

## **Home visits programme in Toro LGA, Bauchi State**

### **Guidelines for electronic monitoring and data quality control**

## Monitoring guidelines for mapping visit

Since this is the first visit to the household there is no previous visit to compare. So the supervisors/data monitors would have to assess the absolute characteristics of individual records and evaluate if the recorded data is valid or not. The main validation is that of location. For this the data manager would produce a KML file for all new mapping visits for a given worker in a given download and send it to the supervisors. The supervisors would open the file using Google earth and visualize the location and data.

### Evaluating location of the household

Make a list of following types of records to be potentially marked as invalid:

- Having GPS accuracy > 4m
- Situated too far away from the settlement corresponding to the settlement code/GHQCODE series
- Clustering/aggregating on one point even if within the settlement corresponding to the GHQCODE series
- Consistent sequence of the GHQCODES. It should follow a pattern for a given date.

### Evaluating data in each record

- Assess number of CBAs in the household if the total is too big
- Assess number of births during last one year for outliers. All the household reporting more than 2 births in a year should be carefully assessed and verified against number of CBAs in the household. For example if there is only one CBA in the household than it is unlikely to have more than 2 births during last one year in the same household
- Assess number of deaths during last one year for outliers. All the households reporting more than 2 deaths in a year must be carefully reported. Again number of CBAs in the household is a good criterion to assess the household size and hence possibility of number of deaths reported during last one year.

Prepare a list of all the households in the Mapping visit monitoring sheet listing the GHQCODE and mentioning the reason for invalidity. Provide a copy to the data manager to cancel these codes in the data set. Contact worker to inform her about cancellation of the mapping visit with following instructions:

- Revisit the household and do a remapping
- Cancel the page assigned to the household in the index register (cross it)
- Retrieve and cancel the GHQ card issued to the household during previous visit
- Assign the household a new page in the index register,
- Issue a new GHQCODE and GHQ card to the household
- Fill and send a new mapping record for the household, redo baseline visit as well if already done. If not conduct the baseline visit taking the opportunity as she is already visiting the household again.

### Evaluating the coverage

For mapping visit we don't emphasize restricting the worker to do a certain number of households in a day as such since this is a short questionnaire. So workers if willing to work for a whole day

can cover as many as 30-40 households in a day. However, we would be concerned about those who are too slow e.g., doing only 5 or 6 in a day or if they exceed over 40.

For these workers we contact them to ask about why they are running too fast or too slow and advise them to work accordingly in future.

## Monitoring guidelines for Baseline and Follow-up visits

The Baseline visit is the second visit to the household after mapping while follow-up visits start after the Baseline visit. The monitoring concerns for both these visits are similar with some minor differences. For both the monitors have to assess the coverage as well as quality especially of different types of errors marked in the error block records sent by the worker. For this the data manager would produce

- Coverage excel file documenting coverage for different sections of the instruments for each worker
- FAF (Finding, Action feedback and Follow-up) text output file.

Supervisors/data monitors would have to follow up with the worker on the assessed coverage as well as different types of errors recorded as error blocks and sent from the field.

- Check daily target and compare with the workers catchment area target to get the percentage and use it to find out whether the worker is running too fast or too slow and give feedback to the worker.
- Advice worker according to her daily coverage for each section of the instrument (GHQ, PSQ, CSQ, PHQ, CHQ) on whether she needs to slow down or to put more effort so that she will be able to meet up with the target in her catchment area within the two months.
- Check in subsequent downloads as to whether the worker have improved in her work and then give feedback or warning to the worker.

### Monitoring quality

#### **General household section (GHQ)**

The data manager would produce a list of GHQCODEs as FAF (Findings, Action feedback and Follow up) output text file using only those records with error blocks for each worker in a given download and send it to the supervisors. Each GHQCODE in the list would be marked for type and reason for error made by the worker as follows:

<b>GHQERROR type ( rstatus)</b>	<b>_rstatus (Record status) Explanation</b>
rs_ Rectified	An error identified in a previous download has been rectified
re_ SingleRecord	No previous visit for the GHQCODE meaning household being visited for the first time but the worker is trying to fill a baseline or a follow-up record
re_ GPSInvalid	Record has an invalid GPS location
re_ NotSent	This is a GHQCODE for which there was an error identified in the previous download and supervisor gave feedback to the worker but worker has not complied with the advice i.e., she did not revisit the household to conduct a fresh visit and send a fresh record as advised
re_ DuplicateMapping	A mapping record sent for a GHQCODE for which a mapping visit already exists in the previous data set
re_ FollowupNotDue	This will only apply to follow-up visits. Here the worker has revisited the household before the due date for the visit. The house is not yet due for follow up

### *GHQCODE FAF excel sheet*

The supervisors would use the list of GHQCODEs in the FAF text output file to enter their findings, proposed action feedback to the worker for each individual GHQCODE and any subsequent follow up in a FAF excel sheet as follows:

- Document all the GHQCODEs in the FAF text output in the FAF excel sheet which are not already there or those for which the follow-up for a previous error has already been completed (rectified)
- Document the type of error in the error column
- Document the feedback to be given to the worker in the action feedback column
- Contact each worker to inform her about these records with the instructions on what they need to do as shown in the attached table

### **Women section (WQ)**

The data manager would produce a list of WOMANCODEs as FAF (Findings, Action feedback and Follow up) output text file using only those records with error blocks for each worker in a given download and send it to the supervisors. Each WOMANCODE in the list would be marked for type and reason for error made by the worker as follows:

<b>WQERROR type ( rstatus)</b>	<b>_rstatus (Record status) Explanation</b>
rs_ Rectified	An error identified in a previous download has been rectified
re_ Preg_StatusInvalid	Here the follow-up status of the woman has been marked as wrong. For example woman was a CBA last time but the worker is showing here as registered for pregnancy and delivered.
re_ NotSent	This is a WOMANCODE for which there was an error identified in the previous download and supervisor gave feedback to the worker but worker has not complied with the advice i.e., she did not revisit the woman to conduct a fresh visit and send a fresh record as advised
re_ FollowupNotDue	This will only apply to follow-up visits. Here the worker has revisited the household before the due date for the visit. The house is not yet due for follow up

### *WOMANCODE FAF excel sheet*

The supervisors would use the list of WOMANCODEs in the FAF text output file to enter their findings, proposed action feedback to the worker for each individual WOMANCODE and any subsequent follow up in a FAF excel sheet as follows:

- Document all the WOMANCODEs in the FAF text output in the FAF excel sheet which are not already there or those for which the follow-up for a previous error has already been completed (rectified)
- Document the type of error in the error column
- Document the feedback to be given to the worker in the action feedback column
- Contact each worker to inform her about these records with the instructions on what they need to do as shown in the attached table

### **Male questionnaire (MQ)**

The data manager would produce a list of HCODEs as FAF (Findings, Action feedback and Follow up) output text file using only those records with error blocks for each worker in a given download

and send it to the supervisors. Each HCODE in the list would be marked for type and reason for error made by the worker as follows:

<b>MQERROR type ( rstatus)</b>	<b>_rstatus (Record status) Explanation</b>
rs_ Rectified	An error identified in a previous download has been rectified
re_ Preg_ Visit_ type_ Invalid	The worker is trying to enter a wrong visit type e.g., doing a follow-up although no baseline done or doing a baseline again
re_ Child_ duplicate	If the worker tries to fill a second record for the father of a child when he has already filled a record for the same in the previous visit
re_ NotSent	This is a WOMANCODE for which there was an error identified in the previous download and supervisor gave feedback to the worker but worker has not complied with the advice i.e., she did not revisit the woman to conduct a fresh visit and send a fresh record as advised
re_ FollowupNotDue	This will only apply to follow-up visits. Here the worker has revisited the household before the due date for the visit. The house is not yet due for follow up

MQ FAF excel sheet

The supervisors would use the list of HCODEs in the FAF text output file to enter their findings, proposed action feedback to the worker for each individual HCODE and any subsequent follow up in a FAF excel sheet as follows:

- Document all the HCODEs in the FAF text output in the FAF excel sheet which are not already there or those for which the follow-up for a previous error has already been completed (rectified)
- Document the type of error in the error column
- Document the feedback to be given to the worker in the action feedback column
- Contact each worker to inform her about these records with the instructions on what they need to do as shown in the attached table

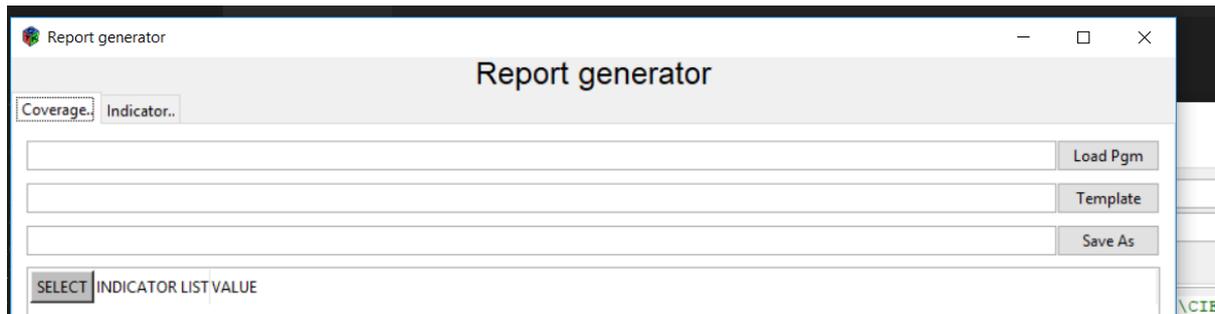
**During each subsequent download check if:**

- The worker has followed the advice and taken action accordingly
- If yes write in the follow-up column conclusive note how the error was rectified. For example
- for a household where the worker was advised to cancel the GHQCODE and do a fresh mapping and if the worker has sent a new record for this household write mapping with new GHQCODE done
- if it was a GPSinvalid error block and the worker was advised to revisit and after revisiting she has sent a completely filled record for the same household the record would be marked as error rectified. So write in the follow-up column error rectified after revisit.
- If the worker has not followed the advice and you don't see a revisit record for the same during next download, contact the worker and re-advise to revisit the household and conduct the needed action. But this time warn her if she does not follow the advice she would be fired. If the worker still doesn't comply to send the record in next download fire the worker.
- Fill into the FAF excel sheet the necessary action taken by you (Supervisor) on each download for each GHQCODE, WOMANCODE and HCODE once entered into the FAF sheet till the error is rectified.

## Guidelines to run the Automated Report Generator

- Open CIETmap
- Read the relevant data set e.g., GHQ, WQ, CHQ or MQ
- Run the python code for report generation. You need to change the path according to the folder where you have saved the code
- `python load_Reprot_Gen_v01.py`

You will see the following window opening



- Click **load pgm** and go to the folder where you have your coverage pgms saved. The pgm should correspond to the data set e.g., GHQ for GHQ, WQ for WQ so on and so forth.
- Click **Template** and go to the folder where you have saved your blank excel coverage template files.
- Click **Save as**. This will allow you to give a name to the new excel file that will be generated by the "report generator" program using the blank template. MAKE SURE YOU HAVE "XLSX" extension at the end of the name you give to the new file.
- Now you click the button **Generate** to generate the report. The **report generator dialog box** will disappear. The CIETanalysis window will be there and you will at the top a sign showing "not responding". This shows CIETanalysis is working to generate the report. Just wait for it to disappear. As soon as the CIETanalysis window becomes responsive it means the new Excel file is ready with the numbers for coverage and quality indicator for that particular data set.
- Go to the folder where you saved the new Excel file and open the file to check the output.

## Guidelines for workers on upgraded ODK with blocks on invalid entries *Female workers' questionnaire (FWQ)*

### Date setting error

This would occur if the date and time setting in your hand set is incorrect. As soon as you open a new record and try moving forward after marking the ward it would give you a message as follows:

- *Date on the handset is not correct*

Once you get this message close the ODK application and correct the date and time setting in your handset. You can now open ODK and start filling a new record.

### Data base message

When you open a new record and start filling the codes for ward and area, the application will give you a message about the data already saved in your handset about your catchment area. The message tells you the exact number of households and CBAs you have registered so far in your catchment area. When you see this message press **ok** button on the message and move forward.

### Invalid GPS Location error

This would happen if either you are more than 30 meters away from the household you are covering or if you have entered the GHQ serial wrong. It would therefore be necessary you make sure which household you are covering and enter the correct serial number after verifying it with the GHQ card as well as the index register. Also you must make sure you record the GPS location close to the household door step. While recording location make sure you are under open sky and not inside the household under or near the roof/covered space. If these conditions are not fulfilled you will get an **error block** due to invalid GPS with a message as follows:

*GPS location xx meters away from the mapping visit. Please check GHQ serial and correct if necessary. If GHQ serial is correct move close to the household and record the GPS location again. If error block persists despite everything correct select **error block** in type of visit, save the record and move to the next household."*

Once you select **error block** in type of visit it would take you to the end of the questionnaire. Save the record and move to the next household with a fresh record.

### Invalid visit type error

This would happen if the type of visit you have selected for the record doesn't match with the type of visit to be conducted for the household you are visiting. This could either be because you have selected a wrong type of visit, have entered a wrong GHQ serial or in case of a follow-up visit, you have visited the household earlier than 2 months (60 days). It would

therefore be important you are extremely careful in recording/selecting the following information:

- Date setting in the handset
- GHQ Serial
- Type of Visit

If any of this information is incorrect you will get an **error block** due to invalid type of visit with a message as follows:

*Invalid type of visit: Please check date and time setting in your handset. If correct check GHQ serial and type of visit. Make corrections if necessary. If **error block** persists despite everything being correct select **error block** in type of visit, save the record and move to the next household."*

So once you select **error block** in type of visit it would take you to the end of the questionnaire. Save the record and move to the next household with a fresh record.

### **Dead woman error**

This would happen if

- 1) You are trying to fill a record for a woman who you have already marked as dead in a previous visit. In this case you will get an **error block** message as follows:
  - *Woman already recorded dead on. Check woman serial. Check GHQ serial*
- 2) You are trying to fill a record for a woman who you have already marked as dead in a previous visit but entered a wrong woman serial number not listed in the index register.
- 3) You are trying to fill a record for a woman added into the household for the first time on this visit but marked her as dead. In both these cases you will get an error block message as follows:
  - *Woman serial number not listed. Cannot record status as dead for a new woman*

*Make corrections as necessary. If **error block** persists despite everything being correct, select **error block**. Once you select **error block** in type of visit it would take you to the end of the questionnaire. Save and send the record. Inform your supervisor about the error to receive further guidance. Move to the next respondent with a fresh record.*

### **Live woman error**

This would happen if:

1) You enter a woman serial number again already covered in this household during the same visit. In this case you will receive a message as follows:

- *Duplicate woman serial for this household*

In this case you will need to go back, check and correct the woman serial number

2) On a supplementary follow-up visit you enter a woman serial number already covered in this household during the primary or supplementary follow-up visit. In this case you will receive a message as follows:

- *Duplicate woman; Woman serial number (xx); already visited on (date)*

In this case again you will need to go back, check and correct the woman serial number

3) If you have marked the woman status incorrect against the status marked during the previous visit to the same woman. This could happen because of any one or more of the following reasons:

- a) If you have entered a wrong woman serial number
- b) If you have marked the pregnancy registration status as wrong
- c) If you have marked the women wrong in the question about “are you currently pregnant”

In this case you will receive a message as follows:

*Invalid woman status; please check woman serial, if the woman is already registered for a pregnancy or if the woman is currently pregnant. Make corrections as necessary. If error block persists despite everything being correct, select error block.*

Once you select **error block** it would take you to the end of the woman questionnaire. Save the record and move to the next woman or household.

### **Invalid time error**

This would happen if the time taken to cover a section (PSQ, CSQ, PHQ and CHQ) is less than the minimum time limit required to be spent for the section. The minimum limits for each section are

- PSQ 15 minutes
- CSQ 10 minutes
- PHQ 3 minutes
- CHQ 4 minutes

On each of such occasion the workers would receive an **error block** message on the screen showing a question as fill time for the section e.g PSQ fill time or CSQ fill time or PHQ fill

time or CHQ fill time. When you mark it as yes and try to swipe forward it would give a message as follows:

*Sorry. This response is invalid.*

Since this means you have not spent enough time with the woman for this section, you must do the section again with the women. Hence you must go back to the *start time* screen for this section and conduct the interaction again.

## **Guidelines for workers on upgraded ODK with blocks on invalid entries**

### **Male workers' questionnaire (MWQ)**

For all the husbands/spouses listed in the pregnancy and child log sheets provided to the male worker by the female worker it is necessary now that the male worker must first fill a record for the baseline visit when he first visits the listed husband/spouse. He can then fill a fresh record for a follow-up visit either on the same day or any time later. So there is no restriction of a minimum time period between the baseline and the first follow-up visit. However, after completing the first follow-up visit the next follow-up can only be done after 60 days and not before that. It is necessary that the male worker conduct or at least start the interaction at respondent's house. This is necessary to record the correct GPS location of the household so it matched with the GPS location recorded by the female worker for the same household during mapping visit. If the GPS location recorded by male worker does not match with the GPS location recorded by the female worker during the mapping visit the male worker would not be able to proceed with the interaction.

#### **Date setting error**

This would occur if the date and time setting in your hand set is incorrect. As soon as you open a new record and try moving forward after marking the ward it would give you a message as follows:

- *Date on the handset is not correct*

Once you get this message close the ODK application and correct the date and time setting in your handset. You can now open ODK and start filling a new record.

#### **Data base message**

When you open a new record and start filling the codes for ward and area, the application will give you a message about the data already saved in your handset about your catchment area. The message tells you the exact number of husbands already following so far in your catchment area. When you see this message press **ok** button on the message and move forward.

#### **Dead respondent error**

This would happen if

- 1) You are trying to fill a record for a husband/spouse who you have already marked as dead in your previous visit. In this case you will get an **error block** message as follows:

- *Respondent already recorded dead.*

Please check GHQ serial and husband serial. Make corrections if necessary. If **error block** persists despite everything being correct, select **error block**. Once you select **error block** it would take you to the end of the questionnaire. Save and send the record. Inform your supervisor about the error to receive further guidance. Move to the next respondent with a fresh record.

- 2) You are trying to fill a record for a respondent who you have already marked as dead in a previous visit but entered a wrong husband serial number not listed in the pregnancy or child log sheet.
- 3) You are trying to fill a record for a new respondent for the first time but by mistake marked him as dead.

In both these cases you will get an error block message as follows:

- *Husband serial number not listed. Cannot record status as dead for a new respondent*

*Make corrections as necessary. If **error block** persists despite everything being correct, select **error block**. Once you select **error block** in type of visit it would take you to the end of the questionnaire. Save and send the record. Inform your supervisor about the error to receive further guidance. Move to the next respondent with a fresh record.*

### **Male error check**

This would happen if

- 1) Either you are more than 50 meters away from the household of the husband/spouse you are covering or if you have entered the GHQ serial wrong. It would therefore be necessary you correctly identify the household of the husband/spouse you are covering and enter the correct serial number after verifying it with the log sheet provided to you by the female worker. Also you must make sure you record the GPS location as close to the household as possible to match the GPS location recorded by the female worker when she visited the same household during the mapping visit. While recording location you need to make sure you are under open sky and not inside the household or under or near the roof or a covered space. If these conditions are not fulfilled you will get an **error block** due to invalid GPS with a message as follows:

*GPS location xx meters away from the mapping visit. Please check GHQ serial and correct if necessary. If GHQ serial is correct move close to the household and record the GPS location again. If error block persists despite everything correct select **error block** in type of visit, save the record and move to the next household."*

So once you select **error block** in type of visit it would take you to the end of the questionnaire. Save and send the record. Inform your supervisor about the error to receive further guidance. Move to the next respondent with a fresh record.

- 2) If you have entered the husband serial wrong or the GHQ serial wrong and the respondent with that GHQ serial or husband serial has already been recorded as dead. In this case you will get an **error block** with a message as follows:

*Respondent already recorded as dead. Please check GHQ serial and husband serial.*

Make corrections if necessary. If **error block** persists despite everything being correct, select **error block**. Once you select **error block** it would take you to the end of the questionnaire. Save and send the record. Inform your supervisor about the error to receive further guidance. Move to the next respondent with a fresh record.

- 3) If you have entered the type of visit wrongly as baseline with a GHQ serial and/or husband serial for which a baseline visit has already been recorded. In this case you will get an **error block** with a message as follows:

*Duplicate baseline. Please check GHQ serial and husband serial and type of visit.*

Make corrections if necessary. If **error block** persists despite everything being correct, select **error block**. Once you select **error block** it would take you to the end of the questionnaire. Save and send the record. Inform your supervisor about the error to receive further guidance. Move to the next respondent with a fresh record.

- 4) If you have entered the type of visit wrongly as follow-up with a GHQ serial and/or husband serial for which a baseline visit has not yet been conducted. In this case you will get an **error block** with a message as follows:

*Baseline missing; Follow-up not allowed. Please check GHQ serial and husband serial and type of visit.*

Make corrections if necessary. If **error block** persists despite everything being correct, select **error block**. Once you select **error block** it would take you to the end of the questionnaire. Save and send the record. Inform your supervisor about the error to receive further guidance. Move to the next respondent with a fresh record.

- 5) If you have entered the type of visit as follow-up with a GHQ serial and/or husband serial for which a follow-up visit has already been done within the last 60 days. In this case you will get an **error block** with a message as follows:

*Follow-up not due until xx days; Please check GHQ serial and husband serial and type of visit*

Make corrections if necessary. If **error block** persists despite everything being correct, select **error block**. Once you select **error block** it would take you to the end of the questionnaire.

Save and send the record. Inform your supervisor about the error to receive further guidance. Move to the next respondent with a fresh record.

- 6) If you try to conduct a visit for a respondent with a GHQ serial and/or husband serial for which the female worker doesn't have a wife registered for a current pregnancy. In this case you will get an **error block** with a message as follows:

- *Husband serial number not listed. Check GHQ serial and husband serial*

Make corrections if necessary. If **error block** persists despite everything being correct, select **error block**. Once you select **error block** it would take you to the end of the questionnaire. Save and send the record. Inform your supervisor about the error to receive further guidance. Move to the next respondent with a fresh record.

### **Invalid time block**

This would happen if the time taken to cover a section (PSQ, CSQ, PHQ and CHQ) is less than the minimum time limit required to be spent for the section. The minimum limits for each section are

- PSQ 15 minutes
- CSQ 10 minutes
- CASCADA 5 minutes

The workers would receive an **error block** message on the screen showing a question as fill time for the section e.g PSQ fill time or CSQ fill time. When you mark it as yes and try to swipe forward it would give a message as follows:

*Sorry. This response is invalid.*

Since this means you have not spent enough time with the woman for this section, you must do the section again with the respondent. Hence you must go back to the *start time* screen for this section and conduct the interaction again.

### **Duplicate child follow-up error**

- 7) This would happen if you try to fill a child follow-up record for a father whose child follow-up record has already been filled in a previous visit. This could happen either because you forgot that you have already filled a follow-up record for a given father or have entered a wrong GHQ or husband serial. In this case you will get an **error block** with a message as follows:

- *Duplicate child follow-up. Check GHQ serial and husband serial*

Make corrections if necessary. If **error block** persists despite everything being correct, select **error block**. Once you select **error block** it would take you to the end of the questionnaire. Save and send the record. Inform your supervisor about the error to receive further guidance. Move to the next respondent with a fresh record.