

MINISTRY OF HEALTH



ZANZIBAR MALARIA ELIMINATION PROGRAMME

**Malaria Surveillance in Zanzibar Field Manual for:
Health Facilities, District Malaria Surveillance Officers,
and Surveillance Monitoring and Evaluation Team**

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List of Abbreviations

DMSO	District Malaria Surveillance Officers
LLIN	Long-lasting Insecticide-treated Net
MCN	Malaria Case Notification
MCR	Malaria Case Register
MEEDS	Malaria Early Epidemic Detection System
mRDT	Malaria Rapid Diagnostic Test
PIN	Personal Identification Number
SME	Surveillance Monitoring and Evaluation
SMS	Short Message Service
USSD	Unstructured Supplementary Service Data
ZAMEP	Zanzibar Malaria Elimination Programme

Chapter 1: Introduction

1.1 Overview of the Malaria Early Epidemic Detection System (MEEDS) and Malaria Case Notification (MCN) System in Zanzibar:

MEEDS was implemented in 2008 to identify abnormal (according to defined thresholds) increases in malaria cases based on weekly reported data. Epidemic thresholds have been set at the *shehia*, village, and facility levels, as shown in Table 1. If the number of confirmed cases reported by a health facility exceeds the threshold level, an investigation process is implemented. Since establishing these thresholds, remarkable achievements have been made in successfully controlling malaria in Zanzibar. However, to ensure that these gains are sustained over time, proper monitoring systems must be in place.

Table 1: Epidemic thresholds for malaria cases in Zanzibar

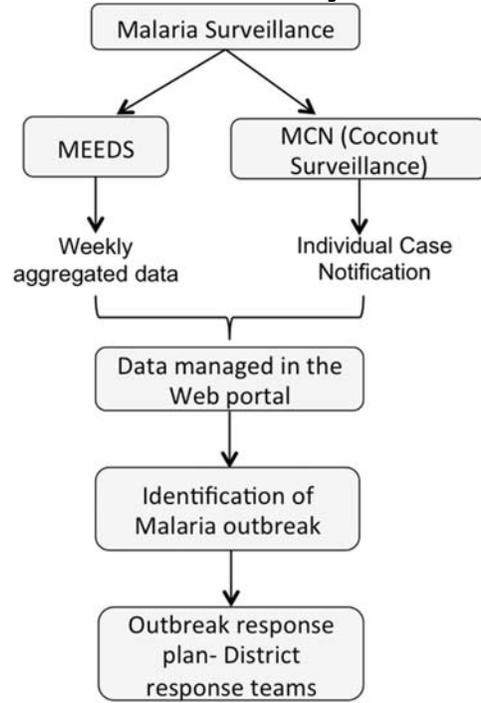
Level	Alert	Alarm
Facility/ <i>Shehia</i>	5 or more cases in patients <5 years of age or 10 or more total cases within 7 days	10 or more cases in patients <5 years of age or 20 or more total cases within 14 days
Village	5 or more total cases within 7 days	10 or more total cases within 14 days
District	Specific for each district and week, based on 5 years of previous data	

The Coconut Surveillance system was established in 2012 to build on the success of MEEDS. This system allows district malaria officers to actively monitor new malaria cases reported through MEEDS and to respond to individual cases. These two surveillance systems help to identify malaria outbreaks and facilitate responding to them quickly. Timely and accurate surveillance is extremely important to ensure that Zanzibar moves towards malaria elimination.

The purpose of this manual is to outline these two malaria surveillance systems (MEEDS and MCN) in Zanzibar. This field manual has been divided into four sections. The details of the steps involved in each system are explained so that this document can serve as a malaria surveillance field manual for 1) health facilities, 2) District malaria surveillance officers (DMSOs), 3) surveillance monitoring and evaluation (SME) teams, and 4) the SME administration team.

This manual also describes the features of the web portal that was designed to manage the data and perform basic analysis. This web portal enables data dissemination to stakeholders through weekly reports and helps to identify sudden increases in malaria cases. When such an increase is detected, an outbreak response plan is initiated by the district response teams, as shown in **Figure 1**.

Figure 1: Overview of the MEEDS and MCN system in Zanzibar



Chapter 2: Manual for Health Facilities

This section of the manual provides guidelines for health facilities on how the MEEDS and MCN system operate. It ends with a checklist for health workers at health facilities to help them verify that all necessary steps have been completed.

2.1 MEEDS

The MEEDS system is based on the weekly reporting of three malaria health indicators by the health facilities via mobile phones using the Unstructured Supplementary Service Data (USSD) system. The three indicators are as follows:

- Number of all-cause outpatient visits;
- Number of positive test results for malaria; and
- Number of negative test results for malaria stratified by age group (<5 years and ≥5 years).

Each week, these data are forwarded by health facilities in Zanzibar to a secure web portal and reviewed by the stakeholders. This system enables SME team to detect malaria epidemic outbreaks within 2 weeks of onset and helps them decide on what actions need to be taken when a sudden increase in malaria transmission is identified.

The following steps outline the procedure that must be followed by medical officers at health facilities to implement MEEDS.

- 1) Health clinics must record the daily number of outpatient visits and the results of the malaria rapid diagnostic tests (mRDTs)/microscopy performed on outpatients with current fever. These values are recorded in a MEEDS weekly data collection booklet that contains weekly forms, as shown below.



- 2) At the health facility, weekly aggregated data are sent to the server via the USSD system. These data include the week number corresponding to the number of the report being submitted and the malaria test results (positive/negative) in the outpatient registers stratified by age group (<5 years and ≥5 years). These data are entered into the red highlighted row on the form.

Mobile phone USSD system (Step-by-step procedure for use by health facilities):

The following steps illustrate the procedure for MEEDS reporting via the USSD system:

- A. Dial the code *150*50*331#.
- B. You will then receive a confirmation message asking you to enter the Personal Identification Number (PIN).
- C. Enter the PIN (1234) and click 'Send'.
- D. You will receive a message asking you to choose an option. Choose the 1st option ('MEEDS') by typing in '1'.



You will then be asked to enter the weekly data, which include seven distinct numbers. To enter each number, click on 'Answer', type in the number, and click on 'Send' as shown below. These numbers are as follows:

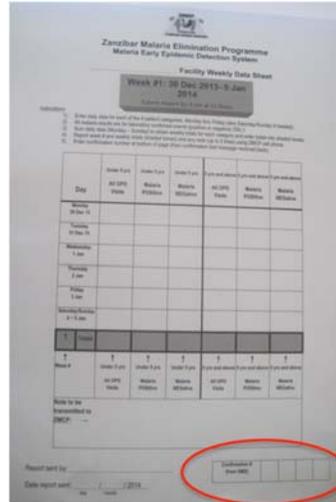
- E. Surveillance report week, which you can find in the MEEDS weekly form.
- F. Number of all-cause outpatient visits by patients under the age of 5 years.
- G. Number of positive test results for malaria for patients under the age of 5 years.
- H. Number of negative test results for malaria for patients under the age of 5 years.



- I. Number of all-cause outpatient visits by patients 5 years of age and older.
- J. Number of positive test results for malaria for patients 5 years of age and older.
- K. Number of negative test results for malaria for patients 5 years of age and older.
- L. Once these details have been sent, you will receive the message notifying you that you will receive a confirmation message shortly, as shown below.



- 1) Once the data are submitted, you will receive a confirmation message with a confirmation code verifying that the report was successfully submitted. You must enter this number into the MEEDS booklet, as shown below.
- 2) If no confirmation message is received, you should contact the Zanzibar Malaria Elimination Programme (ZAMEP) SME team to verify whether the data were actually transmitted.

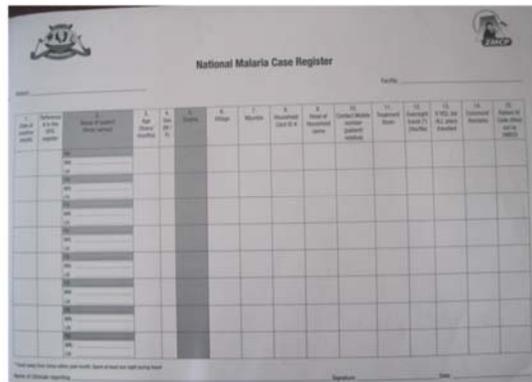
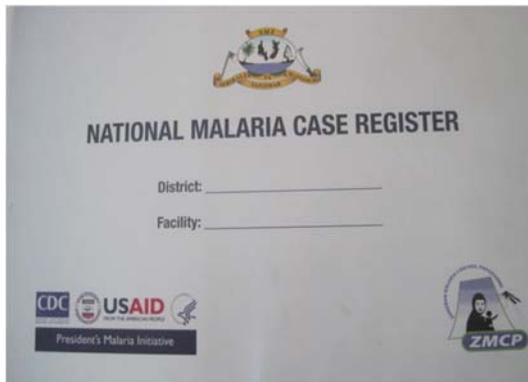


- 3) MEEDS data are sent to the server and managed in the MEEDS web portal, where they are shared with relevant stakeholders.

2 MCN

The MCN system uses the national Malaria Case Register (MCR) to record more detailed information about confirmed malaria cases that are eventually followed up on an individual basis by District Malaria Surveillance Officers (DMSOs). These registers provide quick information about malaria cases when required. Data from the MCR are reported to the server via the short message service (SMS) system and integrated into the Coconut Surveillance application accessed via tablets through the following steps.

- 1) When a case is detected at a health facility in a certain shehia, the patient's details are recorded in the MCR as shown below:



- 2) The health facility then sends the MCN via mobile phone text message to the central server with the patient's first name and the name of the shehia from which the patient came; this information can be found in the highlighted columns in the booklet. The data are sent by following the steps detailed below.

Mobile phone SMS system (Step-by-step procedure for use by health facilities):

- A. Dial the code *150*50*331#.

- B. You will then receive a confirmation message asking you to enter the PIN.
- C. Enter the PIN (1234) and click 'Send'.
- D. You will receive a message asking you to choose an option. Choose the 2nd option ('Case notification') by typing in '2'.



- E. You will receive a message asking you to enter the patient's name. Enter the patient's name and click 'Send'.
- F. You will then receive a message asking you to enter the name of the *shelia* from which the patient came.
- G. Once these details have been sent, you will see a message notifying you that you will receive a confirmation message shortly. You may have to wait approximately 5 minutes to receive the confirmation message, depending on the network connection.
- H. You will receive a confirmation message on your phone; this is the end of the procedure.



2.3 Checklist for health workers at health facilities

Please ensure that the following actions in the checklist have been completed.

2.3.1 MEEDS

	Record the daily number of outpatient visits and the mRDT/microscopy results in the MEEDS booklet.
	Send the weekly aggregated data, which comprises seven indicators, to the server via the USSD system every Monday by 3.30pm.
	Enter the confirmation code from the confirmation message received into the MEEDS booklet.
	If a confirmation message is not received, contact the ZAMEP SME team to verify whether the data were actually transmitted.

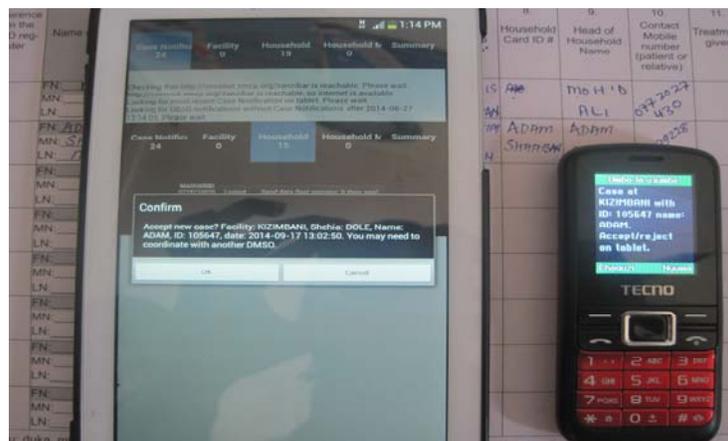
2.3.2 MCN system

	Enter each malaria patient's details in the National MCR booklet.
	Send the MCN via mobile phone text message to the server with the patient's first name and the name of the shehia from which the patient came.
	Verify that a confirmation message was sent to your phone.

Chapter 3: Standard Operating Procedure for DMSOs

Once a health facility reports a case to the MCR, the DMSOs are then notified to follow up on the case within 24 hours. Ideally, 90% of all notified cases should be followed up at the health facility level within 24 hours of MCN and at the household level within 48 hours of health facility follow-up. The DMSOs should ensure that their tablets have active Internet bundles to connect to the system. The step-by-step procedure by which data are reported to the server via the Coconut Surveillance application on each tablet is described below.

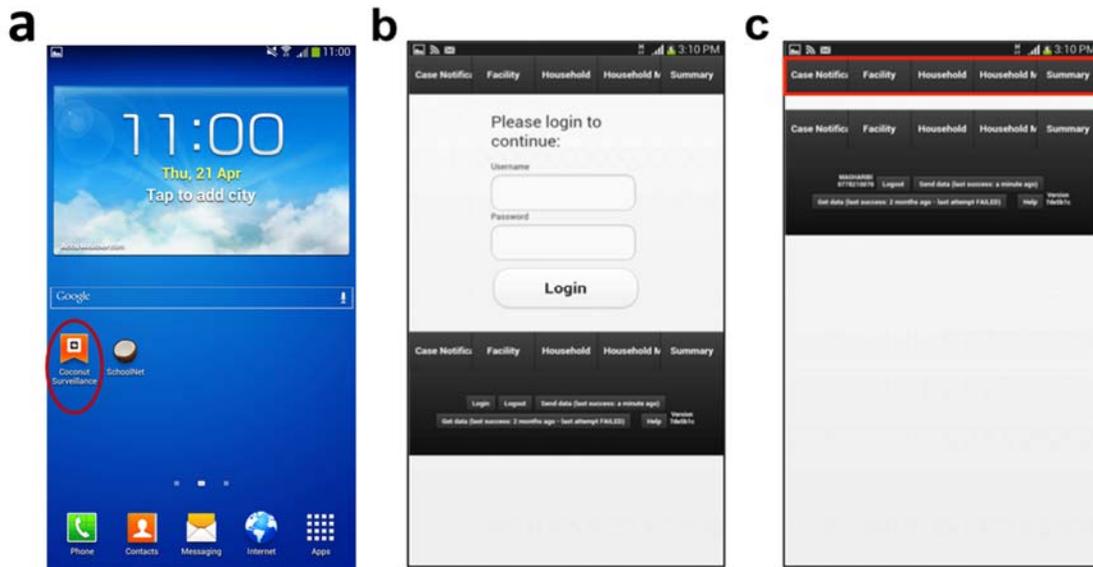
- 1) The DMSO receives an MCN from the server on his/her phone and in the Coconut Surveillance application on his/her tablet, as shown below.



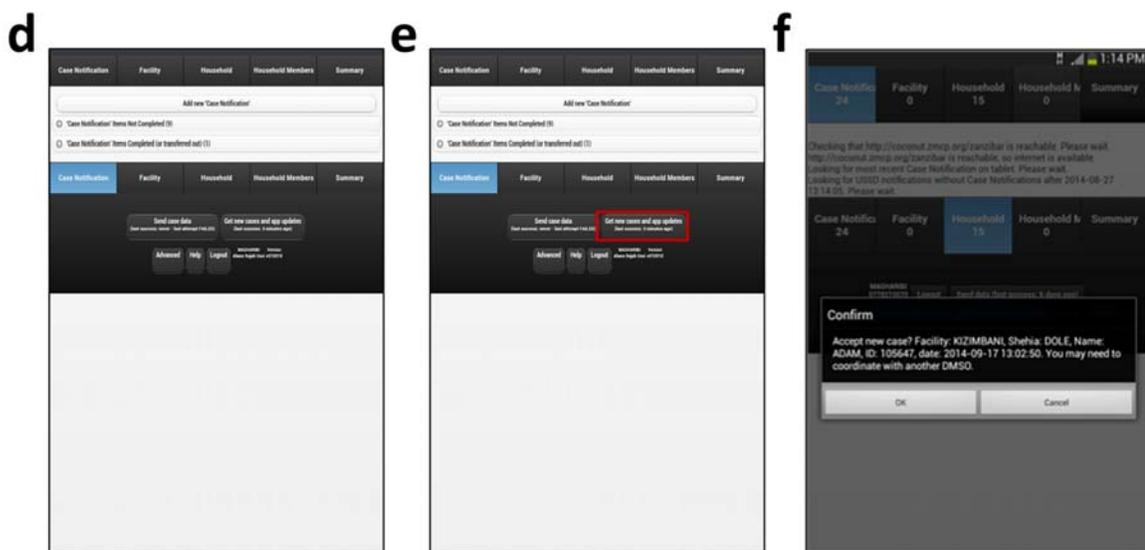
- 2) If the DMSO can go to the health facility to collect the data, he/she will accept the MCN on the tablet. If the DMSO is unable to follow up on the case, he/she will reject the MCN and contact the second DMSO in that district to follow up on the case. The following are the step-by-step instructions for using the Coconut Surveillance application on the tablets.

3.1 Coconut Surveillance System (Step-by-step procedure for use by DMSOs):

- A. Open the '**Coconut Surveillance**' application on the tablet.
- B. The log-in screen will open up. Type in the username and password provided to you and click '**Login**' to log into the application.
- C. The home page will be displayed, showing the different features of the Coconut Surveillance system, including '**MCN**', '**Facility**', '**Household**', '**Household members**' and '**Summary tabs**'.

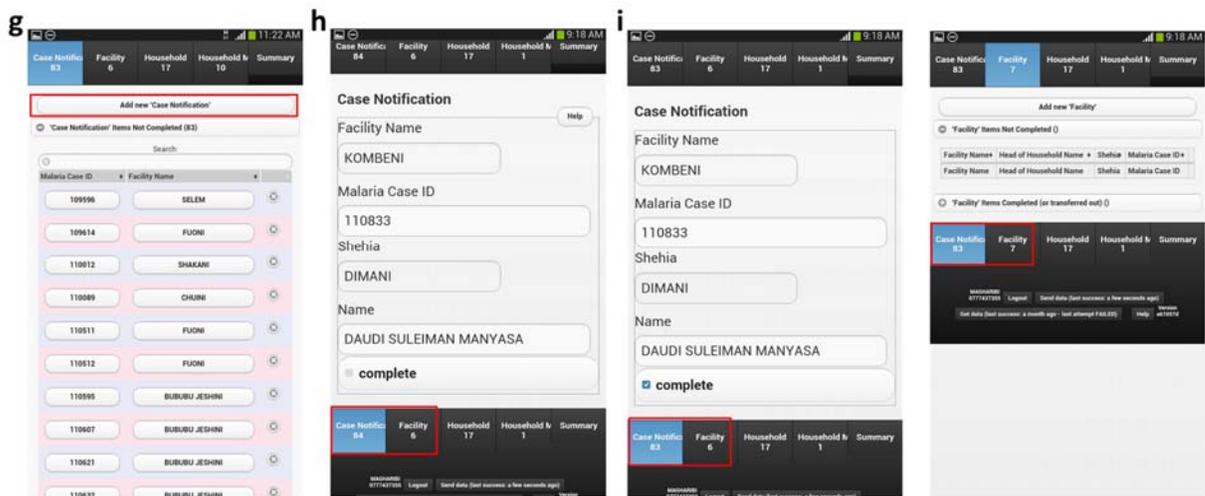


- D. Click on '**Case Notification**' to go to the home page where all notified cases are listed.
- E. Click on '**Get new cases and app updates**' to receive cases.
- F. If a case has come in, you will receive a message (USSD notification) notifying you of the case and asking you to accept it. To accept the case, click on '**OK**'; to reject the case, click on '**Cancel**'.



- G. Click on the '**Case notification**' icon. The new case can be found under the tab '**Case Notification Items Not Completed**'. At times, there may be a delay in receiving messages because of poor network connectivity, and you may not receive the USSD notification. If this occurs, when you arrive at the specified health facility, you can add a case manually by clicking on the '**Add new Case Notification**' icon at the top of the page.

- H. Fill in the details in the MCN form. The sections include the following: **'Facility Name'**, **'Malaria Case ID'**, **'Shehia'**, and **'Name of the patient'**. Most sections will be automatically filled in by the system when it receives the USSD message. Once these sections have been filled in, click on the **'complete'** icon at the bottom of the form.
- I. On the **'Case Notification'** icon at the bottom left, after clicking **'complete'**, the number of cases displayed should be one less than before. For example, if there were 84 cases previously (as shown in 'h' below), then after completing the form, there should be 83 cases left (as shown in 'i' below). Additionally, the case will be moved to the next stage of the process, which is the **'Facility level'**. Hence, when you click the **'Facility'** icon, you should see that a case has been added to the **'Facility'** tab (as shown in 'i' below).



- J. If a form has not been filled in properly, it will fail to complete. Unfilled sections will be highlighted in yellow. Make sure that all sections have been filled before clicking on 'complete'.

J. Case Notification

Facility Name

'Facility Name' is required.
Facility Name is not valid

Next Error

Malaria Case ID

'Malaria Case ID' is required.

Next Error

Shehia

'Shehia' is required.

Next Error

Name

'Name' is required.

Next Error

- 3) The DMSO should visit the health facility within 24 hours of MCN to verify the reported case and record additional information into the tablet from the MCR booklet at the health facility. The steps to enter the facility data into the tablet are shown below.

- K. Click on the 'Facility' tab to display the list of cases at the facility level. You will find your case under the 'Facility Items Not Completed' icon. Click on your case to open up the form.

k

Case Notifico 25 | Facility 1 | Household 15 | Household h 0 | Summary

Add new Facility

Facility Items Not Completed (1)

Search

Facility Name	Malaria Case ID	Shehia	Head of Household Name
KIZIMBANI	105647	DOLE	

Facility Name | Malaria Case ID | Shehia | Head of Household Name

Previous | Next | Showing 1 to 1 of 1 entries

Facility Items Completed (or transferred out) (90)

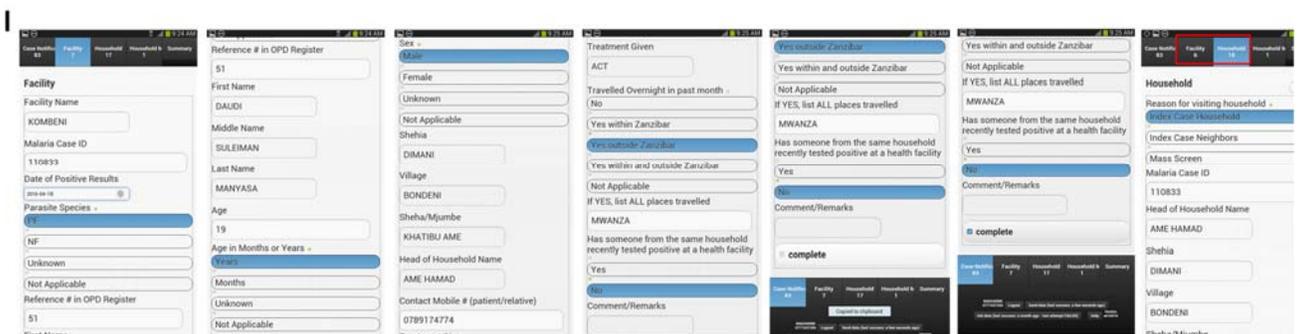
Case Notifico 25 | Facility 1 | Household 15 | Household h 0 | Summary

MAZOWANI 8776176676 | Logout | Send data (Send successes in few seconds ago) | Refresh

Get data (Get successes 2 months ago - last attempt FAILED) | Help | Logout

- L. The Facility form contains many sections that need to be filled in using the MCR booklet as the source of information. These sections include the following: date of positive results; parasite species; reference number in the outpatient diagnosis register; first, middle, and last name of the patient; age (in months or years); sex; shehia,; village; head of household name; mobile contact number (patient/relative); treatment given; whether the patient travelled overnight in the past month and where to; and whether someone from the same household has recently travelled or tested positive at a health facility.

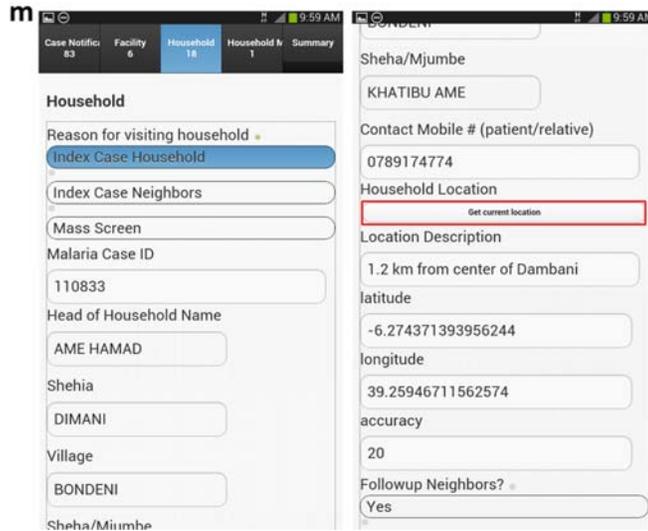
Once all sections have been filled in, click on **'complete'**. Doing so should remove the case from the **'Facility'** tab and move it to the next stage of the process, which is the **'Household'** level.



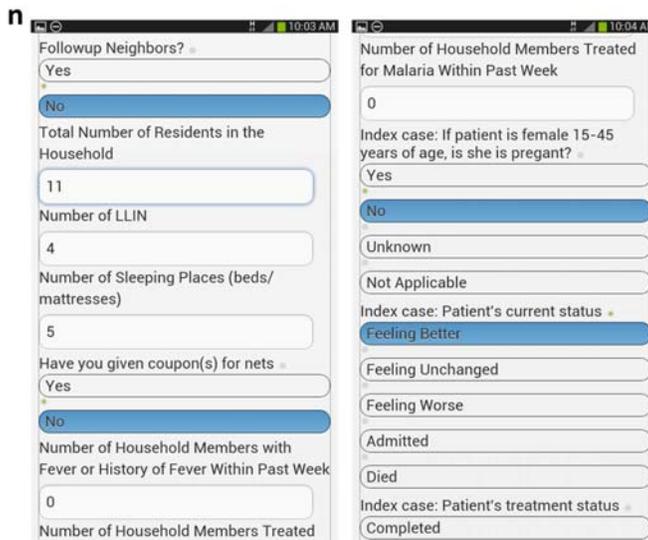
- 4) After the information collected at the health facility has been entered into the tablet, the DMSO will then visit the patient's house and collect data from the household based on the information extracted from the MCR. Each DMSO is provided with a backpack containing mRDTs and medical supplies, such as gloves, syringes, alcohol swabs, malaria medications, long-lasting insecticide-treated net (LLIN) coupons, and a thermometer. The DMSO must ensure that he/she has sufficient stocks of all these supplies.

The following are the steps that should be followed to enter household data into the tablet:

- M. The **'Household'** form contains many sections that need to be filled in by visiting the household. These fields include details on the reasons for visiting the household and the location of the household. The Coconut application has a Global Positioning System application installed that records the geo-location of the household and supplies the co-ordinates to the Coconut application. Click on the **'Get current location'** tab to obtain the co-ordinates; this requires mobile data. However, if mobile data are not available, the form can be completed and moved to the next stage without the location data, which can always be updated at a later time.

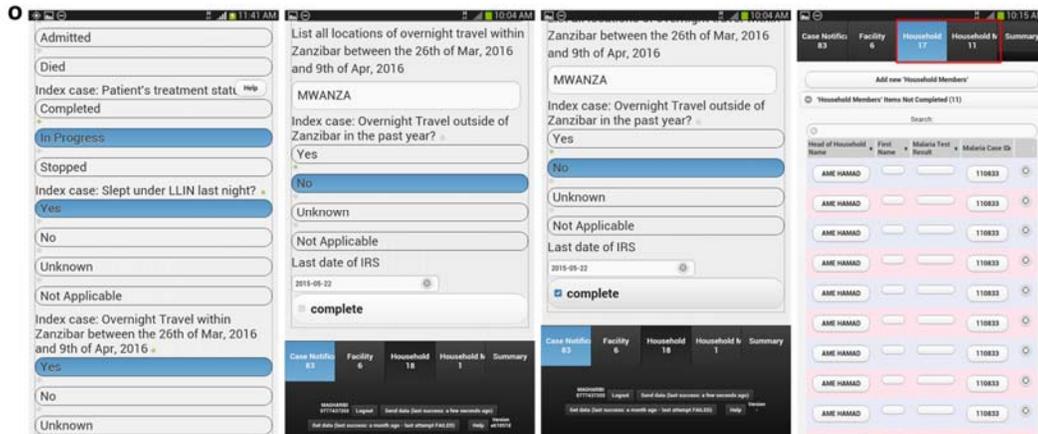


- N. Other fields to be completed include the following: whether neighbors are being followed-up, the total number of residents in the household, the number of LLINs, the number of sleeping places, and whether LLIN coupons have been provided to household members. If a house requires a net, the DMSO can provide an LLIN coupon for net issuance at a health facility. The number on the coupon must be entered in to the application. The number of household members with fever or a history of fever or who were treated for malaria within past week also needs to be recorded.



- O. The DMSO must capture additional information about the patient (the index case), such as whether a female patient is pregnant, the patient's current status, the patient's treatment status, the patient's travel history, whether the patient slept under an LLIN the previous night, and the last date of indoor residual spraying. Once all the sections have been filled in, click on '**complete**'. Doing so moves the case to next stage of the process, which

is the 'Household Members'. Depending on how many residents are in the household, forms can be created for each member.



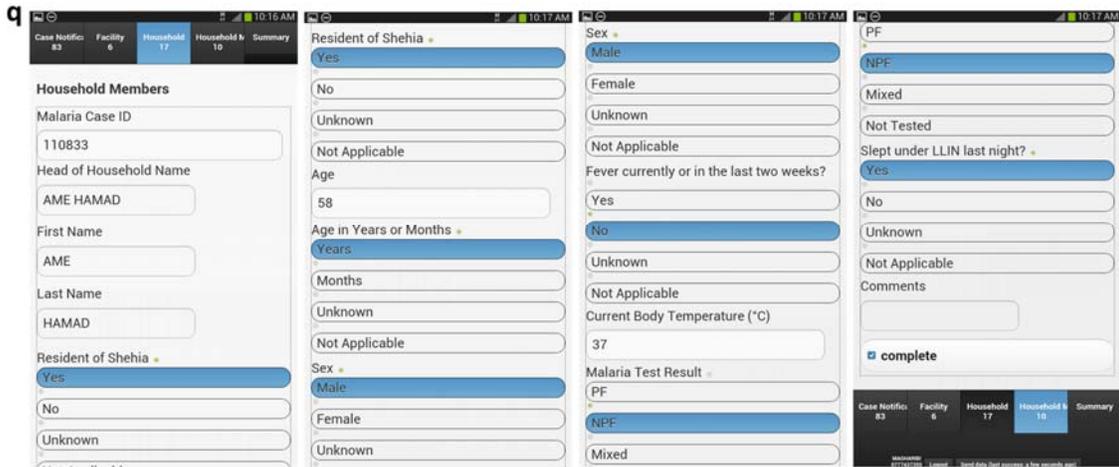
5) The DMSO will then collect individual data from all household members. Every member of the house then needs to be tested for malaria infection using mRDTs. In addition, their temperatures should be checked to determine the presence of fever. If any members test positive, the DMSO must give them medication. The steps to follow to enter the household information are presented below.

P. Click on the 'Household Members' tab to display the list of cases for each household. Every member of the house will be given the same malaria case ID as the index case. Thus, patients from the same household will be linked together in one form. You will find your case under the 'Household Items Not Completed' icon. Click on each case to open up the form for every member.

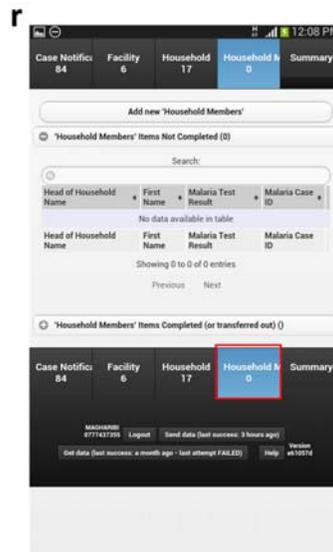


Q. The household member form requires the following details to be filled in: whether the member is a resident of the shehia, the member's sex, whether the member has a fever currently or has had one in the last two weeks, the

member's current body temperature, the member's malaria test results, and whether the member slept under an LLIN the previous night. Once all the sections have been filled in, click on '**complete**'.

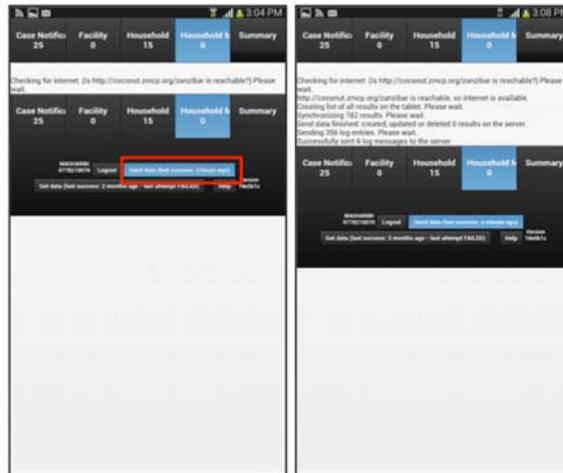


- R. Click on the '**Household Members**' tab again to open to the next household member's form and fill it in as described above. Once all forms have been completed, the cases will be removed from the '**Household Members**' tab (zero cases should be left).



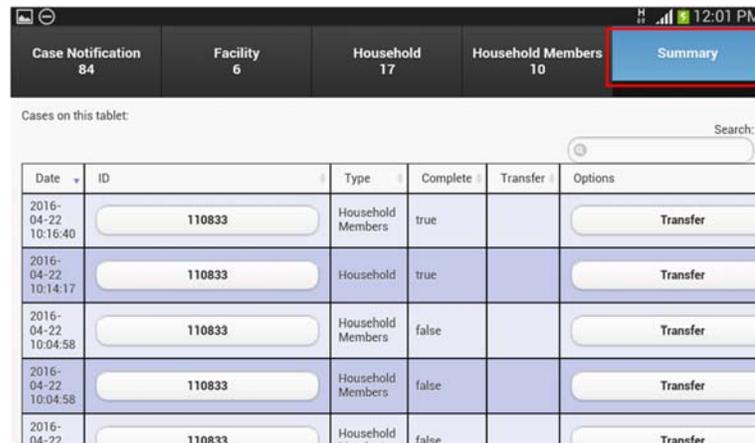
- 6) The data are then shared to the server so that ZAMEP and stakeholders can access them.
- S. Click on the '**Send data**' icon at the bottom of the page to send the data to the server. Doing so requires an internet connection (mobile data or wireless). Wait for a few minutes to receive the confirmation message notifying you that the case was '**successfully sent**' to the server.

S



- T. If you press '**Send data**' but the '**successfully sent**' message does not display on the screen, ensure that internet connectivity is available on the tablet and resubmit the form by pressing '**Send data**' again.

t

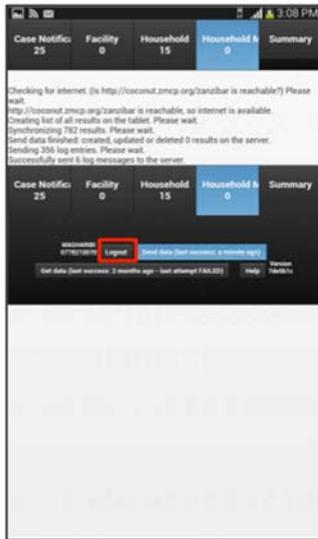


- 7) The last tab is the '**Summary**' icon, which provides a summary of all the cases that remain incomplete or have not yet been followed up. This icon also allows DMSOs to transfer cases to another district. For example, if a patient resides in 'North A' district but visits a health facility in 'Central' district, then the DMSO of the 'Central' district should visit the health facility to enter the patient's details into the tablet. This DMSO should then transfer the case to the DMSO of 'North A' district for follow-up at the household level.

U. To transfer the case, click on the case in the '**Summary**' page. You will then be asked to select the district you want to transfer the case to.

- 8) To log out of the application, click on '**Logout**' at the bottom of the page (as shown in 'u' below).

u



3.2 Checklist for DMSOs

Please ensure that the following actions in the checklist have been completed.

	Check your tablet to ensure there is an active internet bundle.
	Respond to the MCN on the Coconut Surveillance application on the tablet to receive the details of the new case.
	Visit the health facility within 24 hours of receiving the notification to verify the reported case and collect additional information from the MCR booklet using the tablet.
	Prepare your backpack and ensure that it contains mRDTs and medical supplies, such as gloves, syringes, alcohol swabs, malaria medications, LLIN coupons, and a thermometer. Ensure that you have sufficient stocks of all these supplies.
	Visit the household within 48 hours of following up on a case at the health facility level and collect all the necessary data using the tablets by completing all the relevant fields.
	Check the patient and record the details of the index case.
	Test all other household member(s) and collect their individual data. If any members test positive, provide them with medication.
	Send the data to the server so that ZAMEP and stakeholders can access them.
	Ensure that a prescription is written and handed to the patient for future use. Positive mRDTs should be taken back to the ZAMEP laboratory for further analysis.

Chapter 4: Field Manual for the SME Team

The SME team is in charge of overseeing the MEEDS and MCN system and ensuring that the process runs smoothly. This team also reviews the data to detect any abnormal (according to defined thresholds) increases in malaria cases. These data are obtained from key sources, which include the following:

- The Coconut Dashboard;
- Weekly reports from MEEDS and the MCN system; and
- Sentinel surveillance reports.

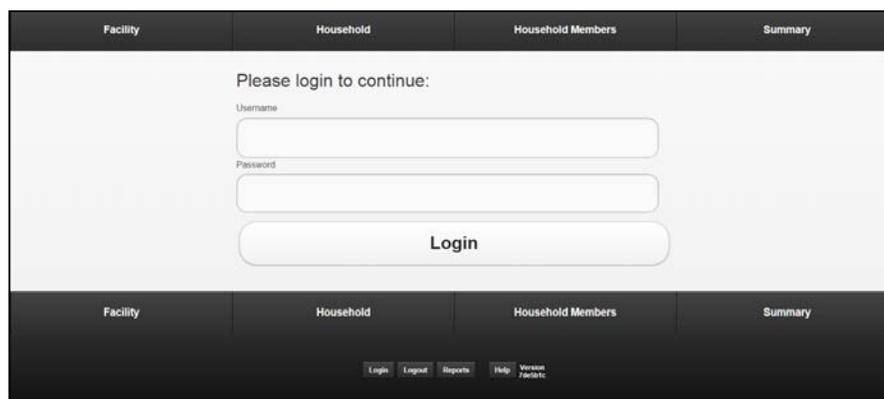
4.1 The Coconut Dashboard

A secure webpage that is linked to the server has been established for MCN data to make data dissemination and data accessibility very simple. All the information collected at health facilities and during household interviews and testing is synced with the server. The webpage was designed to automatically update itself whenever data are sent to the server. The Coconut application performs basic analysis that helps the SME team detect any abnormal increases in malaria cases and respond accordingly. It displays cumulative weekly data trends and detailed and summary data reports presented as tables, graphs, and maps for specific time periods and every district.

The features of the MCN web portal to help the SME team to review the data are outlined below.

- To access the web page for MCN data, use the link below:
<http://coconut.zmcp.org/zanzibar/design/zanzibar/index.html#>

The following web page will open:



- Log in with the username and password provided to you.
- The following home page will open. Enter the time frame (start date and end date) for which you want to view reports. Select all or a specified region and district from the drop-down list, as well as the type of report. There are many options to choose from, as shown below:

Start Date: 04/04/2016
 End Date: 04/11/2016
 Select By Week: []
 Region: ALL
 Report Type: Analysis - Cases, Household, Age, Gender, Nets and Travel
 Aggregation: Case Followup Status
 Click on a column heading to sort: Compare MEEDS or iSMS Weekly Facility Reports With Case Followups, Download Spreadsheet, Epidemic Thresholds, Errors Detected by System, Incidence Graph - cases by week, Cases Followup, Issues, Maps, Period Trends compared to previous 3 periods, Rainfall Submission, Users - How fast are followups occurring?, Weekly Facility Reports from MEEDS or iSMS, Weekly Trends compared to previous 3 weeks

District	Cases	Complete household visit	%	Missing Case Notification	Without complete facility visit (but with case notification)	%	Without complete facility visit within 24 hours	%	Without complete household visit (but with complete facility visit)	%	Without complete household visit within 48 hours	%
ALL	10	20%	19	38%	19	38%	19	38%	21	42%		
CHAKE CHAKE	1	0%	0	0%	0	0%	0	0%	0	0%		
KASKAZINI A	1	0%	0	0%	1	100%	1	100%	1	100%		
KASKAZINI B	9	89%	0	0%	1	11%	1	11%	1	11%	1	11%
KATI	8	6%	1	0%	1	13%	1	13%	1	13%	2	25%

- Each report type has different features, which are explained below:
- The ‘**Analysis - Cases, Household, Age, Gender, Nets and Travel**’ option creates various summary tables for basic analysis.
 - ‘**Aggregation type**’ gives you the option of viewing the data by either the district or shehia. The ‘**Shehia**’ option shows the number of malaria cases reported per shehia in a specified time period, whereas the ‘**District**’ option shows the number of cases reported per district in a specified time period.

By clicking on a particular feature, more details about the reported cases can be viewed.

Start Date: 04/04/2016
 End Date: 04/11/2016
 Select By Week: []
 Region: ALL
 Report Type: Analysis - Cases, Household, Age, Gender, Nets and Travel
 Aggregation Type: District Shehia
 Click on a column heading to sort.

Cases Followed Up [Toggle Details]

District	Cases	Complete household visit	%	Missing Case Notification	Without complete facility visit (but with case notification)	%	Without complete facility visit within 24 hours	%	Without complete household visit (but with complete facility visit)	%	Without complete household visit within 48 hours	%
ALL	50	29	58%	9	10	20%	19	38%	19	38%	21	42%
CHAKE CHAKE	1	1	100%	0	0	0%	0	0%	0	0%	0	0%
KASKAZINI A	1	0	0%	0	1	100%	1	100%	1	100%	1	100%
KASKAZINI B	9	8	89%	0	1	11%	1	11%	1	11%	1	11%
KATI	8	6	75%	1	0	0%	1	13%	1	13%	2	25%

Start Date: 04/04/2016
 End Date: 04/11/2016
 Select By Week: []
 Region: ALL
 Report Type: Analysis - Cases, Household, Age, Gender, Nets and Travel
 Aggregation Type: District Shehia
 Click on a column heading to sort.

Cases Followed Up [Toggle Details]

Shehia	Cases	Complete household visit	%	Missing Case Notification	Without complete facility visit (but with case notification)	%	Without complete facility visit within 24 hours	%	Without complete household visit (but with complete facility visit)	%	Without complete household visit within 48 hours	%
ALL	50	29	58%	9	10	20%	19	38%	19	38%	21	42%
AMARI	0	0	-	0	0	-	0	-	0	-	0	-
BAMBI	0	0	-	0	0	-	0	-	0	-	0	-
BARDAMAJI	0	0	-	0	0	-	0	-	0	-	0	-
BINGUNI	0	0	-	0	0	-	0	-	0	-	0	-

- ‘**Cases followed up**’: shows a summary of the total cases followed up per district/shehia in a specific time period and provides information on the following:

- The total number and percentage of cases with complete household visits per district;
- The total number of cases missing case notifications;
- The total number and percentage of cases without complete facility visits (but with case notifications);
- The total number and percentage of cases without complete facility visits within 24 hours;
- The total number and percentage of cases without complete household visits (but with complete facility visits); and
- The total number and percentage of cases without complete household visits within 48 hours.

Start Week End Year 2016 End Week Select By Date Report Type Analysis - Cases, Household, Age, Gender, Nets and Travel

Aggregation Type District Shehia

Click on a column heading to sort.

Cases Followed Up [Toggle Details](#)

District	Cases	Complete household visit	%	Missing Case Notification	Without complete facility visit (but with case notification)	%	Without complete facility visit within 24 hours	%	Without complete household visit (but with complete facility visit)	%	Without complete household visit within 48 hours	%
VIETE	4	4	100%	0	0	0%	0	0%	0	0%	0	0%
UNKNOWN	0	0	-	0	0	-	0	-	0	-	0	-
MKIDANI	1	1	100%	0	0	0%	0	0%	0	0%	0	0%
MARI	4	4	100%	0	0	0%	0	0%	0	0%	0	0%
MICHEWENI	8	0	0%	1	7	88%	8	100%	8	100%	8	100%
MAGHARIBI	13	5	38%	6	1	8%	7	54%	7	54%	8	62%
KUSIBI	1	0	0%	1	0	0%	1	100%	1	100%	1	100%
KATI	8	6	75%	1	0	0%	1	13%	1	13%	2	25%

By clicking on **'Toggle Details'**, additional information, such as the total number of cases with complete facility visits and the total number of cases missing USSD notifications, is displayed.

Start Year 2016 Start Week End Year 2016 End Week Select By Date Report Type Analysis - Cases, Household, Age, Gender, Nets and Travel

Aggregation Type District Shehia

Click on a column heading to sort.

Cases Followed Up [Toggle Details](#)

District	Cases	Complete household visit	%	Missing USSD Notification	Missing Case Notification	Complete facility visit	Without complete facility visit (but with case notification)	%	Without complete facility visit within 24 hours	%	Without complete household visit (but with complete facility visit)	%	Without complete household visit within 48 hours	%
VIETE	4	4	100%	0	0	4	0	0%	0	0%	0	0%	0	0%
UNKNOWN	0	0	-	0	0	0	0	-	0	-	0	-	0	-
MKIDANI	1	1	100%	0	0	1	0	0%	0	0%	0	0%	0	0%
MARI	4	4	100%	0	0	4	0	0%	0	0%	0	0%	0	0%
MICHEWENI	8	0	0%	0	1	0	7	88%	8	100%	8	100%	8	100%
MAGHARIBI	13	5	38%	0	6	6	1	8%	7	54%	7	54%	8	62%
KUSIBI	1	0	0%	0	1	0	0	0%	1	100%	1	100%	1	100%
KATI	8	6	75%	0	1	7	0	0%	1	13%	1	13%	2	25%

- **'Index Household and Neighbors'**: Provides analysis of the numbers and percentages of index and secondary cases (additional neighboring households visited, tested, and tested positive) per district.

Index Household and Neighbors								
District	No. of cases followed up	No. of additional index household members tested	No. of additional index household members tested positive	% of index household members tested positive	% increase in cases found using MCN	No. of additional neighbor households visited	No. of additional neighbor household members tested	No. of additional neighbor household members tested positive
ALL	29	92	10	11%	34%	0	7	0
CHAKE CHAKE	1	0	0	--	0%	0	0	0
KASKAZRI A	0	0	0	--	--	0	0	0
KASKAZRI B	0	24	4	17%	50%	0	0	0
KATI	6	20	3	15%	50%	0	3	0

- Additional analyses include summaries of the total number and percentage of index cases per district with complete household visits and secondary cases (positive household members) based on the following parameters:
 - Stratified by **Age** (<5, 5<15, 15<25, ≥25);

Age: Includes index cases with complete household visits, positive index case household members, and positive neighbor household members												
District	Total	<5	%	5-15	%	15-25	%	≥25	%	Unknown	%	
ALL	39	4	10%	9	23%	8	21%	18	46%	0	0%	
CHAKE CHAKE	1	0	0%	0	0%	0	0%	1	100%	0	0%	
KASKAZRI A	0	0	--	0	--	0	--	0	--	0	0%	
KASKAZRI B	12	1	8%	1	8%	5	42%	5	42%	0	0%	
KATI	9	0	0%	3	33%	2	22%	4	44%	0	0%	

- Analyzed according to **Gender**;

Gender: Includes index cases with complete household visits, positive index case household members, and positive neighbor household members						
Toggle Unknown						
District	Total	Male	%	Female	%	
ALL	39	22	56%	17	44%	
CHAKE CHAKE	1	1	100%	0	0%	
KASKAZRI A	0	0	--	0	--	
KASKAZRI B	12	7	58%	5	42%	
KATI	9	5	56%	4	44%	

- Analyzed according to **Nets and Spraying**, that is, those cases who slept under a net the night prior and those households that have been sprayed within the last 6 months; and

Nets and Spraying: Includes index cases with complete household visits, positive index case household members, and positive neighbor household members					
District	Positive Cases (index & household)	Slept under a net night before diagnosis	%	Household has been sprayed within last 6 months	%
ALL	39	18	46%	10	26%
CHAKE CHAKE	1	0	0%	0	0%
KASKAZRI A	0	0	--	0	--
KASKAZRI B	12	3	25%	2	17%
KATI	9	3	33%	4	44%

- Analyzed according to **Travel History (within the past month)**, that is, those cases who had travelled within the past month.

Travel History (within past month): Includes index cases with complete household visits, positive index case household members, and positive neighbor household members											
District	Positive Cases	Only outside Zanibar	%	Only within Zanibar	%	Within Zanibar and outside	%	Any travel outside Zanibar	%	Any Travel	%
ALL	39	19	49%	0	0%	0	0%	19	49%	19	49%
CHAKE CHAKE	1	0	0%	0	0%	0	0%	0	0%	0	0%
KASKAZRI A	0	--	--	0	--	0	--	0	--	0	--
KASKAZRI B	12	6	50%	0	0%	0	0%	6	50%	6	50%
KATI	9	4	44%	0	0%	0	0%	4	44%	4	44%

- The 'Case Followup Status' shows alerts for any cases that have not been followed up in the past 2 days or more.

Start Year: 2016
 Start Week: 1
 End Year: 2016
 End Week: 1
 Select By Date
 Report Type: Case Followup Status

Alerts

The following districts have USSD Notifications that have not been followed up after two days. Recommendation call the DMSO

District	Number of Cases
USUKU	14
USUKU	21
KATI	1
USUKU	1

Cases

For the selected period:
 Cases Reported at Facility: 110
 Additional People Tested: 74
 Additional People Tested Positive: 0

Click on a button for more details about the case.

- Positive malaria result found at household
- Positive malaria result found at household with no travel history (probable local transmission)
- Index case had no travel history (probable local transmission)
- Case not followed up to facility after 24 hours
- Shehia - is a shehia classified as high risk based on previous data
- Case not followed up after 48 hours

Case ID (116)	Diagnosis Date (16)	Health Facility District (1)	Shehia (2)	USSD Notification (10%)	Case Notification (34)	Facility (24)	Household (24)	Household Members (71)
110740	2016-03-05	KAKAZINI B	BUBUNYU MSHUPPI	Y				
109667	2016-12-28		KOANI					
110796	2016-03-14	KAKAZINI B	MAHONGA	Y				
110800	2016-03-14	KAKAZINI B	DONGE SURANGE	Y				

- The 'Case Followup Status' also summarizes all individual cases in the selected time period in a table format. The features of the table are shown below.
- By clicking on a particular feature, more details can be viewed, such as household follow-up, index and secondary cases, and other parameters.

Case ID (116)	Diagnosis Date (16)	Health Facility District (1)	Shehia (2)	USSD Notification (10%)	Case Notification (34)	Facility (24)	Household (24)	Household Members (71)
109667	2016-12-28		KOANI					
110740	2016-03-05	KAKAZINI B	BUBUNYU MSHUPPI	Y				
110796	2016-03-14	KAKAZINI B	MAHONGA	Y				
110800	2016-03-14	KAKAZINI B	DONGE SURANGE	Y				

Facility has notified the case via USSD system and the DMSO has received the notification on the tablet.

DMSO completed collecting more information on the case from the facility. Half bars show incomplete details.

DMSO visited the household and collected household location.

DMSO visited the household and collected data on the index case and household data. Half house signifies incomplete information. Pink tab signifies index case with no travel history.

DMSO collected data and tested every household member. Half person means incomplete information. Blue tab signifies that positive malaria result was found at household while pink tab signifies that that positive malaria result was found at household with no travel history.

- 'Compare MEEDS or iSMS weekly Facility Reports with case Followups' provides information on whether the total positive cases from the weekly reports agrees with the number of cases notified. Any mismatched values are indicated in pink.
- The data can be aggregated by time period (year, quarter, month, or week), level of area (zone, district, or facility), and type of facility (public or private).

Start Year: 2016
 Start Week: 1
 End Year: 2016
 End Week: 1
 Select By Date
 Report Type: Compare MEEDS or iSMS Weekly Facility Reports With Case Followups

MEEDS or iSMS Weekly Reports and Coconut cases aggregated by Month and Zone for All facilities.

If the total positive cases from the weekly reports don't match the number of cases notified, the mismatched values are colored.

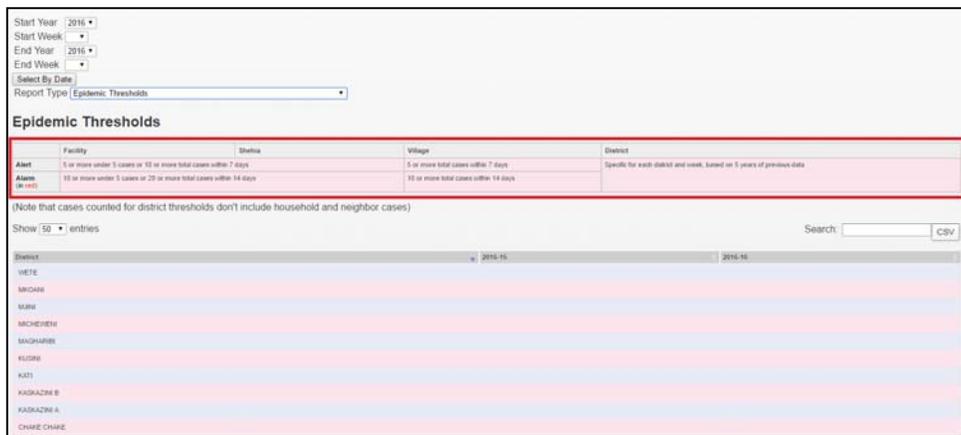
Show 53 entries

Month	Zone	Reports reported for period	Reports submitted for period	Percent submitted for period	Reports submitted within 1 day of period end (Blue)	Reports submitted within 1-2 days of period end (Grey)	Reports submitted within 2-4 days of period end (Pink)	Reports submitted 7 or more days after period end	Total Tested	Total Positive (%)	Number of cases notified	Facility Reported	Cases Collected by facility within 48 hours	Median Days from Positive Case (Facility)	Median Days from Positive Case (Household)	% of Notified Cases with Complete Household Followup	Median Days from Facility Notifications to Complete Household Followup	% of Notified Cases with Complete Household Followup	Number of Household or Neighbourhood Reported	Number of Household or Neighbourhood Tested	Number of Household or Neighbourhood Tested Positive (%)
2016-03	PEMBA	0	28	-	28	0	0	0	428	37.7%	4	4	4	2 (0.2)	0 (0.0)	-	0 (0.0)	100%	3	3 (100%)	3 (100%)
2016-03	USUKU	0	57	-	57	0	0	0	2296	28.7%	2	2	2	1.0 (1.5-N/A)	0 (0.0-N/A)	-	0 (0.0-N/A)	100%	2	2 (100%)	1 (100%)

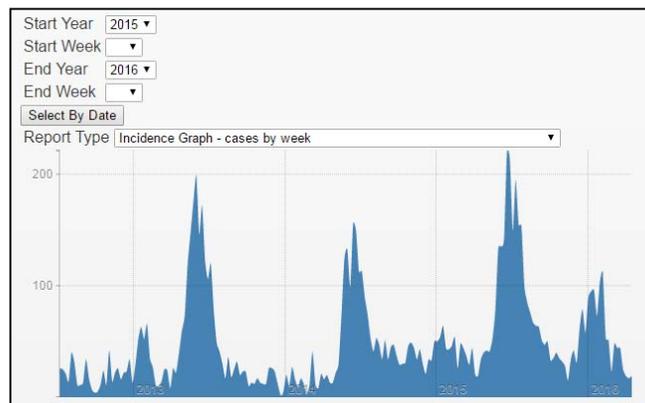
- The **'Download Spreadsheet'** tool enables the user to access raw data from a particular time period by allowing them to download the data as Excel spreadsheets. Clicking on the **'Download spreadsheet'** tab generates an Excel file with six tabs containing raw data on household members, household, facility, case notification, USSD notification, and a summary.



- **'Epidemic Threshold'** is used to confirm the emergence of an epidemic to step up appropriate control measures. It provides information on whether the numbers of cases at the facility, shehia, village, and district level have exceeded the thresholds to trigger an epidemic alert or alarm.



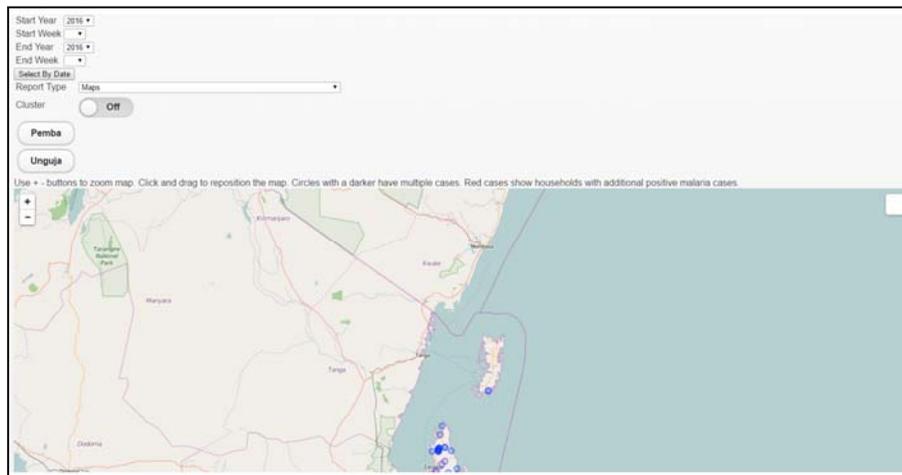
- **'Errors detected by system'** checks for any errors present in the system in the past 2 days. If an error is shown, it should be reported to the ZAMEP SME team, who will then follow up to rectify it
- **'Incidence Graph – Cases by week'** shows the classical epidemiological analysis, representing the number of cases per 1000 population



- The **'Issues'** tool documents any issues related to the system or encountered by the DMSO.



- The **'Maps'** tool maps malaria cases by region. These data can also be clustered or individually mapped by switching the **'Cluster'** tab on or off. Users can also zoom in on the map to view each malaria case.
- The map can be viewed at the country and zonal levels and can also be zoomed to view the more refined district, *shehia*, and household levels.



- **'Period trends compared to previous 3 periods'** shows a summary of index cases over a specific time period and the average number of index cases for the previous three periods.

Start Date: 04/12/2016
 End Date: 04/19/2016
 Select By Week:
 Report Type: Period Trends compared to previous 3 periods
 Cluster: Off
 Pemba
 Unguja

Data Summary

Period	Average for previous 3 periods	2016-04-12 - 2016-04-19
No. of cases reported at health facilities	41	111
No. of cases reported at health facilities with complete household visits	30	24 (20%)
Total No. of cases (including cases not reported by facilities) with complete household visits	30	24
No. of additional household members tested	103	74
No. of additional household members tested positive	10	8 (19%)
% increase in cases found using MCT	32	33%
No. of positive cases (index & household) in persons under 5	3	4 (13%)
Positive Cases (index & household) with at least a facility followup	40	32
Positive Cases (index & household) that slept under a net right before diagnosis	23	17 (53%)
Positive Cases (index & household) that have been sprayed within last 6 months	13	11 (24%)
Positive Cases (index & household) that did not travel	10	10 (33%)
Positive Cases (index & household) that traveled but only within Zanzibar last month	1	0 (0%)
Positive Cases (index & household) that traveled outside Zanzibar last month	10	14 (44%)

Show trend data

- There is also a tab at the bottom of the table that can be used to view the data trends of the previous three periods.

Start Date: 04/12/2016
End Date: 04/19/2016
Report Type: Period Trends compared to previous 3 periods
Cluster: Off
Pemba
Unguja

Data Summary

Period	2016-03-22 - 2016-03-29	2016-03-29 - 2016-04-05	2016-04-05 - 2016-04-12	Average for previous 3 periods	2016-04-12 - 2016-04-19
No. of cases reported at health facilities	34	40	48	41	111
No. of cases reported at health facilities with complete household visits	31 (91%)	31 (77%)	28 (58%)	30	24 (22%)
Total No. of cases (including cases not reported to facilities with complete household visits)	31	31	28	30	24
No. of additional household members tested	138	110	91	113	74
No. of additional household members tested positive	13 (9%)	7 (6%)	9 (10%)	9	8 (11%)
% increase in cases found using MCH	42%	23%	32%	33%	32%
No. of positive cases (index & household) in persons under 5	4 (9%)	2 (5%)	2 (4%)	3	4 (13%)
Positive Cases (index & household) with at least a facility followup	45	39	37	40	32
Positive Cases (index & household) that slept under a net right before diagnosis	24 (53%)	26 (67%)	18 (49%)	23	17 (53%)
Positive Cases from a household that has been sprayed within last 6 months	11 (24%)	18 (46%)	9 (24%)	13	11 (34%)
Positive Cases (index & household) that did not travel	11 (24%)	11 (28%)	9 (24%)	10	10 (31%)
Positive Cases (index & household) that traveled but only within Zanzibar last month	1 (2%)	1 (3%)	0 (0%)	1	0 (0%)
Positive Cases (index & household) that traveled outside Zanzibar last month	19 (42%)	19 (48%)	19 (51%)	19	14 (44%)

Hide trend data

- Clicking on the number of cases for the specific time period in each row opens a page showing individual cases' ID numbers. You can click on a case's ID number to view the details of that case

Start Year: 2016
Start Week: [dropdown]
End Year: 2016
End Week: [dropdown]
Region: ALL
Report Type: Period Trends compared to previous 3 periods

Data Summary

Period	Average for previous 3 periods	2016-04-12 - 2016-04-19
No. of cases reported at health facilities	41	111
No. of cases reported at health facilities with complete household visits	30	24 (22%)
Total No. of cases (including cases not reported to facilities with complete household visits)	30	24
No. of additional household members tested	113	74
No. of additional household members tested positive	10	8 (11%)

Individual case IDs: 110852, 110674, 110787, 110739, 110740, 110742, 110743, 110744, 110745, 110746, 110747, 110748, 110749, 110750, 110751, 110752, 110753, 110754, 110755, 110756, 110757, 110758, 110759, 110760, 110761, 110762, 110763, 110764, 110765, 110766, 110767, 110768, 110769, 110770, 110771, 110772, 110773, 110774, 110775, 110776, 110777, 110778, 110779, 110780, 110781, 110782, 110806, 110807, 110808, 110809, 110810, 110811, 110812, 110813, 110814, 110815, 110816, 110817, 110818, 110819, 110820, 110821, 110822, 110823, 110824, 110825, 110826, 110827, 110828, 110829, 110830, 110831, 110832, 110833, 110834, 110835, 110836, 390XDMT4, 390WVR76, 390WVWP0, 390V31PH, 390VR0X0, 390VFRND, 390PRPHM, 39YLBEAR, 39YKPM0V, 39YK26VV, 39KASAX01

- The 'Rainfall submission' displays monthly data pertaining to climatic factors obtained from Tanzania Meteorological Agency.

Start Date: 04/12/2016
End Date: 04/19/2016
Report Type: Rainfall Submission
Cluster: Off
Pemba
Unguja

Rainfall Data Submissions

Show 50 entries

Search: [input] Copy CSV Print

Station	Year	Week	Amount
No data available in table			

- **‘Users – How fast are follow-ups occurring?’** shows a summary of how fast cases are being followed up by DMSOs. This helps the user to contact individual DMSOs if there is a delay in follow-up and obtain feedback from them.

How fast are followups occurring?

All Users

Median time from SMS sent to Complete Household	21 days
Cases	81
Cases without completed facility record 24 hours after facility notification	12
Cases without complete household record 48 hours after facility notification	14
Cases with complete household record	56
Median time from SMS sent to Case Notification on tablet	3 days
Median time from Case Notification to Complete Facility	2 days
Median time from Complete Facility to Complete Household	3 days

By User

Show 50 entries

Search: Copy CSV Excel PDF Print

Name	District	Cases	Cases without complete facility record 24 hours after facility notification	Cases without complete facility record 48 hours after facility notification	Cases without complete household record 48 hours after facility notification	Cases without complete household record	Median time from SMS sent to Case Notification on tablet (DPI)	Median time from Case Notification to Complete Facility (DPI)	Median time from Complete Facility to Complete Household (DPI)	Median time from SMS sent to Complete Household (DPI)
Said Masud Ali	MICHEVER	26	7	7	7	7	3 days (19 hours, 7 days)	5 days (3 days, 14 days)	24 days (18 days, a month)	a month (a month, a month)
Rakut Aina	URUGUR	20	4	4	4	4	4 days (3 days, 5 days)	20 minutes (12 minutes, 3 days)	5 days (11 hours, 21 days)	6 days (5 days, a month)

- **‘Weekly facility reports from MEEDS or iSMS’** provides information on the number of positive cases reported via the MEEDS or iSMS. The data can be aggregated by time period (year, quarter, month, and week) and level of area (zone, district, and facility)

Start Date: 04/12/2016
End Date: 04/19/2016
Select By Week
Report Type: Weekly Facility Reports from MEEDS or iSMS

Weekly Facility Reports from MEEDS or iSMS aggregated by Month and Zone

Show 50 entries

Search: Copy CSV Print

Month	Zone	All OPD >= 5	All POS >= 5	All NEG <= 5	All OPD <= 5	All POS <= 5	All NEG <= 5	Facility Followed Up Positive Cases	Weekly Reports Positive Cases	>= Test Rate	<= POS Rate	>= Test Rate	<= POS Rate
2016-04	PEMBA	1141	0	175	1812	3	242	4	3	15%	0%	14%	1%
2016-04	URUGUR	2082	2	881	5864	13	1587	2	15	26%	0%	27%	1%

Showing 1 to 2 of 2 entries

Previous 1 Next

Select By Week
Report Type: Weekly Trends compared to previous 3 weeks

Data Summary

Period	Average for previous 3 periods	2016-04-18 -> 2016-04-24
No. of cases reported at health facilities	0	0
No. of cases reported at health facilities with complete household visits	0	0
Total No. of cases (including cases not reported by facilities) with complete household visits	0	0
No. of additional household members tested	0	0
No. of additional household members tested positive	0	0
% increase in cases found using iCMN	NaN	--
No. of positive cases (index & household) in persons under 5	0	0
Positive Cases (index & household) with at least a facility followup	0	0
Positive Cases (index & household) that slept under a net right before diagnosis	0	0
Positive Cases from a household that has been sprayed within last 6 months	0	0
Positive Cases (index & household) that did not travel	0	0
Positive Cases (index & household) that traveled but only within Zanibar last month	0	0
Positive Cases (index & household) that traveled outside Zanibar last month	0	0

Show trend data

4.2 Weekly reports

The MEEDS focal person from ZAMEP is responsible for producing the MEEDS weekly report. The data collected are synthesized weekly and circulated by email. In addition, since 2013, quarterly and annual reports have also been produced and circulated. The purpose of the weekly report is to provide information that may warrant action. The quarterly report gives an overview of the previous three months and, hence, trends in, for example, the testing rate and the timeliness of reporting. This report is also intended to inform actions and engage stakeholders. The annual report provides an overview of activities, and its main purpose relates to accountability. In addition to MEEDS, the MCN also provides weekly reports from the reporting health facilities. These reports, which originate from the health facilities and flow through the two systems, are compared weekly to assess their accuracy. When discrepancies are detected, the data are verified and rectified to ensure consistent reporting through both MEEDS and MCN for the health facilities under scrutiny.

The indicators of interest in the aggregated MEEDS and MCN weekly reports from each health facility are as follows:

- **Week number:** Number of the week in which the most current report was submitted by each health facility through MEEDS and MCN;
- **Reporting rate:** Number of health facilities reporting in the current week divided by all health facilities reporting;
- **Number of malaria cases in the current week:** Number of confirmed malaria cases in the current report submitted (refers to the number of current reports submitted) by health facilities;
- **Malaria positivity:** Number of positive cases in the current week divided by the number of malaria tests performed in the health facilities;
- **Cumulative summary of the current year:** Sum of all malaria cases in the current year by a reporting health facility up to the current week in which the report was submitted;
- **Weekly average of the previous year:** Calculated by summing the malaria cases for the current week, the 2 weeks prior to, and the 2 weeks following the current week over the previous year by MEEDS facility;
- **Test rate of the current year:** Total number of malaria tests performed in the current year divided by the total number of attendances in the current year in the report submitted; and
- **Test rate of the previous year:** Total number of malaria tests performed in the previous year divided by the total number of attendances submitted in the previous year; used to compare the test rates in the same weeks in the current and previous years.

All of these indicators are calculated and presented in reports generated by the MEEDS and MCN web portals. The SME team should compile and prepare the aggregated reports for weekly dissemination as described below:

- Download the weekly aggregated data at least once a week into a dedicated data set.

- The data set should include the current data as well as reports from previous years
- Immediately call any health facilities that have not reported any data or that have provided data suspected to be incorrect and ask them to clarify and make changes accordingly.
- Using the updated and cleaned MEEDS dataset, produce the weekly reports as per the specified indicators.
- Share the weekly reports with ZAMEP and stakeholders, including the district representatives and the International Strategy for Disaster Reduction unit at the Ministry of Health.

4.3 Health facility reports

The health facility report uses data from two sources: the MEEDS booklet and MCR. This report focuses on a specific health facility and includes indicators, such as outpatient visits and total positive and negative test results disaggregated by age (<5 and ≥5 years).

4.4 District reports

District reports focus on specific districts and use two sources of data: the MEEDS booklet and MCR. This report includes indicators, such as outpatient visits and total positive and negative test results disaggregated by age (<5 and ≥5 years).

4.5 Checklist for the SME team

Please ensure that the following actions in the checklist have been completed.

	Monitor the data in the Coconut dashboard on a weekly basis to detect any abnormal increases in malaria cases.
	Follow up with health facilities that have not reported data or have provided data suspected to be incorrect.
	Produce MEEDS and MCN weekly, quarterly, and annual reports for dissemination to relevant stakeholders.

Chapter 5: Responsibilities of the SME Administration Team

The SME administration team is in charge of ensuring that the MEEDS and MCN system are functioning smoothly. The team's responsibilities include the following:

- Following up with MEEDS facilities that are not submitting weekly reports by telephone or by visiting the facility;
- Training new health staff at health facilities on data management (record, compile, submit, analyze, interpret, and use) using the MEEDS and MCN system;
- Training new DMSOs on the application of MEEDS and MCN, including the use of the Coconut application;
- Arranging new phones and tablets for newly recruited staff and replacements for broken equipment;
- Organizing periodic supervisory visits to health facilities reporting via MEEDS and MCN;
- Organizing periodic feedback meetings with public and private health facility workers, including DMSOs reporting via MEEDS and MCN;
- Updating MEEDS, MCR, and MCN data collection tools;
- Producing weekly reports and sharing them with ZAMEP and stakeholders on time;
- Acting as the focal point for all health facilities to address any problems with the system;
- Ensuring that the events log book is updated;
- Checking the malaria trends in the reports submitted through the system on a daily basis and following up with the appropriate health facilities if an adverse event is detected;
- Assisting the national and district teams to prepare for potential epidemics and to respond to malaria; and
- Checking for stock outs; solving problems, such as issues with report submission and missing data collection tools; and checking the quality of the data.