal or illegal connection), medium or high-voltage electricity from grid (legal or illegal connection), electricity from generator, electricity from solar cells/wind turbine or small hydroelectric dam, liquid fuel (petrol, kerosene), gas fuel (methane from tank, biogas), coal or charcoal, vegetable or animal-based fats or oils, paraffin wax or battery-powered source, wood/sawdust/grass or other natural material, heat not needed in region, Don’t know

   By primary fuel source for heating, we mean the fuel used most of the time by the household to provide heating. Record the woman’s response by selecting the appropriate response. If the woman does not know, select “don’t know”.

3. What is the primary fuel source your household uses for cooking?
   
   Possible response options: None, low-voltage electricity from grid (legal or illegal connection), medium or high-voltage electricity from grid (legal or illegal connection), electricity from generator, electricity from solar cells/wind turbine or small hydroelectric dam, liquid fuel (petrol, kerosene), gas fuel (methane from tank, biogas), coal or charcoal, vegetable or animal-based fats or oils, paraffin wax or battery-powered source, wood/sawdust/grass or other natural material, Don’t know
By primary fuel source for cooking, we mean the fuel used most of the time by the household to cook food. Record the main type of fuel the woman indicates her household uses for cooking by selecting the appropriate response. If the woman does not know, select “don’t know”.

4. What is the primary fuel source your household uses for lighting?
   Possible response options: None, low-voltage electricity from grid (legal or illegal connection), medium or high-voltage electricity from grid (legal or illegal connection), electricity from generator, electricity from solar cells/wind turbine or small hydroelectric dam, liquid fuel (petrol, kerosene), gas fuel (methane from tank, biogas), coal or charcoal, vegetable or animal-based fats or oils, paraffin wax or battery-powered source, wood/sawdust/grass or other natural material, Don’t know

By primary fuel source for lighting, we mean the fuel used most of the time by the household to provide lighting. Record the main type of fuel the woman indicates her household uses for lighting by selecting the appropriate response. If the woman does not know, select “don’t know”.

Additional Grameen PPI

5. Does your household own any irons?
   Possible response options: yes, no

Ask the woman whether her household owns any working irons and select the appropriate response. If the woman does respond yes, ask her what type of iron(s) her household owns (possible additional response options: electric, non-electric, charcoal). Record her response by selecting the appropriate option.

6. Additional questions about the woman’s household – Kenya only

For data collection in Kenya, ask the woman the following additional questions:

i) What is the main material of the floor of your home (excluding kitchen and bathrooms)?
   (possible response options: uncovered or other/packed earth, wood or parquet, marble or granite, cement, mosaic or tile) – Record the woman’s response by selecting the appropriate option.

ii) What is the highest school grade that the female head/spouse has completed?
    (possible response options: none or pre-school, primary standards 1 to 6, primary standard 7, primary standard 8 or secondary forms 1 to 3, no female head/spouse, secondary form 4 or higher) – Record the woman’s response by selecting the appropriate option. Please note that the question specifically asks about “completed” grades and not grades attended. If the woman attended primary standard 8 for two weeks only, then you should record primary standard 7 as the highest grade she has completed.

iii) What kind of business (type of industry) is the main occupation of the male head/spouse connected with?
    (possible response options: does not work, no male head/spouse,
agriculture/hunting/forestry/fishing/mining or quarrying, any other) - Record the woman’s response by selecting the appropriate option.

iv) How many habitable rooms does this household occupy in its main dwelling (do not count bathrooms, toilets, storerooms, or garage)? (possible response options: 1, 2, 3, 4 or more) – Record the woman’s response by selecting the appropriate option.

v) How many mosquito nets does your household own? (possible response options: None/1/2 or more) - Record the woman’s response by selecting the appropriate option.

vi) How many towels does your household own? (possible response options: none, one, two or more) – Record the woman’s response by selecting the appropriate option.

vii) How many frying pans does your household own? (possible response options: none, one, two or more) – Record the woman’s response by selecting the appropriate option.

7. Additional questions about the woman’s household – The Gambia only

For data collection in The Gambia, ask the woman the following additional questions and record her response by selecting the appropriate option:

i) Does your household have a fridge? (possible response options: yes, no)

ii) Does your household have a television? (possible response options: yes, no)

iii) Does your household have a fan? (possible response options: yes, no)

iv) Can the female head of the household or the first wife read and write? (possible response options: yes, no)

WASH: Water, Sanitation and Hygiene

Drinking water

- Piped water into a dwelling tap/standpipe
- Piped water to yard/plot
- Public tap/standpipe
- Tubewell/borehole
- Protected dug well
- Unprotected dug well
9. What is the main source of drinking water used by members of your household? 
   Possible response options: Piped into dwelling, piped into yard or plot, piped to neighbour, 
   public tap or standpipe, tubewell or borehole, protected dug well, unprotected dug well, 
   protected spring, unprotected spring, rainwater, tanker-truck, cart with small tank, water 
   kiosk, surface water (river, dam, lake, pond, stream, canal, irrigation channel), bottled 
   water, sachet water, other (specify)

By main source of drinking water, we mean where most of the water the household drinks come 
from. Record the woman’s response by selecting the appropriate option.
If the woman’s response is not covered by the options on the list, select “Other” and use the text box provided to record her response.

10. What is the main source of water used by members of your household for other purposes such as cooking and handwashing?

Possible response options: Piped into dwelling, piped into yard or plot, piped to neighbour, public tap or standpipe, tubewell or borehole, protected dug well, unprotected dug well, protected spring, unprotected spring, rainwater, tanker-truck, cart with small tank, water kiosk, surface water (river, dam, lake, pond, stream, canal, irrigation channel), bottled water, sachet water, other (specify)

By main source of water for cooking and handwashing, we mean where most of the water the household uses for cooking and washing hands comes from. Record the woman’s response by selecting the appropriate option.

If the woman’s response is not covered by the options on the list, select “Other” and use the text box provided to record her response.

11. Where is that water source located?

Possible response options: In own dwelling, in own yard or plot, elsewhere

Ask the woman where the water source members of her household use for other purposes such as cooking and handwashing. Record the woman’s response by selecting the appropriate option.

12. How long does it take for members of your household to go there, get water and come back?

Ask the woman how long it takes for members of her household to go to the water sources to collect water and record the time in minutes in the number box provided. If the woman does not know, select “don’t know”.

Sanitation

Flush toilet to a piped sewer system

Septic tank

Pour-flush to pit

Composting toilet
13. What kind of toilet facility do members of your household usually use?

Possible response options: Flush or pour flush toilet, Ventilated improved pit latrine, Pit latrine with slab, Pit latrine without slab, Open pit, Composting toilet, Bucket, Hanging toilet or hanging latrine, No facility or bush or field, Other (specify)

Ask the woman what kind of toilet facility her household uses most of the time, using printed flashcards to explain the types of toilet facility and record her response by selecting the appropriate response.
If the woman’s response is not covered by the options on the list, select “Other” and use the text box provided to record her response.

If the woman indicates that her household has a flushing toilet, you will then be prompted to ask her where the toilet flushes to (additional response options: Piped sewer system, Septic tank, Pit latrine, Open drain, don’t know where).

14. Where is this toilet facility located?
   Possible response options: In own dwelling, in own yard or plot, elsewhere

Ask the woman where the toilet facility her household uses most of the time is situated and select the appropriate option.

15. Do you share this facility with others who are not members of your household?
   Possible response options: yes, no

Ask the woman if her household shares the toilet facility with other members of the community and record her response by selecting the appropriate response.

16. Where do you or other members of your household most often wash your hands?
   Possible response options: Fixed facility (sink or tap) in dwelling, fixed facility (sink or tap) in yard or plot, Mobile object (bucket or jug kettle), No handwashing place in dwelling or yard or plot, Other (specify)

Ask the woman where members of her household mainly wash their hands and record her response by selecting the appropriate response.

If the woman’s response is not covered by the options on the list, select “Other” and use the text box provided to record her response.

17. Do you have any soap or detergent or ash/mud/sand in your house for washing hands?
   Possible response options: yes, no

Ask the woman whether her household uses soap or another substance when washing their hands and record her response by selecting the appropriate response.

Maternal Nutrition

All women participating in the PRECISE-DYAD study should be asked the Maternal Nutrition questionnaire during all PRECISE-DYAD visits.
<table>
<thead>
<tr>
<th></th>
<th>Dietary Diversity Score Screen</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>During the last 24 hours, have you eaten any foods made from grains, like: porridge, bread, rice, pasta/noodles, millet or other foods made from grains?</td>
</tr>
<tr>
<td>2</td>
<td>In the last month, how often have you eaten these foods?</td>
</tr>
<tr>
<td>3</td>
<td>During the last 24 hours, have you eaten any vegetables or root that are orange-coloured inside, like: pumpkin, carrots, squash or sweet potatoes that are yellow or orange inside?</td>
</tr>
<tr>
<td>4</td>
<td>In the last month, how often have you eaten these foods?</td>
</tr>
<tr>
<td>5</td>
<td>During the last 24 hours, have you eaten any white roots and tubers or plantains, such as: white potatoes, white yams, cassava/radish, or any other foods made from white-fleshed roots or tubers, or plantains?</td>
</tr>
<tr>
<td>6</td>
<td>In the last month, how often have you eaten any of these foods?</td>
</tr>
<tr>
<td>7</td>
<td>During the last 24 hours, have you eaten any dark green leafy vegetables, such as: List examples of any medium-to-dark green leafy vegetables, including wild-foraged leaves?</td>
</tr>
<tr>
<td>8</td>
<td>In the last month, how often have you eaten these foods?</td>
</tr>
<tr>
<td>9</td>
<td>During the last 24 hours, have you eaten any fruits that are dark yellow or orange inside, like: ripe mango, ripe papaya?</td>
</tr>
<tr>
<td>10</td>
<td>In the last month, how often have you eaten these foods?</td>
</tr>
<tr>
<td>11</td>
<td>During the last 24 hours, have you eaten any other vegetables: List examples of other vegetables?</td>
</tr>
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<td>12</td>
<td>In the last month, how often have you eaten these foods?</td>
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<td>13</td>
<td>During the last 24 hours, have you eaten any other fruits?</td>
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<tr>
<td>15</td>
<td>During the last 24 hours, have you eaten any meat made from animal organs, such as: liver, kidney, heart or other organ meats or blood-based foods, including from wild game?</td>
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<td>16</td>
<td>In the last month, how often have you eaten these foods?</td>
</tr>
<tr>
<td>17</td>
<td>During the last 24 hours, have you eaten any other types of meat or poultry, like: beef, pork, lamb, goat, rabbit, wild game meat, chicken, duck, other birds?</td>
</tr>
<tr>
<td>18</td>
<td>In the last month, how often have you eaten these foods?</td>
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<td>------------------------------------------------------</td>
</tr>
<tr>
<td>19</td>
<td>During the last 24 hours, have you eaten any eggs: eggs from poultry or any other bird?</td>
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<tr>
<td>20</td>
<td>In the last month, how often have you eaten these foods?</td>
</tr>
<tr>
<td>21</td>
<td>During the last 24 hours, have you eaten any fish or seafood, whether fresh or dried: fresh or dried fish, shellfish or seafood?</td>
</tr>
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<td>During the last 24 hours, have you eaten any beans or peas, such as: mature beans or peas (fresh or dried seed), lentils or bean/pea products, including hummus, tofu and tempeh?</td>
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<td>In the last month, how often have you eaten these foods?</td>
</tr>
<tr>
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<td>During the last 24 hours, have you eaten any nuts or seeds, like: any tree nut, ground nut, peanut or certain seeds or nut/seed “butters” or pastes?</td>
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<td>During the last 24 hours, have you eaten any milk or milk products such as: milk, cheese, yoghurt or other milk products but NOT including butter, ice cream, cream or sour cream?</td>
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<td>In the last month, how often have you eaten these foods?</td>
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<tr>
<td>29</td>
<td>During the last 24 hours, have you eaten any condiments and seasonings, such as: condiments and seasonings: ingredients used in small quantities for flavour, such as chillies, spices, herbs, fish powder, tomato paste, flavour cubes or seeds?</td>
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<tr>
<td>30</td>
<td>In the last month, how often have you eaten these foods?</td>
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<tr>
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<td>During the last 24 hours, have you eaten freshly cooked fried snacks, like: samosa, wada, fritter?</td>
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<tr>
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<td>33</td>
<td>During the last 24 hours, have you eaten savoury snacks in packets, like: potato crisps, Lays, kukure and other similar snacks?</td>
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<td></td>
<td>Question</td>
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<td>---</td>
<td>---------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>37</td>
<td>During the last 24 hours, have you eaten sweets?</td>
</tr>
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<td>During the last 24 hours, have you eaten fast food/street food/restaurant food?</td>
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</tr>
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<td>In the last month, how often have you consumed these items?</td>
</tr>
</tbody>
</table>

Start by explaining to the woman what is meant by “During the last 24 hours”. Here we mean, “Yesterday, during the day or night did you eat or drink xxxx”. For all the questions in this form, record the woman’s response by selecting the appropriate option.

You must make sure that you ask the woman about ALL the food groups in the table, using local examples to explain what you mean, if necessary. For example, if the woman does not understand what is meant by foods made from grains, ask her if she has eaten ugali or, if she does not know whether she has eaten any nuts, ask her whether she has eaten domoda or Durango.

1. **During the last 24 hours, have you eaten any foods made from grains, like: porridge, bread, rice, pasta/noodles, millet or other foods made from grains?**
   
   Possible response options: yes, no

2. **In the last month, how often have you eaten these foods?**
   
   Possible response options: every day, 2-4 times per week, 5-6 times per week, once a week, less than once a week

3. **During the last 24 hours, have you eaten any vegetables or root that are orange-coloured inside, like: pumpkin, carrots, squash or sweet potatoes that are yellow or orange inside?**
   
   Possible response options: yes, no

4. **In the last month, how often have you eaten these foods?**
   
   Possible response options: every day, 2-4 times per week, 5-6 times per week, once a week, less than once a week
5. During the last 24 hours, have you eaten any white roots and tubers or plantains, such as: white potatoes, white yams, cassava/radish, or any other foods made from white-fleshed roots or tubers, or plantains?
   Possible response options: yes, no

6. In the last month, how often have you eaten these foods?
   Possible response options: every day, 2-4 times per week, 5-6 times per week, once a week, less than once a week

7. During the last 24 hours, have you eaten any dark green leafy vegetables, such as: List examples of any medium-to-dark green leafy vegetables, including wild-foraged leaves?
   Possible response options: yes, no

8. In the last month, how often have you eaten these foods?
   Possible response options: every day, 2-4 times per week, 5-6 times per week, once a week, less than once a week

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   Possible response options: yes, no

10. In the last month, how often have you eaten these foods?
    Possible response options: every day, 2-4 times per week, 5-6 times per week, once a week, less than once a week

11. During the last 24 hours, have you eaten any other vegetables?
    Possible response options: yes, no

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    Possible response options: every day, 2-4 times per week, 5-6 times per week, once a week, less than once a week

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    Possible response options: yes, no

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   Possible response options: yes, no

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   Possible response options: every day, 2-4 times per week, 5-6 times per week, once a week, less than once a week

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   Possible response options: yes, no

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   Possible response options: yes, no

22. In the last month, how often have you eaten these foods?
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   Possible response options: yes, no

24. In the last month, how often have you eaten these foods?
   Possible response options: every day, 2-4 times per week, 5-6 times per week, once a week, less than once a week

25. During the last 24 hours, have you eaten any nuts or seeds, like: any tree nut, ground nut, peanut or certain seeds or nut/seed “butters” or pastes?
   Possible response options: yes, no

26. In the last month, how often have you eaten these foods?
   Possible response options: every day, 2-4 times per week, 5-6 times per week, once a week, less than once a week

27. During the last 24 hours, have you eaten any milk or milk products such as: milk, cheese, yoghurt or other milk products but NOT including butter, ice cream, cream or sour cream?
   Possible response options: yes, no
28. **In the last month, how often have you eaten these foods?**
   *Possible response options: every day, 2-4 times per week, 5-6 times per week, once a week, less than once a week*

29. **During the last 24 hours, have you eaten any condiments and seasonings, such as: condiments and seasonings: ingredients used in small quantities for flavour, such as chillies, spices, herbs, fish powder, tomato paste, flavour cubes or seeds?**
   *Possible response options: yes, no*

30. **In the last month, how often have you eaten these foods?**
   *Possible response options: every day, 2-4 times per week, 5-6 times per week, once a week, less than once a week*

31. **During the last 24 hours, have you eaten savoury snacks in packets, like: potato crisps, Lays, kukure and other similar snacks?**
   *Possible response options: yes, no*

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   *Possible response options: every day, 2-4 times per week, 5-6 times per week, once a week, less than once a week*

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   *Possible response options: yes, no*

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37. **During the last 24 hours, have you eaten sweets?**
   *Possible response options: yes, no*

38. **In the last month, how often have you eaten sweets?**
   *Possible response options: every day, 2-4 times per week, 5-6 times per week, once a week, less than once a week*

39. **During the last 24 hours, have you eaten fast food/food/restaurant food?**
Possible response options: yes, no

40. In the last month, how often have you eaten these foods?
   Possible response options: every day, 2-4 times per week, 5-6 times per week, once a week,
   less than once a week

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   Possible response options: yes, no

42. In the last month, how often have you consumed these items?
   Possible response options: every day, 2-4 times per week, 5-6 times per week, once a week,
   less than once a week

43. During the last 24 hours, have you consumed any other drinks?
   Possible response options: yes, no

44. In the last month, how often have you consumed these items?
   Possible response options: every day, 2-4 times per week, 5-6 times per week, once a week,
   less than once a week

Pelvic Floor Distress Inventory and Pelvic Floor Impact Questionnaire

This section will not display in Visit 4.

The Pelvic Floor Distress Inventory questionnaire is asked in DYAD Visit 1 and Visit 3 to participants who
during PRECISE were in labour for greater than 24 hours. We will also ask an equal number of women
who were in labour for less than 12 hours to answer the questionnaire, these women will be randomly
selected.

For those participants who have been identified as part of this case-control subset, the Pelvic Floor
Distress Inventory form will appear automatically in Visit 1 and Visit 3.

The Pelvic Floor Impact Questionnaire (PFIQ) is asked in DYAD visit 3 to participants if they responded
that they have experienced a symptom and it bothers her “somewhat”, “moderately” or “quite a bit” in
the PFDI questionnaire asked during visit 3. If none of symptoms bother the women, the questionnaire
will not be displayed.

As with the other data collection forms, ask the woman the questions in the order that they appear in
the form and record her response by selecting the appropriate option. Please refer to the Pelvic Floor
manual for details on how to administer these questionnaires.

Maternal Clinical Assessment
This section of the database collects information on clinical assessments like those carried out during PRECISE, such as measurements of vital signs and anthropometry. This form should be completed by clinically trained staff only.

<table>
<thead>
<tr>
<th><strong>Vital Signs</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. What is the woman’s pulse rate? (from Welch Allyn Spot monitor)</td>
</tr>
<tr>
<td>2. What is the woman’s resting systolic BP? – 1st measurement? (from Welch Allyn Spot monitor - mmHg)</td>
</tr>
<tr>
<td>3. What is the woman’s resting diastolic BP? – 1st measurement? (from Welch Allyn Spot monitor - mmHg)</td>
</tr>
<tr>
<td>4. What is the woman’s resting systolic BP? 2nd measurement? (from Welch Allyn Spot monitor - mmHg)</td>
</tr>
<tr>
<td>5. What is the woman’s resting diastolic BP? – 2nd measurement? (from Welch Allyn Spot monitor - mmHg)</td>
</tr>
<tr>
<td>6. Third BP reading required?</td>
</tr>
<tr>
<td>7. What is the woman’s resting systolic BP? – average of last two measurements</td>
</tr>
<tr>
<td>8. What is the woman’s resting diastolic BP? – average of last two measurements</td>
</tr>
<tr>
<td>9. What is the woman’s haemoglobin concentration?</td>
</tr>
<tr>
<td>10. What is the woman’s pulse oximetry?</td>
</tr>
<tr>
<td>11. What is/was the woman’s perfusion index?</td>
</tr>
<tr>
<td>12. What is the woman’s carboxyhaemoglobin saturation?</td>
</tr>
<tr>
<td>13. What is the woman’s respiratory rate?</td>
</tr>
<tr>
<td>14. What is the woman’s peak flow? – 1st measurement</td>
</tr>
<tr>
<td>15. What is the woman’s peak flow? – 2nd measurement</td>
</tr>
<tr>
<td>16. What is the woman’s peak flow? – 3rd measurement</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Anthropometry</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>17. What is the woman’s body weight today? FIRST</td>
</tr>
<tr>
<td>18. What is the woman’s body weight today? SECOND</td>
</tr>
</tbody>
</table>
Maternal clinical assessment

1. **What is the woman’s pulse rate?**

Using the Welch Allyn Spot monitor, measure the woman’s pulse rate in beats per minute and input the reading into the number box provided. See separate Clinical Procedures training manual for more detail on using the Welch Allyn Spot monitor. If the woman’s pulse rate is not known or was not measured, select “yes” in response to the question “Not available”, otherwise ignore the question “Not available” and proceed to the next question.

2 and 4. **What is the woman’s resting systolic blood pressure?**

Using the Welch Allyn Spot monitor, measure the woman’s resting systolic blood pressure. You will need to take at least two measurements and input the readings into the number boxes provided. If the difference between the first two measurements is more than 10 mm Hg apart, you will need to take a third reading. If the difference between the first two measurements is less than 10 mm Hg apart, then a red “0” will appear in the “Third reading required” box. Proceed to the following questions. See separate Clinical Procedures training manual for more detail on using the Welch Allyn Spot monitor. The woman’s resting systolic blood pressure will be auto calculated based on the average of these two (or three) measurements.

3 and 5. **What is the woman’s resting diastolic blood pressure?**

Using the Welch Allyn Spot monitor, measure the woman’s resting systolic and diastolic blood pressure. You will need to take at least two measurements and input the readings into the number boxes provided. If the difference between the first two measurements is more than 10 mm Hg apart, you will need to take a third reading. If the difference between the first two measurements is less than 10 mm Hg apart, then a red “0” will appear in the “Third reading required” box. Proceed to the following questions. See separate Clinical Procedures training manual for more detail on using the Welch Allyn Spot monitor. The woman’s resting diastolic blood pressure will be auto calculated based on the average of these two (or three) measurements.
9. **What is the woman’s haemoglobin concentration?**

Using the Masimo Oximeter, measure the woman’s haemoglobin concentration and record the concentration in grams per decilitre in the number box provided. See separate Clinical Procedures training manual for more detail on using the Masimo Oximeter device. If the woman’s haemoglobin concentration is not known or was not measured, select “yes” in response to the question “Not available”, otherwise ignore the question “Not available” and proceed to the next question.

10. **What is the woman’s pulse oximetry?**

Using the Masimo Oximeter, measure the woman’s pulse oximetry and record the percentage of oxygen saturation in her blood in the number box provided. See separate Clinical Procedures training manual for more detail on using the Masimo Oximeter device. If the woman’s pulse oximetry is not known or was not measured, select “yes” in response to the question “Not available”, otherwise ignore the question “Not available” and proceed to the next question.

11. **What is/was the woman’s perfusion index**

Using the Masimo Oximeter, measure the woman’s perfusion index and record the reading in the number box provided. See separate Clinical Procedures training manual for more detail on using the Masimo Oximeter device. If the woman’s perfusion index is not known or was not measured, select “yes” in response to the question “Not available”, otherwise ignore the question “Not available” and proceed to the next question.

12. **What is/was the woman’s carboxyhaemoglobin saturation (SpOC)?**

Using the Masimo Oximeter, measure the woman’s carboxyhaemoglobin saturation and record the reading in the number box provided. See separate Clinical Procedures training manual for more detail on using the Masimo Oximeter device. If the woman’s carboxyhaemoglobin saturation is not known or was not measured, select “yes” in response to the question “Not available”, otherwise ignore the question “Not available” and proceed to the next question.

13. **What is the woman’s respiratory rate?** (auto populated?)

Record the woman’s respiratory rate in breaths per minute over a thirty second period and then input the resulting number in the box provided. If the woman’s respiratory rate is not known or was not measured, select “yes” in response to the question “Not available”, otherwise ignore the question “Not available” and proceed to the next question.

14-16. **What is the woman’s peak flow?**

Using the Peak Flow meter, measure the woman’s peak flow. You will need to take the measurement three times and input all three readings into the number boxes provided. If the woman’s peak flow
was not measured, select “yes” in response to the question “Not available”, otherwise ignore the question “Not available” and proceed to the next question. See separate Clinical Procedures training manual for more detail on using the peak flow meter.

**Anthropometry**

17-18. **What is the woman’s body weight today?**

Record her weight to 1 decimal place in the number box provided, then take and record a second measurement. See separate Clinical Procedures training manual for more detail on how to take the measurement.

19-20. **What is the woman’s mid-upper arm circumference?**

Record the measurement to one decimal place in the number box provided, then take and record a second measurement. See separate Clinical Procedures training manual for more detail on how to take the measurement.

**Sample collection**

Use this section to record the samples that were collected during visit 1. The procedures for sample collection are detailed in the Clinical Standard SOP.

21. **Was maternal blood collected?**

*Possible response options: Yes, no*

If no maternal blood was collected, answer the following question:

i) **Why?** *(Possible response options: no consent, participant refused, no staff member available to collect sample, no staff member available to process the sample, research team were unable to successfully draw blood, participant left before sample was collected, other (specify), Don’t know).

Record the reason why maternal blood was not collected by selecting the appropriate option. If you select “other”, use the text box provided to provide more detail.

22. **Was maternal urine collected?**

*Possible response options: Yes, no*

This question will not display in visit 4.

If no maternal urine was collected, answer the following question:
i) **Why? (Possible response options: no consent, participant refused, no staff member available to collect sample, no staff member available to process the sample, participant unable to produce sample, other (specify), don’t know).**

Record the reason why maternal blood was not collected by selecting the appropriate option. If you select “**other**”, use the text box provided to provide more detail.

Once you have completed all the forms in the “Mother” section, click on “Dyad Mother Visit 3” or “Dyad Mother Visit 4” on the top left corner of the List of Sections page.

Select either “**Save Changes (Incomplete) + Exit**” if you will need to return to this section to collect more information in future; or “**Finalize Visit (Complete) + Exit**” if you have completed the “Mother” section.

---

### 10d. DYAD Visit 3 and DYAD Visit 4 – Child

In the **DYAD Visit 3** or **DYAD Visit 4** section on the Participant **Landing Page**, select “**Dyad Visit 3 – Child**” or “**Dyad Visit 4 – Child**” to open the forms to collect data about the child.

You will be directed to the **List of Sections** page which lists each of the data forms you will need to complete for that visit. Start with the first form, “**General child health**”, and then work your way through each of the forms to complete the child’s visit.

Start with the first form in the list of sections and work your way through the questions in order. Once you have completed all the fields in a form, select “**Mark Section as complete**” at the bottom of the form and click “**Next**” on the top right corner of the page. You will be directed to the landing page
where the form you just completed will turn green. If you haven’t completed the full form and will require more information later, **do not tick “Mark as complete”** at the bottom of the form. The form on the landing page will remain red.

Click on the next form to continue collecting data.

### General Child Health

This section of the database collects information on the child’s general health and it is similar to the one completed during the first DYAD visit. This form should be completed by clinically trained staff.

<table>
<thead>
<tr>
<th></th>
<th>General child health</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>At any time since the last DYAD visit, has [child’s name] been unwell?</td>
</tr>
<tr>
<td>2</td>
<td>At any time since the last DYAD visit, did [child’s name] have to stay overnight in a hospital because they were ill or needed medical care?</td>
</tr>
<tr>
<td>3</td>
<td>How many days did he/she stay in the hospital?</td>
</tr>
<tr>
<td>No.</td>
<td>Question</td>
</tr>
<tr>
<td>-----</td>
<td>----------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>4</td>
<td>What did the health care providers tell you the problem was?</td>
</tr>
<tr>
<td>5</td>
<td>How many times has (name) been unwell?</td>
</tr>
<tr>
<td>6</td>
<td>What problem(s) has (name) had?</td>
</tr>
<tr>
<td>7</td>
<td>Did you seek any advice or treatment for (name)’s other episodes of illness(es) from any person?</td>
</tr>
<tr>
<td>8</td>
<td>Since the last DYAD visit, how many times have you sought advice or treatment for (name)’s illnesses from a hospital, clinic or doctor?</td>
</tr>
<tr>
<td>9</td>
<td>Has (name) been tested for malaria?</td>
</tr>
<tr>
<td>10</td>
<td>Has (name) been tested for COVID-19?</td>
</tr>
<tr>
<td>11</td>
<td>Does your child usually have a cough when they don’t have a cold, fever or other illness?</td>
</tr>
<tr>
<td>12</td>
<td>In the last 12 months, were there months when (name) has coughed more than half of the days?</td>
</tr>
<tr>
<td>13</td>
<td>Has your child had wheezing or whistling in the chest in the past 12 months?</td>
</tr>
<tr>
<td>14</td>
<td>In the past 12 months, has your child had any of the following?</td>
</tr>
<tr>
<td></td>
<td>• 4 or more attacks of wheeze,</td>
</tr>
<tr>
<td></td>
<td>• Any episode of severe wheeze that they were admitted overnight to hospital for</td>
</tr>
<tr>
<td></td>
<td>• Had their sleep disturbed due to wheezing on average for 1 or more nights per week</td>
</tr>
<tr>
<td>15</td>
<td>In the last 12 months, has your child been breathless during normal daily activities or on minimal exertion?</td>
</tr>
<tr>
<td>16</td>
<td>Does (name) have difficulty seeing?</td>
</tr>
<tr>
<td>17</td>
<td>Does (name) have difficulty hearing sounds like peoples’ voices or music?</td>
</tr>
<tr>
<td>18</td>
<td>Was the child vaccinated for BCG ?</td>
</tr>
<tr>
<td>19</td>
<td>Was the child vaccinated for measles/measles and rubella ?</td>
</tr>
<tr>
<td>20</td>
<td>Was the child vaccinated for rotavirus?</td>
</tr>
<tr>
<td>21</td>
<td>Was the child vaccinated for pneumococcus?</td>
</tr>
<tr>
<td>22</td>
<td>Did the child receive the pentavalent vaccine?</td>
</tr>
<tr>
<td>23</td>
<td>Was the child vaccinated for polio?</td>
</tr>
<tr>
<td>24</td>
<td>Was the child vaccinated for hepatitis B – birth dose?</td>
</tr>
<tr>
<td>25</td>
<td>Was the child vaccinated for meningitis A (MenAfriVac)?</td>
</tr>
<tr>
<td>26</td>
<td>Was the child vaccinated for meningitis quadrivalent (A,C,Y,W)?</td>
</tr>
<tr>
<td>27</td>
<td>Was the child vaccinated for COVID-19?</td>
</tr>
</tbody>
</table>
Ask to see the child’s health card (if available) to assist with the following questions:

1. **At any time since the last DYAD visit, has [child’s name] been unwell?**  
   *Possible response options: Yes, no, don’t know*

Ask the mother/caregiver if the child has been sick or needed medical attention. Record the response by selecting the appropriate option.

2. **At any time since the last DYAD visit, did [child’s name] have to stay overnight in a hospital because they were ill or needed medical care?**  
   *Possible options: Yes, no, don’t know.*

Ask the participant if, since their last DYAD visit, the child had to sleep one or more nights in a hospital because they were sick. Select the appropriate option.

If the participant responds “Yes”, ask the participant how many times this happened (Possible response options: 1, 2, 3, 4, 5 or more). Record their answer by selecting the appropriate option.

If the child didn’t stay overnight in a hospital since the last DYAD visit, skip to question 5.

3. **How many days did he/she stay in the hospital?**

If the child had to stay overnight in a hospital since the last DYAD visit, we want to know how many days the overnight stay lasted. If the child stayed overnight in a hospital more than once since the last DYAD visit, ask this question for each separate overnight stay (up to 5 entries). Record the number of days for each of the stays in the corresponding number box.

4. **What did the health care providers tell you the problem was?**

If the child had to stay overnight in a hospital since the last DYAD visit, we want to know what was the reason. You may also find this information in the child’s health card, if it is available. If the child stayed overnight in a hospital more than once since the last DYAD visit, ask this question for each separate overnight stay (up to 5 entries). Record the participant’s answer or the information in the child’s health card (if available) in the text box.

5. **How many times has (name) been unwell?**

Ask the participant how many the child has been feeling unwell aside from the hospital admission. For example, if the child had Diarrhoea; Cough; Fast, short, or rapid breaths, or difficulty breathing; Fever; Difficulty feeding. Record the number of times in the number box.

6. **What problem(s) has (name) had?**  
   *Possible response options: Diarrhoea; Cough; Fast, short, or rapid breaths, or difficulty breathing; Fever; Difficulty feeding; Other (specify))*

We would like to know what problems the child had when they had been unwell/sick. You can prompt the participant by reading the list of the possible response options. Record the participants response by selecting all that apply. If you select ‘other’ use the text box to specify.
You can prompt the participant by reading the list of the possible response options. Record the participants response by selecting all that apply. If you select ‘other’ use the text box to specify.

7. **Did you seek any advice or treatment for (name)’s other episodes of illness(es) from any person?**
   *Possible response options: Yes, no, don’t know*

Record the participant’s response by selecting the appropriate option.

8. **Since the last DYAD visit, how many times have you sought advice or treatment for (name)’s illnesses from a hospital, clinic or doctor?**

We would like to know if the participant looked for help, advise or treatment when the child was sick. This could involve any other person, such as a health care provider, a community leader, a member of the family, or field or community worker. Record the participant’s response by selecting the appropriate option. Record the participants response in the number box.

9. **Has (name) been tested for malaria?**
   *Possible response options: Yes, no*

Record the participants response by selecting the appropriate option. You may also find this information in the child’s health book. If the child has been tested for malaria, ask the following question:

i) **What was the result** (Possible response options: positive, negative, don’t know). Select the appropriate option.

10. **Has (name) been tested for COVID-19?**
    *Possible response options: Yes, no*

Record the participants response by selecting the appropriate option. If the child has been tested for Covid-19, ask the following question:

i) **What was the result** (Possible response options: positive, negative, don’t know). Select the appropriate option.

**Breathing**

11. **Does your child usually have a cough when they don’t have a cold, fever or other illness?**
    *Possible response options: Yes, no, don’t know*

Ask the participant if the child is coughing even when he/she is not sick. Record the participants response by selecting the appropriate option. If you select ‘no’ skip to question 12.
12. In the last 12 months, are there months when (child’s name) has coughed more than half the days?
   Possible response options: Yes, no, don’t know

   We want to know if in the past year, there have been months where the child coughs more than half of the days. Ask the participant if there are specific months, time of the year or seasons that they notice the child coughing more than half of the days. Record the participant’s response by selecting the appropriate option.

13. Has your child had wheezing or whistling in the chest in the past 12 months?
   Possible response options: Yes, no, don’t know

   Ask the participant if their child makes wheezing or whistling noises in the chest when he/she breathes. Record the participant’s response by selecting the appropriate option. If you select ‘no’ skip to question 14.

14. In the past 12 months, has your child had any of the following?
   Possible response options: 4 or more attacks of wheeze, any episode of severe wheeze that they were admitted overnight to hospital for, had their sleep disturbed due to wheezing on average for 1 or more nights per week.

   Read the list of answers to the participant and select all that apply. You can probe the participant by asking if there have been 1 or more night per week when the child couldn’t fall asleep or was awakened by wheezing. If you had recorded in earlier questions that the child was admitted overnight to hospital for an episode of wheeze, record it in this question as well.

15. In the last 12 months, has your child been breathless during normal daily activities or on minimal exertion?
   Possible response options: Yes, no, don’t know

   Ask the participant if they have noticed that the child seems out of breath during normal daily activities (such as eating) for no reason in particular. Record the participant’s response by selecting the appropriate option.

Washington Group/UNICEF module on child functioning (Age 2-4)

Before asking these questions, read the following statement to the participant: “I would like to ask you some questions about difficulties your child may have.”

16. Does (name) have difficulty seeing?
   Possible response options: No difficulty, some difficulty, a lot of difficulty or cannot do at all.

   We would like to know if the child has any difficulty seeing and to what degree. You can probe the participant by asking if she has noticed that the child squints or holds objects too close to their eyes or seems to struggle to follow an object with their eyes. Read the possible response options back to the participant and record their answer by selecting the appropriate option. To help the participant
differentiate between some difficulty and a lot of difficulty, you can ask her how often the child shows difficulty seeing: if she responds occasionally or sometimes, select some difficulty; if she responds: ‘most of the time’ or ‘always’ select a lot of difficulty.

17. Does (name) have difficulty hearing sounds like peoples’ voices or music?

Possible response options: No difficulty, some difficulty, a lot of difficulty or cannot do at all.

We would like to know if the child has any difficulty hearing and to what degree. You can probe the participant by asking if she has noticed that she needs to raise the volume of her voice to get the child’s attention, or if the child fails to respond to his or her name, or if the child appears not to hear what is going on if there is background noise. Read the possible response options back to the participant and record their answer by selecting the appropriate option. To help the participant differentiate between some difficulty and a lot of difficulty, you can ask her how often the child shows difficulty hearing: if she responds occasionally or sometimes, select some difficulty; if she responds: ‘most of the time’ or ‘always’ select a lot of difficulty.

Vaccinations

Ask the participant if they have a card or other document where the child’s vaccinations are written down. If the participant has a card or document, ask her if you may see it. Use the health card or vaccinations record to help you respond the following to these questions.

15. Was the child vaccinated for tuberculosis - BCG?

Possible response options: yes, not received, unknown

Select the appropriate option according to the child’s health card/vaccinations record. If there is a record that the child has been vaccinated for BCG (vaccination against tuberculosis (TB)), select “yes”. If the child’s health card/vaccinations record is not available and the participant does not know, select “unknown”.

16. Was the child vaccinated for measles – MMR?

Possible response options: yes, not received, unknown

Select the appropriate option according to the child’s health card/vaccinations record. If there is a record that the child has been vaccinated for MMR (measles, mumps and rubella), select “yes. If the child’s health card/vaccinations record is not available, select “unknown”.

17. Was the child vaccinated for rotavirus?

Possible response options: yes, not received, unknown

Select the appropriate option according to the child’s health card/vaccinations record. If there is a record that the child has been vaccinated for rotavirus, select “yes”. If the child’s health card/vaccinations record is not available, select “unknown”.

If you select “Yes”, respond to the following question:
18. Was the child vaccinated for pneumococcus? *(book, not received, unknown)*

Possible response options: yes, not received, unknown

Select the appropriate option according to the child’s health card/vaccinations record. If there is a record that the child has been vaccinated for pneumococcus, select “yes”. If the child’s health card/vaccinations record is not available, select “unknown”.

If you select “Yes”, respond to the following question:

   i) Doses received: *(Possible response option: 3, 2, 1, or unknown)*. Select the appropriate option according to the health card/vaccinations record.

19. Did the child receive the DTP booster? *(book, not received, unknown)*

Possible response options: yes, not received, unknown

Select the appropriate option according to the child’s health card/vaccinations record. If there is a record that the child has been vaccinated for DTP (diphtheria, tetanus and pertussis), select “yes”. If the child’s health card/vaccinations record is not available, select “unknown”.

If you select “Yes”, respond to the following question:

   i) Doses received: *(Possible response option: 3, 2, 1, or unknown)*. Select the appropriate option according to the health card/vaccinations record.

20. Was the child vaccinated for polio? *(book, not received, unknown)*

Possible response options: yes, not received, unknown

Select the appropriate option according to the child’s health card/vaccinations record. If there is a record that the child has been vaccinated for polio, select “yes”. If the child’s health card/vaccinations record is not available, select “unknown”.

If you select “Yes”, respond to the following question:

   i) Doses received: *(Possible response option: 3, 2, 1, or unknown)*. Select the appropriate option according to the health card/vaccinations record.

21. Was the child vaccinated for hepatitis B – birth dose?

Possible response options: yes, not received, unknown

Select the appropriate option according to the child’s health card/vaccinations record. If there is a record that the child has been vaccinated for hepatitis B, select “yes”. If the child’s health card/vaccinations record is not available, select “unknown”.
22. Was the child vaccinated for meningitis A (MenAfriVac)?

*Possible response options: yes, not received, unknown*

Select the appropriate option according to the child’s health card/vaccinations record. If there is a record that the child has been vaccinated for meningitis A, select “yes”. If the child’s health card/vaccinations record is not available, select “unknown”.

If you select “Yes”, respond to the following question:

i) **Doses received:** *(Possible response option: 3, 2, 1, or unknown)*. Select the appropriate option according to the health card/vaccinations record.

23. Was the child vaccinated for meningitis quadrivalent (A, C, Y, W)?

*Possible response options: yes, not received, unknown*

Select the appropriate option according to the child’s health card/vaccinations record. If there is a record that the child has been vaccinated for meningitis quadrivalent (A, C, Y, W), select “yes”. If the vaccinations record shows that the child has received another meningitis vaccine, select “yes” and then specify the type of meningitis vaccine in the text box provided. If the child’s health card/vaccinations record is not available, select “unknown”.

24. Was the child vaccinated for COVID-19?

*Possible response options: Yes, no*

Select the appropriate option according to the child’s health card/vaccinations record. Since it is possible that the child has received COVID-19 vaccination, but it was not recorded in the health card/vaccinations record, this question can be asked directly to the mother/caregiver. If there is a record in the child’s health card/vaccinations record or the mother/caregiver reports that the child has been vaccinated for COVID-19, select “yes”.

If the child has been vaccinated, ask the mother/caregiver the following questions:

i) **From which company was the vaccine?**

You can probe the mother/caregiver by listing the following vaccine manufacturers: Pfizer, Oxford/Astra-Zeneca, Moderna, Gamaleya (Russia), Janssen (Johnson & Johnson), Sinovac (China), Sinopharm (China), Coronavac (China). Record her answer in the text box or select “don’t know”.

ii) **How many doses has the child received?**

Ask the mother/caregiver how many times the child has received the vaccine. Record the answer in the number box or select “don’t know”. For each of the doses, record the date in which the child received it using the calendar.
The Child Nutrition questionnaires should be asked to the mothers or caregiver of all children participating in the PRECISE-DYAD study at all PRECISE-DYAD visits.

<table>
<thead>
<tr>
<th>Child Dietary Diversity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 If you were exclusively breastfeeding your infant, at what age did you introduce non-breast milk feeds (e.g. other milk, tea, juice, porridge, fruits etc.)?</td>
</tr>
<tr>
<td>2 On a typical day, does your child usually eat any of the following foods:</td>
</tr>
<tr>
<td>3 Milk and milk products such as fresh/fermented milk, cheese, yoghurt, cow milk or other milk products?</td>
</tr>
<tr>
<td>4 Breast milk?</td>
</tr>
<tr>
<td>5 Cereals and cereal products such as maize, rice, pasta, porridge, bread, biscuits, millet, sorghum, wheat and any other locally available grains?</td>
</tr>
<tr>
<td>6 Fresh or dried fish or sea foods like shellfish?</td>
</tr>
<tr>
<td>7 Roots and tubers such as potatoes, sweet potatoes, yams, cassava, or foods made from roots or wild roots and tubers?</td>
</tr>
<tr>
<td>8 Vegetables such as cabbages, carrots, spinach, and any other locally available vegetables including wild vegetables; Kale, Mnavu, Mrenda, Mchicha, Mkunde, Mtango, Bwere, Mwangani, Mchingu, Mzungi (Kenya only)</td>
</tr>
<tr>
<td>9 Meats and poultry such as camel, beef, lamb, goat, rabbit, wild game, chicken or other birds, liver, kidney, heart, other organ meats or blood-based foods?</td>
</tr>
<tr>
<td>10 Hen eggs or other bird eggs?</td>
</tr>
<tr>
<td>11 Pulses/ legumes/ nuts and seeds such as beans, peas, lentils, nuts, seeds, or foods made from these?</td>
</tr>
<tr>
<td>Lentils: Green grams/Pojo, Dengu, Mbaazi, Kamande, Kunde, Njahi, Nuts: Njugu (groundnuts), Korosho (Cashews), Macadamia</td>
</tr>
<tr>
<td>Mabuyu- Baobab seeds, Coconuts (Kenya only)</td>
</tr>
<tr>
<td>12 Oil, fats, ghee, margarine or butter added to food or used for cooking?</td>
</tr>
<tr>
<td>13 Sugar or honey for example added to tea or other food, sweetened soda, juices, chocolates, sweets or candies?</td>
</tr>
<tr>
<td>14 Spices or other unsweetened beverages?</td>
</tr>
</tbody>
</table>
### Household Food Security

<table>
<thead>
<tr>
<th></th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>During the past 7 DAYS has ANY member of the household missed a meal due to food shortage?</td>
</tr>
<tr>
<td>15</td>
<td>During the past 4 WEEKS:</td>
</tr>
<tr>
<td>16</td>
<td>Did you worry that your household would not have enough food?</td>
</tr>
<tr>
<td>17</td>
<td>Were any of your household unable to eat the kinds of food preferred because of a lack of resources?</td>
</tr>
<tr>
<td>18</td>
<td>Have any of your household had to eat a limited variety of food due to lack of resources?</td>
</tr>
<tr>
<td>19</td>
<td>Have any of your household eaten some foods that you really didn’t want to eat because of a lack of resources?</td>
</tr>
<tr>
<td>20</td>
<td>Have any of your household eaten fewer meals in a day because there was not enough food?</td>
</tr>
<tr>
<td>21</td>
<td>Did household members go to sleep at night hungry because there was not enough food?</td>
</tr>
<tr>
<td>22</td>
<td>Did you or your household members go a whole day and night without eating anything because there was not enough food?</td>
</tr>
</tbody>
</table>

1. If you were exclusively breastfeeding your infant, at what age did you introduce non-breast milk feeds (e.g. other milk, tea, juice, porridge, fruits etc.)
   - Possible options: Still breastfeeding, 0-3 months, 4-6 months, 7-12 months, >12 months, unknown.

We would like to know at what age the child started eating other foods, such as other types of milk, juices, tea, fruits, porridge in addition to breastmilk. Record the woman’s response by selecting the appropriate option. If the woman does not know, select “unknown”.

### Child Dietary Diversity

The following questions are asked to the mother/caregiver if they responded that the child not only drinks breast milk.

Start the questionnaire by asking: “On a typical day, does your child usually eat any of the following foods” and then proceed to ask the following questions.
Each of the following questions refers to a different food group. You must make sure that you ask the woman about ALL of the food groups that are asked in the questionnaire, using local examples to explain what you mean, if necessary. Record the mother/caregiver's response by selecting the appropriate option. Select “yes” if the child eats at least one of the examples mentioned in each one of the food groups.

2. **Milk and milk products such as fresh/fermented milk, cheese, yoghurt, cow milk or other milk products?**
   *Possible answers: Yes, no*

3. **Breast milk?**
   *Possible answers: Yes, no*

4. **Cereals and cereal products such as maize, rice, pasta, porridge, bread, biscuits, millet, sorghum, wheat and any other locally available grains?**
   *Possible answers: Yes, no*

5. **Fresh or dried fish or sea foods like shellfish?**
   *Possible answers: Yes, no*

6. **Roots and tubers such as potatoes, sweet potatoes, yams, cassava, or foods made from roots or wild roots and tubers?**
   *Possible answers: Yes, no*

7. **Vegetables such as cabbages, carrots, spinach, and any other locally available vegetables including wild vegetables?**
   *Possible answers: Yes, no*

   In Kenya only: Provide the following examples of vegetables: Kale, Mnavu, Mrenda, Mchicha, Mkunde, Mtango, Bwere, Mwangani, Mchingu, Mzungi

8. **Meats and poultry such as camel, beef, lamb, goat, rabbit, wild game, chicken or other birds, liver, kidney, heart, other organ meats or blood-based foods?**
   *Possible answers: Yes, no*

9. **Hen eggs or other bird eggs?**
   *Possible answers: Yes, no*
10. Pulses/legumes/nuts and seeds such as beans, peas, lentils, nuts, seeds, or foods made from these?
   Possible answers: Yes, no

In Kenya only: Provide the following examples Lentils: Green grams/Pojo, Dengu, Mbaazi, Kamande, Kunde, Njahi, Nuts: Njugu (groundnuts), Korosho (Cashewnuts), Macadamia, Mabuyu- Baobab seeds, Coconuts.

11. Oil, fats, ghee, margarine or butter added to food or used for cooking?
   Possible answers: Yes, no

12. Sugar or honey for example added to tea or other food, sweetened soda, juices, chocolates, sweets or candies?
   Possible answers: Yes, no

13. Spices or other unsweetened beverages?
   Possible answers: Yes, no

Household Food Security

This section of the questionnaire asks participants about their household’s access to sufficient food.

With these questions, we approach the issue of food availability from different angles, aiming to understand not only the household’s access to food but also how members of the household feel and behave in relation to this. By asking these questions at each DYAD visit, we also hope to learn about changes in the household’s access to food over time.

14. During the past 7 DAYS has ANY member of the household missed a meal due to food shortage?
   Possible answers: yes, no, don’t know.

We would like to know if, in the past week, any person of the participant’s household, including the participant herself and her child (if applicable), had to miss a meal because there was not enough food.

By “household” we mean the people living in the same hut as the woman, not the total number of people living in the same compound (The Gambia) OR the family unit living under the same roof (Kenya). By “missed a meal” we mean in relation to the number of meals that person usually eats during the day.
Record the woman’s response by selecting the appropriate option. If the woman does not know, select “don’t know”.

After asking the first question, ask the woman to answer the following questions considering the past 4 weeks / month.

During the past 4 WEEKS:

15. Did you worry that your household would not have enough food?
   Possible answers: yes, no, don’t know.

We would like to know if at any point over the past month, the participant felt worried, anxious or uncertain about her household not being able to access sufficient food.

By “household” we mean the people living in the same hut as the woman, not the total number of people living in the same compound (The Gambia) OR the family unit living under the same roof (Kenya).

Record the woman’s response by selecting the appropriate option. If the woman does not know, select “don’t know”.

16. Were any of your household unable to eat the kinds of food preferred because of a lack of resources?
   Possible answers: yes, no, don’t know.

We would like to know if the household had limited choices in the type of food they eat because of lack of resources. Ask the participant if in the past month, any person in her household, including herself and the child (if applicable) did not have access to the food they prefer to eat because they did not have money or the ability to grow or trade the kind of food.

By “foods preferred” we mean the type (rice vs. corn) or preparation (porridge prepared with water vs. milk) or a high quality foods (meat or fish).

Record the woman’s response by selecting the appropriate option. If the woman does not know, select “don’t know”.

17. Have any of your household had to eat a limited variety of food due to lack of resources?
   Possible answers: yes, no, don’t know.

We would like to know if the household had to eat a monotonous diet (always the same the types of foods) because of lack of resources. Ask the participant if in the past month, any person in her household, including herself and the child (if applicable) had to eat the same types of food, because they did not have money or the ability to grow or trade more varied foods.

Record the woman’s response by selecting the appropriate option. If the woman does not know, select “don’t know”.
18. Have any of your household eaten some foods that you really didn’t want to eat because of a lack of resources?
   Possible answers: yes, no, don’t know.

We would like to know whether any person in her household had to eat food that they considered to be undesirable or socially unacceptable, because they did not have money or the ability to grow or trade other foods.

Record the woman’s response by selecting the appropriate option. If the woman does not know, select “don’t know”.

19. Have any of your household eaten fewer meals in a day because there was not enough food?
   Possible answers: yes, no, don’t know.

We would like to know whether any person in her household, including herself and the child (if applicable) ate “fewer meals in a day” than what they would eat on a usual day because there was not enough food at any point during the past month.

Record the woman’s response by selecting the appropriate option. If the woman does not know, select “don’t know”.

20. Did household members go to sleep at night hungry because there was not enough food?
   Possible answers: yes, no, don’t know.

We would like to know if the participant she felt hungry at bedtime because of lack of food, or if she was aware that other members of the household were hungry at bedtime because the lack of food. Record the woman’s response by selecting the appropriate option. If the woman does not know, select “don’t know”.

21. Did you or your household members go a whole day and night without eating anything because there was not enough food?
   Possible answers: yes, no, don’t know.

We would like to know whether any person in her household, including herself and the child (if applicable), did not eat from the time they woke up in the morning, to the time they woke up the next morning due to lack of food. Record the woman’s response by selecting the appropriate option. If the woman does not know, select “don’t know”.

Neurodevelopment

This section of the database collects information on the child’s motor development and language. For this purpose, we will use the following tools to assess early childhood development.
- The Malawi Development Assessment Tool (MDAT) is administered during DYAD visits where the child is present, as some of the questions require you to directly observe and report on the child.

- The Development Milestones Checklist (DMC) is administered in Kenya only, when data collection takes place over a telephone interview, as the questions in this tool can be asked to the mother/caregiver.

- The Neurodevelopmental Screening tool (NDST) is a parent-report questionnaire administered in DYAD visits 3 and 4.

- The Modified Checklist for Autism in Toddlers (M-CHAT) is parent-report screening tool to assess risk for Autism Spectrum Disorder. It is administered in DYAD visits 3 and 4 if the child screens positive with the MDAT and NDST.

- Paediatric Quality of Life (PEDSQL) is a parent-report questionnaire administered in DYAD visits 3 and 4 if the child screens positive with the MDAT or NDST.

- The epilepsy screening questionnaire is a parent-report screening tool administered in DYAD visits 3 and 4. For those children that screen positive, the epilepsy full questionnaire is also administered in visits 3 and 4.

- The Cardiff Acuity and Contrast vision tests are administered to children in DYAD visits 3 and 4 if they screened positive for vision impairment with NDST and MDTAT and/or with the Washington Group / UNICEF Module on Child Functioning questions that are asked as part of the ‘Child Health’ questionnaire.

- The Family Care Indicators questionnaire, is administered during DYAD visit 2, 3 and 4. These questions are asked to the mother or child’s caregiver.

Only staff who have received the appropriate training in neurodevelopmental assessment should answer this form. As with the other data collection forms, ask the woman the questions in the order that they appear in the form and record her response by selecting the appropriate option. Please refer to the Neurodevelopment manual for details on how to administer these tools.

Clinical Assessment Child

This section of the database collects information on clinical assessment of the child. This form should be completed by clinically-trained staff only.

<table>
<thead>
<tr>
<th></th>
<th>Vital Signs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>What is the child’s heart rate? (from Welch Allyn Spot monitor)</td>
</tr>
<tr>
<td>No.</td>
<td>Question</td>
</tr>
<tr>
<td>-----</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>2</td>
<td>What is the child’s resting systolic BP? 1st measurement – (from Welch Allyn Spot monitor - mmHg)</td>
</tr>
<tr>
<td>3</td>
<td>What is the child’s resting diastolic BP? – 1st measurement? (from Welch Allyn Spot monitor - mmHg)</td>
</tr>
<tr>
<td>4</td>
<td>What is the child’s resting systolic BP? 2nd measurement? (from Welch Allyn Spot monitor - mmHg)</td>
</tr>
<tr>
<td>5</td>
<td>What is the child’s resting diastolic BP? – 2nd measurement? (from Welch Allyn Spot monitor - mmHg)</td>
</tr>
<tr>
<td>6</td>
<td>Third BP reading required?</td>
</tr>
<tr>
<td>7</td>
<td>What is the child’s resting systolic BP? – average of last two measurements</td>
</tr>
<tr>
<td>8</td>
<td>What is the child’s resting diastolic BP? – average of last two measurements</td>
</tr>
<tr>
<td>9</td>
<td>What is the child’s pulse oximetry?</td>
</tr>
<tr>
<td>10</td>
<td>What is the child’s haemoglobin concentration?</td>
</tr>
<tr>
<td>11</td>
<td>What is the child’s respiratory rate?</td>
</tr>
<tr>
<td></td>
<td><strong>Anthropometry</strong></td>
</tr>
<tr>
<td>12</td>
<td>What is the child’s length today? - FIRST (cm) <em>(number box)</em></td>
</tr>
<tr>
<td>13</td>
<td>What is the child’s length today? - SECOND (cm) <em>(number box)</em></td>
</tr>
<tr>
<td>14</td>
<td>What is the child’s body weight today? – FIRST (kg) <em>(number box)</em></td>
</tr>
<tr>
<td>15</td>
<td>What is the child’s body weight today? – SECOND (kg) <em>(number box)</em></td>
</tr>
<tr>
<td>16</td>
<td>What is the child’s head circumference? – FIRST (cm) <em>(number box)</em></td>
</tr>
<tr>
<td>17</td>
<td>What is the child’s head circumference? – SECOND (cm) <em>(number box)</em></td>
</tr>
<tr>
<td>18</td>
<td>What is the child’s mid-upper arm circumference? –FIRST (cm) <em>(number box)</em></td>
</tr>
<tr>
<td>19</td>
<td>What is the child’s mid-upper arm circumference? –SECOND (cm) <em>(number box)</em></td>
</tr>
<tr>
<td></td>
<td><strong>Sample collection</strong></td>
</tr>
<tr>
<td>20</td>
<td>Was blood collected?</td>
</tr>
<tr>
<td>21</td>
<td>Was a stool sample collected?</td>
</tr>
</tbody>
</table>
1. **What is the child’s heart rate?**

Using the Welch Allyn Spot monitor, measure the child’s heart rate and record the measurement in the number box provided. See separate Clinical Procedures training manual for more detail on using the Welch Allyn Spot monitor. If the child’s heart rate is not known or was not measured, select “yes” in response to the question “Not available”, otherwise ignore the question “Not available” and proceed to the next question.

2 and 4. **What is the child’s resting systolic blood pressure?**

Using the Welch Allyn Spot monitor, measure the woman’s resting systolic blood pressure. You will need to take at least two measurements and input the readings into the number boxes provided. If the difference between the first two measurements is more than 10 mm Hg apart, you will need to take a third reading. If the difference between the first two measurements is less than 10 mm Hg apart, then a red “0” will appear in the “Third reading required” box. Proceed to the following questions. See separate Clinical Procedures training manual for more detail on using the Welch Allyn Spot monitor. The woman’s resting systolic blood pressure will be auto calculated based on the average of these two (or three) measurements.

3 and 5. **What is the child’s resting diastolic blood pressure?**

Using the Welch Allyn Spot monitor, measure the woman’s resting systolic and diastolic blood pressure. You will need to take at least two measurements and input the readings into the number boxes provided. If the difference between the first two measurements is more than 10 mm Hg apart, you will need to take a third reading. If the difference between the first two measurements is less than 10 mm Hg apart, then a red “0” will appear in the “Third reading required” box. Proceed to the following questions. See separate Clinical Procedures training manual for more detail on using the Welch Allyn Spot monitor. The woman’s resting diastolic blood pressure will be auto calculated based on the average of these two (or three) measurements.

9. **What is the child’s pulse oximetry?**

Using the Masimo Oximeter, measure the child’s pulse oximetry and record the percentage of oxygen saturation in his/her blood in the number box provided. See separate Clinical Procedures training manual for more detail on using the Masimo Oximeter device. If the child’s pulse oximetry is not known or was not measured, select “yes” in response to the question “Not available”, otherwise ignore the question “Not available” and proceed to the next question.

10. **What is the child’s haemoglobin concentration?**
Using the Masimo Oximeter, measure the child’s haemoglobin concentration and record the concentration in grams per decilitre the number box provided. See separate Clinical Procedures training manual for more detail on using the Masimo Oximeter device. If the child’s haemoglobin concentration is not known or was not measured, select “yes” in response to the question “Not available”, otherwise ignore the question “Not available” and proceed to the next question.

11. **What is the child’s respiratory rate?**

Record the child’s respiratory rate in breaths per minute over a thirty second period and then input the resulting number in the box provided. If the child’s respiratory rate is not known or was not measured, select “yes” in response to the question “Not available”, otherwise ignore the question “Not available” and proceed to the next question.

**Anthropometry**

12-13. **What is the child’s length today?**

Record the child’s length to 1 decimal place in the number box provided, then take and record a second measurement. See separate Clinical Procedures training manual for more detail on how to take the measurement.

14-15. **What is the child’s body weight today?**

Record the child’s weight to 1 decimal place in the number box provided, then take and record a second measurement. See separate Clinical Procedures training manual for more detail on how to take the measurement.

16-17. **What is the child’s head circumference today?**

Record the child’s head circumference to one decimal place in the number box provided, then take and record a second measurement. See separate Clinical Procedures training manual for more detail on how to take the measurement.

18-19. **What is the child’s mid-upper arm circumference?**

Record the child’s mid-upper arm circumference to one decimal place in the number box provided, then take and record a second measurement. See separate Clinical Procedures training manual for more detail on how to take the measurement.
Sample collection

20. Was blood collected?
   Possible response options: Yes, no

If a sample of child blood was collected, answer a follow-up question to indicate whether this was done by finger prick or venepuncture.

If no child blood was collected, answer the following question:

   i) Why? (Possible response options: (no consent, participant refused, no staff member available to collect sample, no staff member available to process the sample, research team were unable to successfully draw blood, participant left before sample was collected, other (specify), don’t know)

Record the reason why child blood was not collected by selecting the appropriate option. If you select “other”, use the text box provided to provide more detail.

21. Was a stool sample collected?
   Possible response options: Yes, no

This question will not display in Visit 4.

If no child stool was collected, answer the following question:

   i) Why? (Possible response options: no consent, participant refused, no staff member available to collect sample, no staff member available to process the sample, participant unable to produce sample, other (specify), don’t know)

Record the reason why child stool was not collected by selecting the appropriate option. If you select “other”, use the text box provided to provide more detail.

If a stool sample has been collected, ask the participant the following questions:

   i) What is the consistency of (NAME)’s stool normally? (Possible response options: watery, soft, formed, hard, don’t know)

Record the participant’s response by selecting the appropriate option.

   ii) Does (NAME) ever exhibit any difficulties in passing a stool? (Possible response options: yes- but only occasionally; yes - is often uncomfortable; strains or has abdominal bloating, no, don’t know.)

Record the participant’s response by selecting the appropriate option.

   iii) On average (thinking about the last few days), how many times a day does (NAME) produce a stool? (Possible response options: 1-2, 3-5, 5-7, 7-10, don’t know.)
Record the participant’s response by selecting the appropriate option.

**Video recording**

This question will *not* display in Visit 4.

22. **Was the video of mother and child interactions recorded?**

   Possible response options: Yes, no

Indicate whether a video of mother and child interactions was recorded during the visit. See the Neurodevelopment SOP for more information.

If a video of mother and child interactions was not recorded, indicate the reason by selecting the appropriate option. (Possible response options: no consent, participant refused, mother was not present, no staff member available to record video, research team were unable to successfully record the video, participant left before video was recorded, other (specify), Don’t know). If you select “other”, give details of the reason in the text box provided.

**10e. End Report**

The End Report form must be completed at the end of each DYAD visit or after filling in the enrolment form if the mother has lost to follow up. This table will enable us to track the participant if she could not be contacted on time or did not attend the visit.

<table>
<thead>
<tr>
<th>End Report</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Maternal status:</strong></td>
</tr>
<tr>
<td>- Attended at facility</td>
</tr>
<tr>
<td>- Phone interview</td>
</tr>
<tr>
<td>- Unable to attend</td>
</tr>
<tr>
<td>- Does not want to participate</td>
</tr>
<tr>
<td>- Withdrew consent</td>
</tr>
<tr>
<td>- Lost to follow-up</td>
</tr>
<tr>
<td>- Maternal death</td>
</tr>
<tr>
<td>- Past 25 months when study began (<em>only displayed at visit 3</em>)</td>
</tr>
<tr>
<td>- Completed the study (<em>only displayed at the last visit</em>)</td>
</tr>
<tr>
<td>- Referred for further support (mental health, illness)</td>
</tr>
<tr>
<td><strong>2. Child’s status:</strong></td>
</tr>
</tbody>
</table>
3. Comments

1. Maternal status

*Possible response options: Attended at facility, phone interview, unable to attend, does not want to participate, withdrew consent, lost to follow-up, maternal death, past 25 months when study began, completed study, referred for further support.*

If the participant was enrolled in the study and the visit took place, we want to know whether the data collection was carried out in the facility or over the telephone. Select “Attended at facility” if the current DYAD visit took place at the facility or select “phone interview” if data collection took place over the telephone. If the participant attended and was referred, select “referred for further support”. Indicate in the comment section what the referral was for.

Select “unable to attend” if the participant is willing to participate in the study but is unable to schedule an appointment for this visit, this could be because she or the child were sick, or another unforeseen event, like problems with transportation, work or other caring responsibilities. Record the reason the participant could not attend in the Comments section. You can contact the woman closer to the date of her next DYAD visit.

Select “does not want to participate”, if the participant did not consent to DYAD, and therefore was not enrolled in the study. If the participant indicates that she does not want to participate ask her the reason (i.e. she has moved out of the study area or her family no longer approves her participation), record it in the text box in the Comments section. Do not contact this woman again for subsequent DYAD visits.

Select “withdrew consent” if the participant consented to DYAD and already had one visit and at a later date withdrew her consent to continue participating in the study. Select the date when she withdrew her consent using the calendar. If she gave a reason for withdrawing from the study, record it in the Comments section.

If the woman cannot be contacted to schedule an appointment, select “lost to follow-up” and select the date when the decision was made that she was lost to follow-up using the calendar. Enter any additional relevant information in the Comments section. You can contact the woman closer to the date of her next DYAD visit.
If the mother has died, select the appropriate option, and record the date when she died using the calendar.

Visit 3 must take place 24 months (+/- 1 month) after the woman gave birth. If it is not possible to enrol the woman in visit 3 because it has been longer than 25 months since she gave birth, for example if you were not able to contact her to schedule a visit, select “past 25 months when study began”. You can contact the woman closer to the date of her DYAD visit 4.

The answer option “completed the study” will display in the last DYAD visit the mother will attend. This could be either DYAD visit 3 or DYAD visit 4, depending on when the visit takes place. Select this option to indicate that the mother has attended her last visit.

2. **Child status**
   Possible response options: Attended the facility, unable to attend, lost to follow-up, death, past 25 months when study began.

If the child was present during the visit, select “attended the facility”. If the child was not present at the visit, select “unable to attend” and record in the comments section the reason why the child was not able to attend, for example, due to him/her being sick. If the participant attended and was referred, select “referred for further support”. Indicate in the comment section what the referral was for.

If the child cannot be located, select “lost to follow-up” and select the date when the decision was made that he/she was lost to follow-up using the calendar. Enter any additional relevant information in the Comments section.

If the child has died, select the appropriate option and record the date when he/she died using the calendar.

Visit 3 must take place when the child is 24 months (+/- 1 month) old. If it is not possible to enrol the child in visit 3 because it has been longer than 25 months he/she was born, for example if you were not able to schedule a visit, select “past 25 months when study began”. You can contact the mother/caregiver again closer to the date of DYAD visit 4.

The answer option “completed the study” will display in the last DYAD visit the child will attend. This could be either DYAD visit 3 or DYAD visit 4, depending on the age of the child. Select this option to indicate that the child has attended his/her the last visit.

Select “Mother/caregiver didn’t give consent”, if the mother agreed to participate but didn’t want her child(ren) to participate.

3. **Comments**
Use the text box in the comments section to annotate all relevant information collected when completing this form, such as the reason the mother/caregiver gave for not giving consent, the reason why the data collection did not take place at the facility, or why she did not attend the visit.