VISIDA App Guide

Setup and Configuration

Device Requirements

The VISIDA app is designed for Android smartphones with an operating system of 7.0 and above.

To check the operating system on a device:

1. Open the device's settings

2. Tap **'About Phone'** or **'About Device'**

3. Tap Android version to display version information.

Please Note: The phone should also have a working camera and microphone, and the user should have access to a USB cable to connect the phone to a computer to export data. The USB cable will also be required to download and install the app if the user will not be downloading directly to the phone using an internet connection.

Download and Install the VISIDA App

The VISIDA app is designed for Android phones and can be installed by downloading the file below and following the installation instructions. It can be downloaded to your computer and transferred using a USB cable, or downloaded directly to the phone using an internet connection.

Computer Download Steps:

1. Check that the phone settings allow for apps to be installed from unknown sources. To do this, open **'Settings,'** open **'Lock screen & Security'** or similar security tab. Look for **'Unknown Sources'** and toggle on to allow installation of apps from unknown sources.

2. Download the VISIDA app by clicking on the file **'VISIDA.apk'** below.

3. Once the download is complete, connect the phone to the computer.

4. Move the **'VISIDA.apk'** file to the download folder on the phone. Drag the file into the folder. Alternatively, copy & paste the file by right clicking on the file, selecting copy, right clicking inside the Download folder on the phone and selecting paste.

5. Once the file has been moved onto the phone, disconnect the phone from the computer.

6. On the phone, open the **'Download'** folder. In most phones, this folder is located in a **'My Files'** or **'File Manager'** application.

7. Select the **'VISIDA.apk'** file.

8. When prompted, select **'Install'**

9. When prompted, select **'Done'**

Direct Download Steps:

1. Check that the phone settings allow for apps to be installed from unknown sources. To do this, open **'Settings,'** open **'Lock screen & Security'** or similar security tab. Look for **'Unknown Sources'** and toggle on to allow installation of apps from unknown sources.

2. Copy this webpage link into the browser on the phone

3. Download the VISIDA app by clicking on the file **'VISIDA.apk'** below.

4. If prompted, click **'OK,'** the file will download to the phone.

5. Once the download is complete, click on the file to begin the installation

6. When prompted, select **'Install'**

7. When prompted, select **'Done'**

Configure the VISIDA App

The VISIDA app is capable of being configured to best suit the use case. Settings such as language, audio instructions and icon types can be changed here. This can be done by the user themselves or by a research assistant/field worker prior to the data collection period.

Steps:

1. Open the VISIDA app to the set-up page.

2. Click '**App configuration**'

3. Select if intake will be captured as discrete plates only (food eaten only from an individual plate per person), shared plates only (food eaten only from plates shared between multiple people) or a combination of discrete plates and shared plates. If unsure, we will cover the use case for each of these options in Module 4.

4. Select the app language. The language selected will be used throughout the app for all instructions, both written and audio (where available).

5. Select whether audio instructions should be available for each app button. When this is enabled the user will be able to press and hold any button with a speakerphone icon and hear the associated audio instruction. If audio instructions are not available in the chosen app language this option will not be available.

6. Select whether images should be locked. If the VISIDA app web platform will be used to code the data, this should be enabled. If disabled, the user will be able to take images at any angle, however this would invalidate the quantification tools in the VISIDA web based platform.

7. Select whether text input should be enabled for records. Turning on this feature will replace the voice recording requirement with a text entry requirement.

8. Choose which icons will be used for each of the data collection methods. A range of icons are available reflecting multiple eating styles.

9. A pin number can also be set here to restrict access to the configuration settings. This is useful if the app is being prepared on behalf of a user by a field worker so that the settings cannot be changed by the user.

10. Click '**SUBMIT**'

Please Note: If any settings need to be changed at any time, press the on the home screen, enter the pin (if set) and select **'CONFIGURE'**.

Set-up Participant Profiles

Before collecting any data, the participant profile/s needs to be set up for the household. Profiles should only be created for those in the household who will be collecting intake data or will be having intake data collected on their behalf (i.e. children). The name of each user and their photograph will only be stored locally on the phone, the data that is transferred in the app export will be de-identified.

Steps

1. From the Settings screen click **'SETUP HOUSEHOLD'**

2. Click the   icon.

3. Click the camera icon to take a profile picture. If prompted, select **'Allow'** to give VISIDA access to your phone's camera.

4. Enter the Household ID.

5. Enter the Participant ID.

PLEASE NOTE: You will have received your household and participant ID number in an email. Please use this number for both the household and participant ID.

6. Enter the individual's Name.

7. Use the Age wheel to select the individual's age.

8. Select the individual's sex.

9. If over the age of 18, select the individual's life stage.

*Note: If neither pregnant or breastfeeding, select **'None.'**

10. Click **'SUBMIT.'**

11. Repeat for each individual in the household for whom data will be collected.

Please Note: if creating a profile for a child under the age of 2 years old, the age can be specified in months and the child can be marked breastfed or not breastfed. Selecting breastfed will allow for breastfeeding occasions to be captured.

Set-up Household Reminders

Household reminders assist users in collecting their daily intake by sending notifications to the phone at their usual eating times. A reminder will also be sent at the end of each day to remind the user to review their day of intake and add any missed food items.

Steps

1. Click on the icon.

2. Click on each of the icons to set the dates for collection days 1, 2 & 3.

3. Click on each of the icons to set the meal collection reminder times. Set these to be around the typical time the user would consume main meals.

4. Once all reminders have been set, click **'SET REMINDERS'**

5. Set your end of day review reminder. The end of day review time will automatically be set for 7:30pm. To change this, click on the blue text. This reminder should be set for a time after the user would typically finish eating for a day.

Please Note: If you are using household reminders make sure that the volume on your phone for notifications is turned up so that you can hear the alerts.

App Overview

App Home Screen Buttons Explained

There are a variety of buttons and icons in the VISIDA app that perform various functions. This video will explain the function of each of these, starting from the Home screen.

This is the home screen of the VISIDA app, it will look slightly different depending on how the app was configured on set up.

NOTIFICATION BELL

Reminder notifications for intake collection, finalising and end of day review are stored here. Clicking on the bell will show all notifications, clicking on a notification will take the user to the page where the action needs completing.

SETTINGS COG

All settings for the app are found here. If a pin number has been set to protect these settings, the user will be prompted to enter it on clicking this button.

 OR

OWN PLATE or EATING

Own plate should be used for collecting food items before eating that are only eaten by one person. This includes single food items or multiple food items that are consumed by an individual from their own plate.

SHARED PLATE

Shared plate should be used for collecting food items before eating that are shared among multiple people. This can be single items that are shared i.e. a pack of snack food, or common plates of food that are shared i.e. a bowl of rice in the centre of the table.


FINALISE EATING

After a meal has been eaten it should be finalised. This gives the user an opportunity to report what was eaten in the meal, how many people in shared meals were eating, and any leftovers.

COOK

Any food that is cooked or prepared in the home can be collected here as a recipe. The recipe name, each of the ingredients and the recipe final image are all collected here.
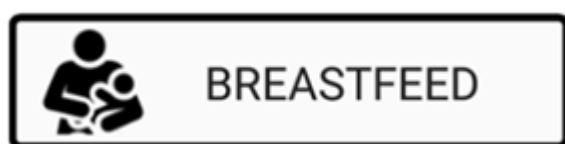
BREASTFEED

This button will only appear if a profile for a breastfed child has been created. It allows for breastfeeding occasions to be recorded as a frequency.

HELP BUTTON

Appears on every page in the app and will show the relevant instructions for the open page. Instructions will appear in the language set on app configuration where available.

HOME BUTTON

Appears on all pages of the app, will return the user to the app home screen.

BACK BUTTON

Appears on all pages in the app, will return the user to previous page.

How to use the Audio Buttons

Audio buttons allow for the user to hear the name of the button when that button is held down. This is helpful for users with limited written language literacy or visual impairment.

When audio instructions are enabled, buttons that have this audio playback feature will have a megaphone icon in the top left corner.

When the user taps and holds down the button, the audio name will be played.

Help Button and Instructions

The VISIDA app contains instructions that can assist the user to use the app. Please note, these instructions are not a replacement for user training.

When available for the language selected, there will be written and audio in-app instructions for each page within the app. There are instructions available only for selected languages at this time, however we plan to expand the number of languages available. Selection of the app language is completed during the app configuration step.

To access these instructions, click on the icon. The instructions for the corresponding page will appear. A megaphone icon is used to indicate an audio instruction exists. Press and hold this icon to listen.

The Fiducial Marker

When capturing intake data using the VISIDA app, it is important to use the fiducial marker. This will be provided to you. This marker is used to assist the user in taking images at the correct

angle. It also acts as a constant, an item that we know the dimensions of that is in every image. This allows for quantification to be more accurate.

When taking an image, ensure that the fiducial marker is placed beneath the food item and that both the food item and the marker are clearly shown through the camera view finder.

Align the cross with that on the marker and angle the phone up and down until both dots turn green.

The fiducial marker allows for size estimates to be made more accurately by sight. Additionally, it allows for quantification tools in the CMS to be used, like the on-screen ruler.

Capturing Intake Data

Capturing Recipes

The VISIDA app allows users to collect recipes for the food items they cook and prepare within the home. Data on the recipe name and ingredients are captured in the form of images and voice recordings. The date and time the recipe was prepared are captured automatically.

Steps

1. From the VISIDA home screen, click '**COOK**'

2. Click on the plus icon

3. Click on the to record the recipe name

4. If prompted, click '**ALLOW**' when asked to allow VISIDA to record audio

5. Click the to start recording

6. Click the to stop the recording

7. To listen back to the recording, click If happy with the recording, click the icon. If wanting to re-record, click the icon

8. To begin collecting ingredients, click **'ADD INGREDIENT.'** The camera view finder will open and allow for an image to be taken of the ingredient. The fiducial marker

 should be placed in front of the food item and should be completely visible through the view finder. The cross needs to be aligned with the center of the marker and the phone angled until both dots turn green. The image can then be taken by pressing the camera icon.

9. To accept the photo, click To re-take the image, click

10. Collect an audio recording for the image. Describe the ingredients contained in the image. Make sure to include as much detail as possible.

11. Follow the same process to capture all ingredients. Multiple ingredients can be captured in one image, or as individual images per item. Once all ingredients have been captured, click **'SUBMIT.'**

12. When prompted, click **'YES'** to record a final image of the completed dish. Just as with each of the ingredients, place the fiducial marker in front of the final food item and align the cross with the center of the card. Angle the phone until both dots turn green and take the image. Once taken, use the tick to accept the image or the cross to re-take the image.

Please Note: The recipe will now appear in the recipe list and is available for editing until the day has been finalized. To make changes to the recipe, click on the '**Edit**' button. Add forgotten ingredients by clicking the '**ADD INGREDIENT**' button and delete any ingredients by pressing and holding the image.

Capturing Eating Occasions

Eating occasion data is captured both prior to consumption **and** at the conclusion of the eating occasion.

When collecting prior to consumption, this data is captured in the form of discrete servings and/or shared servings, depending on the eating styles context for the group in which dietary intake data is being collected. Whether the food item was collected as discrete or shared serving will impact the steps taken to finalize the food item at the end of the eating occasion.

The VISIDA app can be configured to capture **three distinct eating styles:**

1. Discrete servings only: This is when food is served for one person and consumed only by that person.

This configuration is denoted by the button "**EATING**" on the app's home screen.

EATING

FINALISE EATING

COOK

BREASTFEED

2. <u>Shared servings only:</u> A shared serving is a food item that is served in a single vessel (e.g. plate or bowl) and consumed by multiple people from this same vessel.

This configuration is denoted by the button "**SHARED PLATE**" on the app's home

VISIDA 🔔 ⚙

EATING

SHARED PLATE

FINALISE EATING

COOK

BREASTFEED

screen.

3. <u>Combination of discrete and shared servings:</u> This is when both discrete and shared servings are present during the eating occasion. Often individuals will add food from the shared serving and mix with food on their own (i.e. discrete) serving of another food.

This configuration is denoted by both to capture both **"OWN PLATE"** and **"SHARED PLATE"** buttons on the app's home screen.
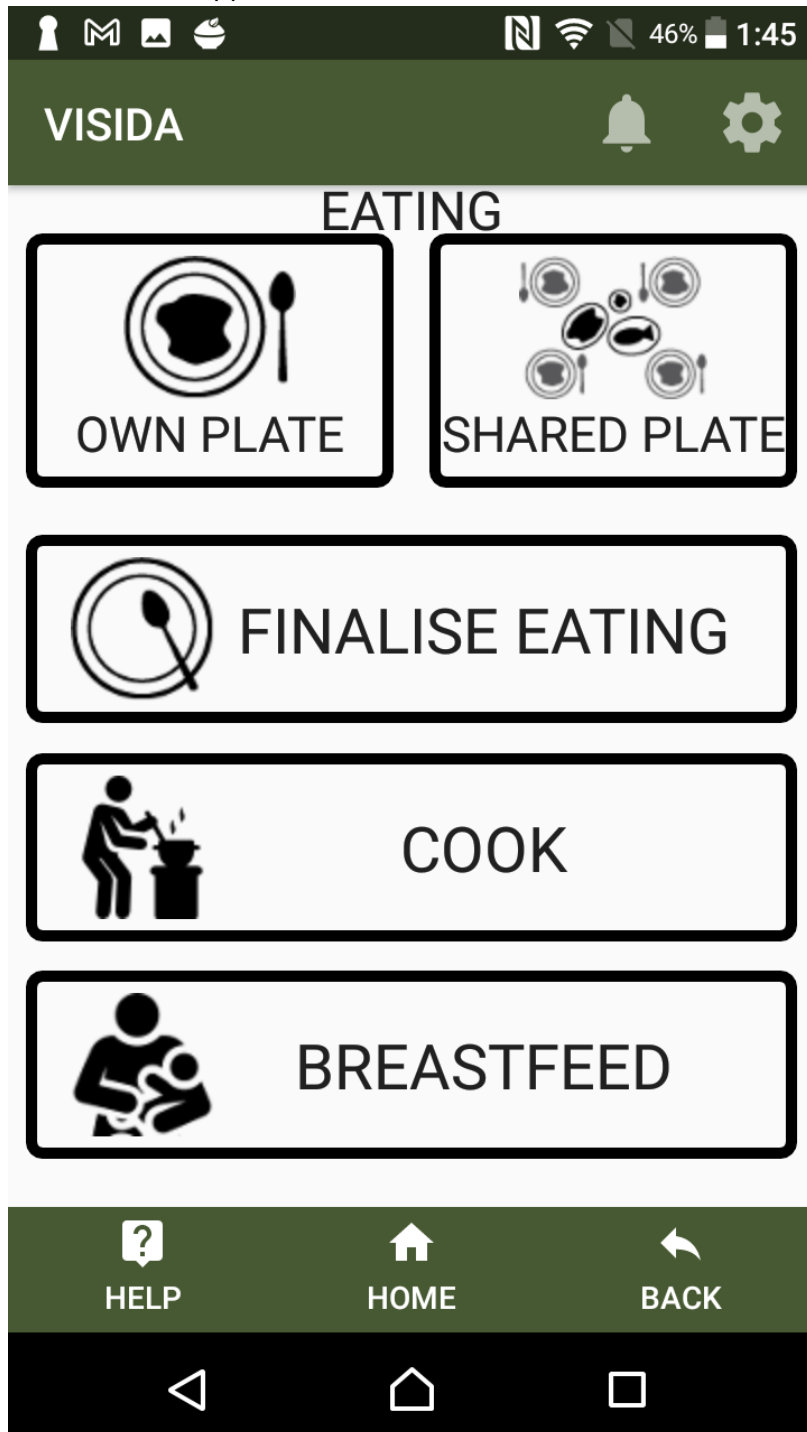
Capturing Discrete Servings

The VISIDA App allows users to collect intake data as discrete or shared plates, depending on how the app was configured on app set up. The following lesson will walk through the steps of collecting a discrete serving record, shared plates will be covered in the following lesson.

Steps

1. Click '**OWN PLATE**' or **'EATING'** depending on the app configuration

2. Select the user for whom the food is being collected for

3. Click '**ADD FOOD**'

4. The camera view finder will open and allow for an image to be taken of the food item. The fiducial marker should be placed in front of the food item and should be completely visible through the view finder. The cross needs to be aligned with the center of the marker and the phone angled until both dots turn green. The image can then be taken by pressing the camera icon.

5. To accept the photo, click   To re-take the image, click

6. Click the icon to collect an audio recording for the image. Make sure to include as much detail as possible, including quantities and any brand names.

7. Click the icon to stop recording

8. Press the icon to listen to the recording, the icon to accept the recording or the icon to re-record.

9. To link a recipe already recorded to this eat record, click '**LINK RECIPE**,' and tick the checkbox next to the recipe that was used before clicking '**ACCEPT**.'

10. When you have captured all food items for this eating occasion (i.e. a glass of water, a bowl of soup and a plate of rice), click '**SUBMIT**'

Capturing Shared Servings

The VISIDA App allows users to collect intake data as discrete or shared plates, depending on how to app was configured on app set up. The following lesson will walk through the steps of collecting a shared plate record.

Steps

1. Click '**SHARED PLATE**'

2. Click '**ADD FOOD**'

3. The camera view finder will open and allow for an image to be taken of the food item. The fiducial marker should be placed in front of the food item and should be completely visible through the view finder. The cross needs to be aligned with the center of the marker and the phone angled until both dots turn green. The image can then be taken by pressing the camera icon.

4. To accept the photo, click   To re-take the image, click

5. Click the icon to collect an audio recording for the image. Make sure to include as much detail as possible, including quantities and any brand names.

6. Click the icon to stop recording

7. Press the icon to listen to the recording, the icon to accept the recording or the icon to re-record.

8. Once all food items for this eating occasion have been captured (i.e. a glass of water, a bowl of soup and a plate of rice), click '**SUBMIT**'

Finalising eating occasions

After eating each meal, users should finalize their eat records. This function also offers the opportunity for users to record any leftovers and to note the total number of people who ate

from each shared plate. This process is slightly different for discrete and shared plates. Both scenarios will be demonstrated in this lesson.

Finalizing a discrete plate

Steps

1. Click '**FINALISE EATING**'

2. Select the profile for the person who you are finalizing for. If there are records that require finalizing there will be an asterisk next to the person's name.

3. Click '**FINALISE**'

4. If the the person in shown at the whole meal, click **'ATE ALL'** if they did not consume any of the food in the image click **'DID NOT EAT'** if they ate some of the food and there are any leftovers, click '**ATE MOST**'

5. The camera view finder will open and allow for an image to be taken of the food item. The fiducial marker should be placed in front of the food item and should be completely visible through the view finder. The cross needs to be aligned with the center of the marker and the phone angled until both dots turn green. The image can then be taken by pressing the camera icon.

6. To accept the photo, click   To re-take the image, click

7. Click the icon to collect an audio recording for the image. Make sure to include as much detail as possible, including quantities and any brand names.

8. Click the icon to stop recording

9. Press the icon to listen to the recording, the icon to accept the recording or the icon to re-record.

Finalizing a shared plate

Steps

1. Click '**FINALISE EATING**'

2. Select the profile for the person who you are finalizing for. If there are records that require finalizing there will be an asterisk next to the person's name.

3. Click '**FINALISE**'

4. If there were leftovers, select '**YES LEFTOVERS**' and follow the same steps 5-9 above to take an image of the leftover food items. If there were no leftovers, click '**NO LEFTOVERS**.'

5. To record the total number of people who ate from the shared dish use the and buttons to enter the total number of adult males, adult females and children who ate from the dish. When ready, click the icon. Make sure to include all people eating in this count, not just those who have a participant profile in the VISIDA app

6. A photo of the participant will then be shown one at a time in the top left hand corner. If the participant ate from the dish click '**ATE**' if they did not eat from the dish click '**DID NOT EAT**'

7. Repeat for all participants in the household.

Capturing Breastfeeding Occasions

The VISIDA app allows users to collect breastfeeding occasions as a frequency. A participant under the age of 2 years old must be marked as 'Breastfed' at the time of participant profile set up for the Breastfeeding Button to appear.

Steps

1. Click '**BREASTFEED**'

2. Select the child participant who is being breastfed

3. Click '**CAPTURE**'

4. The following message will appear '**Breastfeed occasion captured**.'

Please Note: If the breastfeeding button has not appeared, ensure that you have a participant marked as 'Breastfed.'

Completing the end of day review

At the end of each day the VISIDA app will send a notification reminder for the user to review their day of eating. The time that this notification occurs is set on app set-up as explained in Module 2, Lesson: Set-up Household Reminders.

Steps

1. Click on the reminder notification

2. Review the entire day of eating

3. If any food or drinks have been forgotten, click **'ADD FOOD'** to record them as a voice recording

4. Click on the icon to start recording. You can record all missed items in one audio file or, record multiple individual audio files.

5. Click the icon to stop the recording

6. To listen back to the recording, click If happy with the recording, click the icon. If wanting to re-record, click the icon

7. Once all missed food and drinks have been added, click **'DAY COMPLETE'**

Please note: Once this step has been completed, the data recorded will no longer be available for editing in the app.

Data Verification and Export

Verifying intake data

The VISIDA app provides an in-app verification screen to check all collected intake data for all users prior to exporting. This is helpful for users if they would like to screen all collected images before exporting and can be used by field workers to check intake with the user and manually fill in any missed items.

Steps

1. Click on

2. If a PIN was set on app set-up the user will be prompted to enter it now

3. Click **'VERIFY.'** Records are displayed in chronological order for all recording days, for each user

Exporting Data – Local

The VISIDA app allows for data to be exported locally to a computer using a USB cable. This allows for data to be collected easily in populations where access to the internet is limited or unavailable.

Steps

1. Click on

2. If a PIN was set on app set-up the user will be prompted to enter it now

3. Click on '**EXPORT DATA**'

4. If the export is successful, the message '**Data Export Complete**' will appear. If you have a large volume of data, this may take a minute

5. Connect the phone to the computer

6. Using the file explorer on the computer, open the '**Download**' folder in the on the phone

7. Look for a zip folder with the words '**ExportMedia**'

8. Move or copy and past the folder onto the computer

9. Disconnect the phone

Preparing the app for new users

How to Delete App Data

In instances where multiple individuals will be using a common phone to collect their intake data one after the other, the data will need to be removed between each user. This is important to ensure the previous user's privacy is protected. This lesson will walk you through the steps of completely removing the app data from the phone without having to delete and re-install the app.

Steps

1. Open the phone's settings

2. Locate '**Apps**' or '**Applications**'

3. Click on the VISIDA app

4. Click '**Storage**'

5. Click '**CLEAR DATA**'

6. Click '**OK**'

Please Note: Deleting the data will remove ALL data including the participant's profile. Please confirm that a copy has been exported and saved before proceeding.

How to Uninstall the VISIDA App

When a user has completed all data collection, it is good practice to uninstall the VISIDA app. This lesson will walk you through how to do this.

Steps

1. Open the phone's settings

2. Locate '**Apps**' or '**Applications**'

3. Click on the VISIDA app

4. Click '**UNINSTALL**'

5. Click '**OK**'

Instructing clients on how to use the app

Suggested Training Process

Suggested Training Process

Now that you are familiar with the VISIDA app, you will also be able to train others to use the app. In this module we will provide a brief training framework for both face-to-face and virtual training mode. These frameworks are just a suggestion. You can use this framework or you can create your own. This lesson will cover the suggested setting, equipment and resources for each training mode. You can also access the following resources here: Printable version of the fiducial marker, sample test food images and a checklist for both training modes.

Face-to-face

Setting

Training space: Ensure you have a large enough space so the number of participants you will be training can sit comfortably. If you will be collecting personal information from participants, make sure this space also allows for private, 1:1 conversations to take place without other participants overhearing.

Group size: Groups should be small; with between 1 and 4 participants per trainer, per training session.

Equipment

Android phone: All trainers should have access to an Android phone with the VISIDA app installed. They should also have completed this course or, been taught how to use the app by

someone who has completed this course and demonstrated their understanding. All participants should have access to an Android phone with an operating system of 7.0 or above that is charged and ready for training. This can be their personal mobile device that they bring with them to the training session, or you may wish to provide them with a suitable phone yourself.

App file: All trainers should have access to the VISIDA.apk file so that it can be copied onto participant's phones if they are unable to download and install the app themselves. The app file can be downloaded by the participant to their personal phone prior to the training session, or you can copy the file onto their phone during the training session.

Laptop or desktop computer: Trainers should have access to a laptop or desktop computer and should have the VISIDA.apk file saved on this computer.

USB cable: If using their personal mobile phone, the participant should also bring their own suitable USB cable so that their phone can be plugged into the computer, and the app file can be transferred onto the phone. If using a phone provided by your team, ensure that you have a working USB cable suitable for the phone to transfer the app file.

Fiducial marker: All trainers should have access to multiple fiducial markers to both demonstrate the process and give to users to take home for the duration of the data collection period. We suggest providing users with more than one marker in case one is lost or damaged. The fiducial marker can be ordered in hard copy directly from the VISIDA project team, or you can use the downloadable version below and print it to the described specifications. If you choose to print the cards we would suggest laminating them to protect them from damage.

Resources

Training tools: We suggest preparing some test images of foods, descriptions of food items or pretend food items (empty packets, toys or food models) that can be used in the training process to test each user's understanding of the app. We have created an example of test images in the document below with example of how to capture more of your own if you prefer.

This course: We suggest that trainers have access to this course, either through internet access on a computer or printed. This will allow trainers to double check anything they're unsure of throughout the training process.

Virtual/Online

Setting

Training space: Online training can be held using an online video meeting program like Zoom or Skype. Ensure that participants have access to a reliable internet connection and are familiar with the preferred meeting program if using this training method.

Group size: The speed of the internet connection will be an important factor in determining the number of participants. Even if the internet connection is fast and reliable, we would suggest aiming for 1-2 participants per group for this mode.

Equipment

Android phone: You should ensure that participants and trainers have access to a suitable phone (Android, version 7.0 an above) prior to organizing the training time and that is charged and ready for training. This can either be their personal phone or you can provide a phone for them. If you are providing the phone, make sure that the participants have received the phone and that it is fully charged prior to the training session.

Laptop or desktop computer: All trainers and participants should have access to a computer with internet access and working microphone. A working webcam is not essential but is preferred.

App file: All trainers should have the app already downloaded and installed on their phone. If you are providing the participant's with phones to use, consider installing the app for them prior to sending them the phone. If they are using their own phone, provide access to the VISIDA.apk file using an online sharing service (e.g. OneDrive or Dropbox) or provide the file on a USB stick.

USB cable: Participants and trainers should each have access to a USB cable to connect the phone they are using (personal or provided) to their computer to download the VSIDIA.apk file and/or export and upload app data.

Fiducial marker: Participants and trainers should have multiple fiducial markers on hand in case one is lost or damaged. The fiducial marker can be ordered in hard copy directly from the VISIDA project team, or you can use the downloadable version below and print it to the described specifications. If you choose to print the cards we would suggest laminating them to protect them from damage. You can send these fiducial markers to participants or they can print the marker themselves if they have printer access.

<u>Resources</u>

Meeting platform instructions: Provide users with instructions on how to access the meeting platform you will be using ahead of time. This will give users time to sign up to the program and/or download the software if required. There are several short videos available on YouTube for most meeting platforms that may be helpful.

Training tools: We suggest preparing some test images of foods or descriptions of food items that can be used in the training process to test each user's understanding of the app. If using test images you can provide these as a hard copy to the user or have them print them. We have created an example of test images in the document below with example of how to capture more of your own if you prefer. Alternatively, if printing or providing hard copy images is not an option, consider preparing a list of test item food descriptions (e.g. a large bowl of steamed jasmine rice) that the user can write on paper and take images of during the training.

This course: We suggest that trainers have access to this course, either through internet access on a computer or printed. This will allow trainers to double check anything they're unsure of throughout the training process.

Checking Understanding

As part of the training process, we have found ensuring participants can demonstrate competency in using the app correctly to be essential in optimizing the quality of data

collection. We also recommend a 'test' recording day where participants can collect data independently using the app with no or minimal support from a researcher or field worker. The data collected from this test recording day can then be viewed by the research or field work team and feedback given to participants as required.

Tasks

Participants demonstrate competency by completing brief tasks. Tasks are small actions that can be completed during the training session to demonstrate understanding of key concepts. This could include the use of the test images or food item names discussed in the previous lesson. Participants could follow along with your training session with their own phone, practicing each data collection type on the app live as they go.

Test recording day

As this method of collecting intake data is likely to be unfamiliar to most participants, we would strongly encourage you complete a 'test' recording day (of at least two eating occasions) with each participant on their first independent use of the app. You may also wish to have a member of the research or field work team present and on-hand to assist participants if required. If this is not possible, you could ask the participant to complete a test day of data collection on their own. Once the test recording day is completed, a member of the team could then meet with the participant face-to-face (or virtually), where data from the app which can then be viewed to check for completeness and any feedback provided. Such an approach aims to identify and address any data collection issues with the participant prior to starting the actual data collection of dietary intake day(s) that will be used as outcome analysis. This approach would also allow for participants to ask any additional questions that came up during their test recording day of using the app.

Learnings from our field experience using the app

In our experience, there are a few areas of the data collection process when using the app that participants may find more challenging than others. The list below will detail each of these areas, we would recommend spending additional training time on these areas.

1. Selecting the correct eating occasion eating style.

In instances where the app has been configured for both discrete and shared eating styles, some participants may struggle to understand when each collection style should be used. The definitions for each are laid out clearly in Module 4. To assist in improving data collection accuracy, we suggest clearly demonstrating the difference between shared and own plates and testing the user's understanding of these definitions. Including a test recording day in this scenario is strongly recommended.

2. Correctly recording the total number of people eating a shared plate.

In instances where the app has been configured to allow for eating styles that include shared plate collection, some participants may record the total number of people eating incorrectly.

This is usually due to confusion over whether or not to include participants and non-participants in the calculations. Calculations should always include everyone participating in the meal. This includes participants (those with a profile in the app) and non-participants (those without a profile in the app). To improve data collection accuracy, we suggest having the user demonstrate the collection of a shared plate for a combination of participants and non-participants.

3. Including all ingredients in recipes

When collecting recipes we have found that participants may frequently forget to include certain ingredients that are often added during the cooking process. These include water in soups, and additional oil and seasoning condiments like salt and pepper. To improve data collection accuracy, we suggest encouraging participants to record all ingredients, including water and others added during the cooking process. Additionally, it may be helpful to advise participants to record missed ingredients as a voice recording if they have added them during cooking and forgotten to record an image at that time.

4. Collecting a final recipe image

When collecting a final recipe image participants often forget to capture the final recipe image or, they collect an image of an eating occasion as the final recipe image. It is important for users to capture the complete dish in the final recipe image to assist in providing contextual information about the number of servings it provides. To improve data collection accuracy we suggest explaining the importance of this image capture to participants.

5. Finalizing

Finalizing allows users to record what happened to a food item. This includes the collection of any leftovers and total number of people eating when shared plates have been used. Sometimes users forget to finalize an eating occasion, failing to record any leftovers and number of people eating. To improve data collection accuracy, we suggest emphasizing that the app should used before AND after each eating occasion to capture a complete picture of the intake data.

FAQs

Area: App installation

Problem: I have downloaded the app file and have put it on my phone but I can't find it.

Solution: Different phone types store the downloads folder in different places. Try looking for a 'My Files,' 'File Manager' or 'Downloads' app on your phone, or if your phone has a search bar, try searching for the app file by name.

Problem: My phone won't let me install the app.

Solution: Make sure that the Android version on your phone is Android 7 or higher. If it is and the problem persists, make sure you have followed the steps to change your settings to allow for apps to be downloaded from unknown sources. If you still cannot install the app, contact the VISIDA Project team.

Area: App configuration and Household Set-up.

Problem: The breastfeeding button is not appearing on the home screen.

Solution: In order for the breastfeeding button to appear, you must have a participant profile for a child under the age of 2 years who has been marked as breastfed.

Problem: The 'turn on audio buttons' is greyed out.

Solution: This means that there are not currently any audio instructions for the language you have selected.

Area: Capturing data

Problem: The phone camera won't allow me to take an image.

Solution: Ensure that you have given the app permission to access your camera. To check this, go to Settings, Apps, VISIDA and make sure that 'Allow access to camera' is turned on.

Problem: The phone won't allow me to make a voice recording.

Solution: Ensure that you have given the app permission to access your microphone. To check this, go to Settings, Apps, VISIDA and make sure that 'Allow access to microphone' is turned on.