**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

September 2016





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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.

Level	Alert	Alarm
Facility/Shehia	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	d on 5 years of previous data

 Table 1: Epidemic thresholds for malaria cases in Zanzibar

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*.





### **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 indictors 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.

 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.</p>

#### 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 1<sup>st</sup> option ('MEEDS') by typing in '1'.

NOKIA	NOKIA	NOKIA	NOKIA
*150* 50*331#	Welcome to ZMCP MEEDS. Please enter your PIN	1234	Welcome to ZMC 1. MEEDS 2. Case Notification
Options Clear	Answer Back	Send Clear	Answer Bac
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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.
- 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:

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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 2<sup>nd</sup> 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 *shehia* 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'.

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- 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 '**Cance**l'.



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).

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( A6	f new 'Case Notification'	3	Case Notification	Case Notification	Add new 'Facility'
Case Notification' Items	Not Completed (82)		Facility Name	Eacility Name	C 'Facility' Items Not Completed ()
6	Search:		KOMBENI	r denity name	Facility Name+ Head of Household Name + Shehia Malaria Case ID+
Malaria Case ID + I	Facility Name			KOMBENI	Facility Name Head of Household Name Shehia Malaria Case ID
109596	SELEM		Malaria Case ID	Malaria Case ID	Facility' Items Completed (or transferred out) ()
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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**'.

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Facility Na	ame	
Facility Name ' in Facility Name is r	s required. not valid	
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í I		
Malaria Ca	ase ID	
'Malaria Case ID'	is required.	
	Next Error	
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"Shehia ' is requir	red.	
-	Next Error	
Name		
'Name' is require	ed.	
	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.

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Add new Yacility'  Tacility Hems Not Completed (1) Search Facility Name + Malaria Case + Shehia + Head of Household Name KIZHMEANB 105647 DOLE Facility Name Malaria Case - ex-bit Head of
Ann new Yackey
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Malaria Case making Head of
English Strength St
Pacenty Name ID Stema Household Name
Previous Next Showing 1 to 1 of

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

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.

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ES FIELDER FRANKER FRANKLER STATE	Reference # in OPD Register	(Maie	Treatment Given	Cres ourside cardinal	Tes montano conside cancida	Ease Buildy Paulity Presented Presented In
	51	Female	ACT	Yes within and outside Zanzibar	Not Applicable	
Facility	First Name	Female	Travelled Overnight in past month	Not Applicable	If YES, list ALL places travelled	Household
Facility Name	DAUDI	Unknown	(No )	If YES, list ALL places travelled	MWANZA	Reason for visiting household +
KOMBENI	Middle Mome	(Not Applicable	(Yes within Zanzibar	MWANZA	Has someone from the same household	(Index Case Household
Malaria Case ID	Middle Name	Shehia	and the second s	Has someone from the same household	recently tested positive at a health facility	Index Case Neighbors
110000	SULEIMAN	DIMANI	Construction Symptom	recently tested positive at a health facility	Yes	Mass Screen
110833	Last Name	Villane	(Yes within and outside Zanzibar	Yes	(948)	Malaria Case ID
Date of Positive Results	MANYASA	noundan	(Not Applicable )	(Shi	Comment/Remarks	110833
Parasite Species -	Ann	BONDENI	If YES, list ALL places travelled	Comment/Remarks		Head of Household Name
(PF		Sheha/Mjumbe	MWANZA			
NE	19	KHATIBU AME	Has someone from the same household		© complete	AME HAMAD
	Age in Months or Years -	Mand of Manashold Name	recently tested positive at a health facility	complete		Shehia
Unknown	Quena:	Head of Household Name	(Yes )		Provide Facility Household Household's Summary	DIMANI
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Einst Mame	(not obbierante	Transformed Chains	S	arteriation (speed) Theorem in the second speed	9	Sheha/Miumhe

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.

⊒⊖ # <u>∎</u> 9:59 AM	
ase Notifici Facility Hausehold Household N Summary 83 6 18 1	Sheha/Mjumbe
Household	KHATIBU AME
Reason for visiting household	Contact Mobile # (patient/relative)
Index Case Household	0789174774
Index Case Neighbors	Household Location
	Get current location
Mass Screen	Location Description
Malaria Case ID	1.2 km from center of Dambani
110833	latitude
Head of Household Name	6 274271202056244
AME HAMAD	-0.274371393950244
Shehia	39.25946711562574
DIMANI	accuracy
Village	20
BONDENI	Followup Neighbors?
	Yes

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.

⊒⊖ # <u>10:03 AM</u>	EΘ # 4 10:
Followup Neighbors?	Number of Household Members Treate
Yes	for Malaria Within Past Week
No	0
Total Number of Residents in the Household	Index case: If patient is female 15-45 years of age, is she is pregant?
11	Yes
Number of LLIN	(No
4	Unknown
Number of Sleeping Places (beds/ mattresses)	Not Applicable
5	Feeling Better
Have you given coupon(s) for nets	Feeling Unchanged
No	(Feeling Worse
Number of Lloueshold Members with	Admitted
Fever or History of Fever Within Past Week	Died
0	Index case: Patient's treatment status
Number of Llounsheld Members Treated	Completed

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	4 🖬 🖂 🕺 10:04 AM	🗐 🖯 🕺 🚺 10:04 AM	<b>8</b> 0	مر المستقل	1 10:15 A
Admitted	List all locations of overnight travel within Zanzibar between the 26th of Mar, 2016	Zanzibar between the 26th of Mar, 2016 and 9th of Apr, 2016	Case Notifics Facility 83 6	Household 1	Household Iv Summar 11
Died	and 9th of Apr, 2016	MWAN7A		an Marcala Materia	
Index case: Patient's treatment stati. Heb	MWANZA	IIIIAALA	O Threaded Members' Iter	no Not Completed ()	10.
Completed	Index case: Overnight Travel outside of	Index case: Overnight Travel outside of Zanzibar in the past year?		Search:	
(In Progress	Zanzibar in the past year?	(Yes	O Head of Hansacheld   First	Malaria Test	
	(Yes )		Name Name	* Result	* Malaria Case ID
Stopped		(No )	AME HAMAD		110833
Index case: Slept under LLIN last night?	NO	Unknown			
(Yes )	Unknown		AME HAMAD		11003
No	Not Applicable	Not Applicable	AME HAMAD		110833 0
	Last date of IRS	Last date of IRS			110411 0
Unknown		2015-05-22	(mining)		
Not Applicable	10001	Complete	AME HAMAD		110833 0
Index case: Overnight Travel within Zanzibar between the 26th of Mar, 2016 and 9th of Apr. 2016	= complete	Case Heldlic Facility Household Household In Summary	AME HAMAD		110833 0
Yes	Case Notific Facility Household Household In Summary		AME HAMAD		110833
		And a second state of the			110833 0
No	MANAGARAN AND A CANADA THE AND	Bertrastion Logost Band data Suit success a fee seconds age) Rel data Sast success a month age: Lost attempt FALIDS Integ	ANT MANAGE		110411 0
Unknown	That data (but mercane a result age: fast attange (balance) and attant				( interest of the second secon

- 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.

				3 2 1	10:15
Case Notific: Fi 83	cility 6	Househol 17	d Hou	isehold N S 11	umm
<u> </u>	Add ne	w Household	Members	e.	
Household Men	nbers' Item	is Not Comple	ted (11)		
6		Search.			
Head of Household Name	• First Name	* Malaria Result	<sup>(est</sup> , )	italaria Case ID	
AME HAMAD				110833	9
AME HAMAD				110833	0
AME HAMAD				110833	ġ
AME HAMAD				110833	0
AME HAMAD				110833	6
AME HAMAD				110833	6
AME HAMAD				110833	6
				110833	
AME HAMAD				110833	10

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**'.

■⊖ # <b>⊿</b> ∎10:16 AM	E O 2 10.17 AM	E → 10:17 AM	■ ⊖ <b>⊿</b> 10:17 AM
Case Notifics Facility Household Household & Summary	Resident of Shehia .	Sex .	(PF)
e3 e U/	(Yes	Male	(NPF
Household Members	No	Female	Mixed
Malaria Case ID	Unknown	Unknown	(Not Tested
110833	(Not Applicable	(Not Applicable	Slept under LLIN last night? •
Head of Household Name	Age	Fever currently or in the last two weeks?	(Yes
AME HAMAD	58	Yes	No
First Name	Age in Years or Months .	No	Unknown
AME	(Years	Unknown	Not Applicable
Last Name	Months	Not Applicable	Comments
HAMAD	Unknown	Current Body Temperature (*C)	
Devident of the big	Not Applicable	37	E complete
Resident of Shenia .	Sex .	Malaria Test Result	Complete
(Tes	(Male	(PF	
No	Female	* (NPF	Case Notifics Facility Household Household b Summary 83 6 17 10
(Unknown	Unknown	Mixed	Same and the second

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).

Same Marifier	Freit	~		-h-h				C
84	6	ų.	noui	7	mou	0		Summa
	,	ldd new	Hous	ehold Me	mbers			
Household	Member	s' Items	Not C	ompleted	1 (0)			
			50	ech:				
Head of House	hold	<ul> <li>First</li> <li>Narr</li> </ul>		Malaria Result	Test	•	Malar	ia Case
		No da	ita ava	lable in t	table			
Head of House Name	hold	First Nam		Malaria Result	Test		Malar	ia Case
		Showi	ng 0 to	0 of 0 e	ntries			
C 'Household	Member	s' Items	Comp	leted (or	transfe	erred o	out) ()	
Case Notifics 84	Facili 6	ty	Hour	ehold 7	Hou	eho 0	le N	Summi
uat 9777 Get data (Ja	AUTON AUTON		Sand I	lata (last s st atlenge	WORKER 1	hour	ngel Tedy	Version +61057d

- 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.



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.

10							_	🖁 🔐 12:(
Case Not 8	ification 4	Facility 6		Househo 17	bld	Household Me 10	embers	Summary
Cases on thi	s tablet:						6	s
Date 🗸	ID		- 1	Туре	Complete	Transfer 0	Options	
2016- 04-22 10:16:40		110833	D	Household Members	true		$\square$	Transfer
2016- 04-22 10:14:17		110833		Household	true		$\square$	Transfer
2016- 04-22 10:04:58	$\square$	110833		Household Members	false			Transfer
2016- 04-22 10:04:58	$\square$	110833	D	Household Members	false			Transfer
2016-	C	110833	7	Household	false		6	Transfer

- 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).



#### 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: <u>http://coconut.zmcp.org/zanzibar/ design/zanzibar/index.html#</u>

The following web page will open:

Facility	Household	Household Members	Summary
P	ease login to continue:		
0.00			
	saoro		
(	L	ogin	
Facility	Household	Household Members	Summary
	Lagin Lagart	Reports Hulp Vorsan 746940	

- 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	4/2016											
End Date	04/11	1/2016											
Select By W	/eek												
Region	AL	L	•										
Report Typ	e An	alysis - Cases, H	ouseho	ld, Age, Gender, N	iets and Travel								
Aggregatio	n Ca	ise Followup Stati mpare MEEDS or	usen us r iSMS	ld, Age, Gender, N Weekly Facility R	eports With Case Followups								
Click on a	col Do Ep	wnload Spreadsh idemic Thresholds	eet s										
Cases	F(Inc	rors Detected by S cidence Graph - ca sues	System ases by	week									
District .	Ma Pe Ca Da	ips riod Trends comp	ared to	previous 3 periods		t with	% 0	Without complete facility visit	% 0	Without complete household visit (but with	5.0	Without complete household	%.0
ALL	Us	ers - How fast an eekly Facility Rep	e follow orts fro	ups occuring? m MEEDS or iSM	s	10	20%	within 24 hours	38%	complete facility visit)	38%	visit within 40 nours	42%
CHAKE	W	eekly Trends com	pared t	previous 3 week:		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	1195	1	11%
KATI	8	6	75%	1		0	0%	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.

	e 04/04	4/2016										
End Date	04/11	1/2016										
Select By	Week											
Region	AL	L	٠									
Report Ty	ype An	alysis - Cases, H	ousehe	ild, Age, Gender, M	Nets and Travel							
Aggregati	on Typ	e:	) She	hia								
Click on a	colum	nn heading to s	ort.									
Cases	Fol	lowed Up	Tog	le Details								
Cases	Fol	lowed Up	Tog	gle Details								
Cases	Fol	Complete household visit <sup>®</sup>	Tog	gle Details Missing Case Notification •	Without complete facility visit (but with case notification)	% ø	Without complete facility visite within 24 hours	% 0	Without complete household visit (but with complete facility visit)	% 0	Without complete household visit within 48 hours	% 0
District	Cases	Complete household visit <sup>®</sup> 29	Tog % • 58%	Missing Case • Notification 9	Without complete facility visit (but with case notification)	% ¢	Without complete facility visite within 24 hours	% • 38%	Without complete household visit (but with complete facility visit)	% <b>e</b> 38%	Without complete household @ visit within 48 hours	% • 42%
Cases District • ALL CHAKE CHAKE	Cases	Complete household visit <sup>®</sup> 29	Tog % • 58%	Notification 9	Without complete facility visit (but with case notification) 10 0	% <b>●</b> 20% 0%	Without complete facility visite within 24 hours	% ¢ 38% 0%	Without complete household visit (but with complete facility visit)	% • 38%	Without complete household e visit within 48 hours 21	55 € 42% 0%
Cases District • ALL CHAKE CHAKE KASKAZINI A	Cases	Complete household visit® 29 1 0	Tog % • 58% 100%	ple Details Missing Case • 9 0 0	Without complete facility visit (but with case notification) 10 0	16 ¢ 20% 0% 100%	Without complete facility visit within 24 hours	% • 38% 0% 100%	Without complete household visit (but with complete facility visit) 19 0	% ● 38% 0% 100%	Without complete household evialt within 45 hours 21	<ul> <li>% ●</li> <li>% ●</li> <li>42%</li> <li>0%</li> <li>100%</li> </ul>
Cases District • ALL CHAKE CHAKE KASKAZINI A KASKAZINI B	Cauda 50 1 9	Complete household visit <sup>®</sup> 29 1 0 8	Tog % • 58% 100% 0% 89%	Missing Case  Missing Case	Without complete facility visit (but with case notification) 10 0 1 1 1 1	%         0           20%         0%           0%         100%           11%         11%	Welhout complete facility visit within 24 hours 19 0 1 1	% ♦ 38% 0% 100%	Without complete household visit (but with complete facility visit) 19 0 1	% ♦ 38% 0% 100%	Without complete household visit within 45 hours 21 0 1	% ●       42%       0%       1000       11%

Start Date	e 04/0	\$/2016											
End Date	04/1	1/2016											
Select By	Week												
Region	AL	L	•										
Report Ty	/pe Ar	alysis -	Cases, Househ	old, Ag	e, Gender, Nets a	and Travel 🔹							
Aggregati	on Typ	e: 0	District ® She	ehia									
Click on a	colun	ın hea	ding to sort.										
	20160		and the second										
Cases	Fol	low	ed Up Tog	gle De	tails								
Shehia	•	Case	Complete household visit	1.0	Missing Case  Notification	Without complete facility visit (but with case notification)	5.0	Without complete facility visit within 24 hours	1.0	Without complete household visit (but with complete facility visit)	1.0	Without complete household visit within 48 hours	1.0
411		50	29	58%	9	10	20%	10	38%	10	38%	24	
1999								12		12		1	42%
AMANI		0	0		0	0		0		0		0	42%
AMANI BAMBI		0	0		0	0		0		0		0	42%
AMANI BAMBI BANDAMAJI		0	0		0	0		0	1 1 1	0		0	42%

 - '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.

End Week Select By E Report Ty	Date pe An	alysis - Cases, H	ouseho	id, Age, Gender, M	Nets and Travel							
Aggregatic	in Typ	e:   District	She	hia								
lick on a	colum	in heading to s	ort.									
Cases	Fol	lowed Up	Tog	le Details								
District 🕶	Case	Complete household visit <sup>®</sup>	50	Missing Case •	Without complete facility visit (but with case notification)	5.0	Without complete facility visite within 24 hours	% 0	Without complete household visit (but with complete facility visit)	50	Without complete household ¢	1. 0
District • WETE	Caseb	Complete household visit®	% ¢ 100%	Missing Case +	Without complete facility visit (but with case notification)	% • 0%	Without complete facility visity within 24 hours	% • 0%	Without complete household visit (but with complete facility visit)	56 e	Without complete household ¢	% •   0%
District • WETE UNKNOWN	Cases	Complete household visit®	% • 100%	Missing Case  Notification 0 0	Without complete facility visit (but with case notification)	% • 0%	Without complete facility visity within 24 boors	% • 0%	Without complete household visit (but witg complete facility visit)	55 e	Without complete household e visit within 48 hours	% •   0%
District • WETE UNKNOWN MKOANI	Caseb 4 0	Complete household visit®	16 • 100%  100%	Masing Case + Notification •	Without complete facility visit (list with case notification)	1% • 0% 	Without complete facility visity within 24 hours	1% • 0% - 0%	Without complete household visit (but with complete facility visit)	55 e 0% 	Without complete household ¢	% • 0%
District • WETE UNKNOWN MKOANI MANI	Cases 4 0 1 4	Complete household visit <sup>®</sup> 4 0 1	% • 100%  100%	Massing Case Notification	Without complete facility visit (but with case notification)	% • 0% 	Without complete facility visity within 24 hours	1% • 0% - 0% 0%	Without complete household visit (but with complete facility visit)	N • 0%  0% 0%	Without complete household ¢ visit within 48 hours 0 0 0 0 0	% •   0%   ~   0%
District - WETE UNIKNOWN MICHEWENI	Cases 4 0 1 4 8	Complete household visit <sup>©</sup> 4 0 1 4 0	16 • 100% 100% 100% 0%	Mining Case Notification 0 0 0 0	Without complete facility visit (but with case notification)	56 0 056 056 056 056	Without complete facility visity within 24 hours  0  0  0  0  0  0  0  0  0  0  0  0  0	1% • 0% 0% 0% 100%	Without complete household visit (but will complete factivy vest)	55 0 0% 	Without complete household visit sithin 48 hours 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1% • 0% 0% 0% 100%
District • WETE UNKNOWN MKOANI MANN MICHEWENI MACHARIBS	Cases 4 0 1 4 8 13	Complete household visit <sup>®</sup> 4 0 1 4 0 5	16 • 100%  100% 100% 0% 38%	Missing Case Notification 0 0 0 0 1 5	Without complete facility with (lost with care redification)	1% • 0% 0% 0% 88%	Without complete facility visity within 24 hours	1% • 0% - 0% 10% 54%	Without complete facility visit	16 0 0% 0% 0% 0% 100% 54%	Without complete household • visit within 48 hours 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	%       0%       0%       0%       0%       10%       10%       52%
District  WETE UNICHONNE MICHEWERE MACHARIEE KUSISHI	Caseh 4 0 1 4 8 1 1 1	Complete household visit <sup>®</sup> 4 0 1 1 4 0 5 0 0	16 • 100% 100% 100% 0% 38%	Masing Case Notification 0 0 0 0 0 1 1 6 1	Velhour complete facility vent (last set) case autification) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1% • 0% 0% 0% 88% 8%	Without complete facility visity within 24 hours 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	16 0 0% - 0% 100% 54% 100%	Without complete facility user	15 0 0% 0% 0% 0% 100% 54% 100%	Without complete household visit within 48 hours 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1% • 0% 0% 0% 0% 100% 100% 100%

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 Wee End Year End Weel Select By J	2016 k • 2016 ( •	• • •												
Report Ty	pe An	alysis - Cases.	House	hold, Age, Gen	der. Nets and T	ravel	•							
Addredatii	on Typ	e:	0.5	hehia										
Click on a	colum	un haading te	east											
JULK OF O	CORMA	in neduling to	Ster	2	_			_						-
Cases	Foll	lowed U	p	oggle Details										
			_											
District •	Candh	Complete household Ø	5.0	Missing USS§	Missing Case Notification	Complete facility visit	Without complete facility visit (but with case notification)	5.0	Without complete facility visit within 24 hours	5.0	Without complete household visit (but with complete facility visit)	5.4	Without complete household visit within 45 hours	5.0
District • WETE	Casella 4	Complete household • visit	% • 100%	Masing USSD Notification	Missing Case Notification	Complete facility visit	Without complete facility visit (but with case notification)	5. • 05	Without complete facility visit within 24 hours	5. e 0%	Without complete household visit (but with complete facility visit)	5.4	Without complete household visit within 48 hours	5.0
District • WETE UNKNOWN	Canda 4	Complete household • viait 4	% • 100%	Missing USSD Notification	Missing Case Notification	Complete tacitity visit	Without complete facility visit (but with case notification)	%. • 0%	Without complete facility visit within 24 hours 0	55 O	Without complete household visit (but with complete facility visit)	5. <b>e</b> 25.	Without complete household visit within 45 hours 0	5 • 0%
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District • WETE UNKNOWN MKOANI MANA	Canda 4 0 1	Complete household • visit 0 1	% • 150% - 150%	Missing USSO Notification 0 0	Missing Case Notification	Complete facility visit 4 0 1	Without complete facility visit (but with case notification)	% • 0% 0% 0%	Without complete facility visit within 24 hours	54 • 0%  0% 0%	Without complete household visit (but with complete facility visit) 0 0 0	5. 0 25. 25. 25. 25.	Without complete household visit within 45 hours 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5 5 • 014 - 016 016
District  WETE UNKNOWN MKOANI MANA MCHEWENI	Canda 4 0 1 4 8	Complete household • viat 4 0 1 4 0	% • 100% 100% 100% 0%	Aliasing USS Notification 0 0 0	Missing Case Notification 0 0 0	Complete facility visit 4 0 1 4 0	Without complete facility visit (but with case notification) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5. 0 0% 0% 0% 0%	Without complete facility visit within 24 hours 0 0 0 0 0 0 0	5. • 0% - 0% 0% 150%	Without complete household visit (but with complete facility visit) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5. • 0% 0% 0% 100%	Without complete hourshold visit within 45 hours 0 0 0 0 0 0 0 0 0 0	5 • 0% 0% 0% 0%
District • WETE UNKNOWN MKOANI MACHEVENI MACHEVENI MACHEVENI	Candh 4 0 1 4 8 13	Complete household • vait 4 0 1 4 0 5	% • 100% 100% 100% 100% 38%	Missing USSQ Notification 0 0 0 0	Maxing Case Notification 0 0 0 1 5	Complete facility visit 4 0 1 1 4 0 6	Without complete facility visit (but with case notification) 0 0 0 0 7	%         •           0%         •           0%         •           0%         •           0%         •           0%         •           0%         •           0%         •           0%         •           0%         •           0%         •           0%         •           0%         •	Without complete facility visit within 24 hours 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5. • 0%  0% 0% 54%	Without complete household visit (bot with complete facility visit 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5. • 0% 0% 0% 100% 54%	Without complete bootenheld visit within 40 bours 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5 5 0 0% 0% 0% 0% 10% 62%
District  WETE UNKNOWN MKOANI MANA MACHEWENI KUSINI	Canda 4 0 1 4 8 13 1	Complete household • viat 4 0 1 4 0 5 0	% ● 100% 100% 100% 100% 38% 0%	Masing USSQ Notification 0 0 0 0 0 0 0	Missing Case Notification 0 0 0 1 5 1	Complete facility visit 4 0 1 1 4 0 6 0	Without complete facility vitit  Utor with case motification	5. • 0% 0% 0% 88% 8% 0%	Without complete facility visit within 24 hours 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	15 0 046  056 056 5416 5416	Without complete household visit (bid with complete facility visit 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	% • 0% 0% 0% 100% 54%	Without complete boorseheld visit within 40 bours 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	<ul> <li>5. •</li> <li>0%</li> <li>0%</li> <li>0%</li> <li>100%</li> <li>100%</li> </ul>

 '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	Househ	old and Neighl	bors					
District +	No. of cases followed up	No. of additional index household members tested	No. of additional index household members (ested 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%	345	0	7	0
CHAKE	1	0	0		0%	0	0	0
KASKAZINI	0	0	0	-	-	0	0	0
KASKAZINI B		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 in	dex cases v	with complete	househo	old vi	isits, po	ositive in	ndex	case	hous	sehold r	nembe	rs, ar	nd po	sitive neight	oor hou	sehol	d members			
Datact		Total Ø	-5	• 5		3115		5		15-25		5		H25 4	<b>N</b>		Usknown		-	
ALL		39		4 10	•		9	23%			8	21%		18	40%			0	0%	
CHARE CHARE		1		8 27			0	25.1			0	25.		1	10076			0	0%	
KASKAZINI A		0		0 -			0				0			0				0		
KASKAZINI B				1 85			1	15			5	42%		5	42%			0	0%	
647)		9		0 0%				33%			2	22%		4	44%			0	0%	

• Analyzed according to Gender;

Gender: Includes index cases v	with complete house	ehold visits, positive	index case househole	d members, and posi	tive neighbor household me	embers
Toggle Unknown						
Dietrict	+ Tot	stal é	Maie Ø	s	Female 0	s •
ALL		39	22	58%	17	445
CHARE CHARE		1	1	100%	0	0%
KASKAZINI A		0	0		0	-
KASKAZINI B		12		50%	5	42%
RATI		9	5	58%	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	Spr	aying: Includes index cases with com	plete household visits, positive index cas	e l	hous	seh	old members, and positive neighbor household me	em	nber	s
District		Positive Cases (index & household)	Slept under a net night before diagnosis		5		Household has been sprayed within last 6 months e			
ALL		39	18	1	15%		10	1 2	15	
CHARE CHARE		1		3	2%		0	5 0	15	
KASKAZINEA		0						1		
KASKAZINI B			3	1	15%		2	1	17%	
KATI		9	3	1	33%		4	1	14%	

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

Travel His household	me	ry (within pa mbers	st month): In	cludes	inde	cases with complet	te h	ousehold visits, positive in	de	( Ci	ise household membe	ers, an	d pos	sitive neig	hb	or
District		Positive Cases 0	Only outside Zanpibar		5.4	Only within Zanzibar 0	1.	Within Zanzibar and outside		5.0	Any Travel outside Zanzibar		5. 0	Any Travel		5.4
ALL		39		19	49%	0	0%		0	2%		19	49%		19	49%
CHAKE CHARE		1		0	0%	0	8%		0	2%		0	8%		0	2%
KÁSKAZINI A		0		0		0			0	-		0			0	
KASKAZINEB		12		6	50%	0	0%		0	85.		6	50%		6	50%
rian -		9		4	44%	0	2%		0	2%		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.

111100 (1100 (11 mail))									
Start Year 2016	•								
Start Week									
End Year 2016	•								
End week									
Report Tupp Ca	a Enforcem Status								
Report Type Ca	seronop status								
Alerts									
The following district District Number of Stationarity: 14 Statistical 14 Statist	s have USSD Notificatio taxes	ns that have not been followed up i	ther two days. Recommend	ation call the DMSO					
Cases									
For the selected Cases Reported Additional Peopl Additional Peopl	period at Facility 1 e Tested 7 e Tested Positive 0	10 4							
Click on a button	for more details ab	out the case.							
Positive m     P	alaria result found a alaria result found a a had no travel histo slowed up to facility hia classified as hig ot followed up after	t household. It household with no travel hi ry (probable local transmiss after 24 hours. h risk based on previous dat 48 hours.	story (probable local tr ion). a	ansmission).					
Case ID (118)	Dispose Data (5)	· Health Facility District.() .	Shethia (0)	USSD Notification (109)	Case Notification (34)	Facility (24)	• Insumments (24)	Household Members (74)	
110740	2015-83-05	KASKAZINI B	BUMBWINE MOUFINE	T	A	0	۵		
109857	2015-12-26		KOANI		A	0	۵		
110798	2016-82-14	KAGKAZINI B	MAHONDA	T	a	0	۵		
( and a set of the set	2016-02-14	KASKAZINI B	DONOE KARANCE	(*)			-	(10)	

- 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 (2111)	Ingrostion (1	Number Provide Deservice	* (hereal)	8 110 Mathematics (1911)	· Care Muthanton (10)	· Pacify (2)		· Researchert Manham (74)	
100007	345-61.0		alast -		A	0	0		a facility has notified the error via UCCD system and
mosta.	2010.01.01	1.00	Managerighting	T	2	•	0	1.1	- Facility has notified the case via USSD system and
(matur)	2010.01.04	Notes .	TORONALD	T.	A	•	٥		the DMSO has received the notification on the
86738	and to m	140	reliat secondae	Y	A	9	٥		tablet.
110740	2010/01/0	Avenues .	BARRING MELFINE	Y	A	•	0		<ul> <li>DMSO completed collecting more information on</li> </ul>
111742	1006.04.02	ALCONG.	BURLEU DOBLOW	Y					the case from the facility. Half bars show incomplete
1100	1010-01-01	9471	International In	T					dataile
milles	2016-04 H	ARCING.	admittan.	T	A	9	101	444	parco while d also be while and will stand
millel.	2018-34-10	benind .	(ALMO)	T		9	101		- DMSO visited the nousehold and collected
THE OWNER WATCHING	1000-04.00	#10812969	sthig strength	T					household location.
mitat	2710-011	Avenue -	Interest advectance	Y		0	0 -	1.0	<ul> <li>DMSO visited the household and collected data on</li> </ul>
10000	1010-01-01	1.00	1000	T	,				the index case and household data. Half house
111/42	2010.01.01	100	ALCOLOGIE.	T		0	6		signifies incomplete information. Pink tab signifies
110752	2016-86-12	1414	arms	T		9	101	11	index case with no travel history
10000	1000.04.04	and comments	passa (	T			-		DMCO collected data and tested succe bausehold
11111	2010 da 14	4.80	animize	T	>				<ul> <li>Diviso collected data and tested every nousehold</li> </ul>
110703	2010.00.10	1.00	10000	T	2				member. Half person means incomplete
THE OWNER WATCHING TO BE A DECIDENT	1876-64 H	11.000	amargad.	T	>				information. Blue tab signifies that positive malaria
11070	2716.04.02	Mariananan.		T					result was found at household while pink tab
1000	2010.04.10	-	08364	T					signifies that that positive malaria result was found
HUN	2712.04.00	AND ALCON B	NTOPE /	Y					at household with no travel history
11274	and a la	14.079		T					at nousenoia anti no traver instory.

- '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).

End Y End V	oar (20 Aeek	•																			
Select	By Date Type in	ompare N	FFDS or 2	SMS Week	h Facility Rec	ots With Case F	allouune •														
repor	( Abels			SHO HEEK	d i word out		care and a														
ИE	EDS	or	SMS	S We	ekly I	Report	s and	Coco	nut	ca	ses	add	rega	ated b	v Mor	hth	and	Zone		for	
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the t	otal posi	tive case	s from th	e weekly	reports don	't match the n	umber of case	es notified,	the m	smatch	ed valu	es are co	lored.						Searc	h.	CSV Mod
the 1 tow	otal posi 53 • ) er Zane	tive case	s from th	Peccet subsetted for perced	Reports don Reports automited automited automited automited automited automited automited automited automited automited (Messley)	T match the ni Reports extensive within 5.3 days of period and thy Wellereader)	Reputs Naturation 3.5 days attented and stipercod and stipercod and stipercod and	ilisporte sudmitted 7 or more days after persod send	Total Testad	Total Positive CV	Number of Cases rottfand	Facility Facility Facility Pasitive Ceses	Cases followed the witten 42 Mours	Median Days Inois Poellor Test Result for Jacilly Natformer	Median Days Down Facility NetRy show for Compiler Faceley (CR)	% of Notified Cares with Campitur Facility Followap	Median Days Insin Facility Notification to Compiles Hoccorfical (Q4)	<sup>5</sup> i st <b>N</b> offled Cases with Complete Household Followap	Searc Number of Museline or Measure Measure	h Rember of Rosenation Anothers Tested (%)	CSV Mod Number of Household a Menghors Trelind Positive (11)
All the 1 Show Month	tal post 51 • et 2000	tive case	s from th	Percent subertited for perced	Reports don Reports submitted address tary of pecied and (Menday) 28	I match the nu Reports substituted within 5-3 days of period and (by Westwarding)	Reports automation automation of period and althy Triology E	Reports subsetted 7 of more days after period usual 7	The me Testal Testad	Total Postier N	Number of fame sutting	Pacifity Future Up Partner Cases	Coors Friend Al Hours 4	Median Days from Poater Teel Result In Facility Motification (CRI) 2 (0-3)	Median Days box Facility Antify sites to Complete Facility (CR) \$ (5-8)	Noted Notified Carry with Cangidity Tacibly Followap	Median Days Train Facility Notific strain Campiala Hosenshall (ISR) B Y (127-facto	Si of Rotfled Creer with Complete Hospschild Followap SIS	Searc Russber of Register Arguiter Medians	h: Number of Numberhild in Neghtier Mentern Testind (%) 3 (182%)	CSV Mod Number of Neosehold o Neophor Neodors Tasked Pusitize (1) T (19)

 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.

Show 50 · entries		
		Search
Create New Issue		
Issues		
Report Type Issues	•	
Select By Date		
End Year 2016 •		
Start Week		

- 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.

d Date 64/19/2016		
elect By Week		
eport Type Period Trends compared to previous 3 periods .		
uster Om		
Pamba		
Penda		
Unguja		
ata Summary		
mod	- Average for previous 3 periods	2016-04-12 2016-04-19
of cases reported at health facilities		m
a of cases reported at health facilities with complete household visits		24 12240
dul No. of cases (including cases not reported by fadilies) with complete household with	+ 1 1 10	24
a. of additional bound-hold anothers treated	1 1 11	74
is of additional household members tested positive	1 1 10	8 (1114)
Lincreake is cases found using IXCN	2 1 1 10	22%
us, of positive cases (index & household) in persons under %	2 1 2 2	4 (33%)
Indian Career (index & household) with at least a facility followage	1 1 4	32
	, , , n	17 (055)
rusere Cases (Rusei & Russettiat), that single proper a net right before diagnous	13	11 0496
routine Caster (inclus a household) that have a set rough tensor diagnoses valide Cases from a household that have been sprayed within had 6 months		
same came inne a household part wegt under a net ager sener suppose under Cames fors a household. But has been spozyed within Los E months under Cames reduce & household; that did wet travel		10 ctrise
Saler Caser (and a Solarian) that ways saler a set right tener subjects		0 cmu

• 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.

d Date 04/19/2016					
elect By Week					
eport Type Period Trends compared to previous 3 periods					
luster Off					
Dunka					
Pemba					
Unguja					
lata Summany					
ata Summary					
Head	2016-03-22 -+ 2016-03-28	· 2016-03-29 2016-04-05	2016-04-05-> 2016-04-12	- Average for previous 3 periods	2016-04-12 -> 2016-04-19
6. of cases reported at health facilities	34	40	48	÷ 41	111
In of cases reported at health facilities with complete household visits	31 (01%)	- 31 cress	28 ctrsi	38	24 (22%)
plat No. of sames (including cases not reported by facilities) with somplete household viate	31	- 31	28	30	24
in of additional household members texted	138	. 110		. 113	74
in of additional household members tested positive	13 010	: 7 (0%)	9 (10%)	19	8 (11%)
increase in cases found using MCN	42%	1 22%	32%	1 12	33%
in of position sames (index & household) in persons weater \$	4 (9%)	1 2 (0%)	2 (1%)	1. 3	4 (19%)
value Cases (inter & husehold) with at least a facility followep	45	: 39	37	4	32
testine Cases (anders 5. hoursehold) that slept under a net right before diagnosis	24 (13%)	1 26 10710	18 (47%)	C B	17 (13%)
table Cases hor: a household that has been sprayed within last 5 months	11 (24%)	18 (40%)	9 (24%)	, n	11 (34%)
	11 (24%)	- [11] OPN	9 (245)		10 0110
Vollive Cases (Index & household; that did not travel					
Solline Cases (Index & Novelifick) that did not travel Solline Cases (Index & Novelfick) that traveled but only within Zanabar last month	1 250	- 1. Chu	0 10%	16193	0.0%

• 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 Start Week End Year End Week Select By Dah Region Report Type Data Sui	2016 • 2016 • • • ALL Perio	d Trends	e ( compared to previous 3 periods • )
Periat		Austrape Na pressus 3 periods	2006-84-02 -> 2006-84-18
No. of cases reported at leadth facilities		45	111 10057 10074 10777 10779 10779 10779 10770 10772 10774 10774 10774 10774 10776 10776 10777 10776 10775 10775 10775 10775 10775 10775 10777 10777 10775 10
No. of cases reported at health facilities with complete houseshalid visite		28	(A) any
Total Tip: of cases not reported by footiesy lotti complete bracketwill viells		20	24
No. of additional topunethold members tested		10	74
tia, of additional becasehold members tretad positive		10	

• 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						
Select By Week							
Report Type	Rainfall Submission	•					
Cluster (	011						
Pemba							
Unguja							
Rainfall	Data Submissions						
Show 50 • entr	ies					Search	Copy CSV Print
Stature		Tear	· Virot		· Amount		1
			No. data availa	able in fable			

 '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 fa	ast are	fol	lowups occu	ring?							
All User	s										
Median	time fro	m SM	IS sent to Compl	ete House	hold					2	21 days
Cases										8	31
Cases w	ithout co	omple	ted facility record	24 hours a	after facility notificati	on				1	12
Cases w	ithout co	omple	te household rec	ord 48 hou	rs after facility notifie	cation				1	14
Cases w	ith comp	olete	nousehold record							5	56
Median	time fron	n SM	S sent to Case No	tification or	n tablet					3	3 days
Median	time fron	n Cas	e Notification to C	omplete Fa	acility					2	2 days
Median	time fron	n Cor	nplete Facility to C	omplete H	ousehold					3	3 days
By User Show 50 •	entries							Search:		Copy CSV	Excel PDF Print
Name	Ownict	Cases	Cases without complete facility record 24 forums after facility notification	Cases without complete facility record	Cares althout complete howerhold record 48 hours after facility notification	Cases without complete household record	Median time from SMI went to Case Notification on tablet (IGR)	Median tase from Case Notification to Complete Eacility (IGR)	Median tires Facility to Co (IQR)	from Complete omplete Househol	Median time from SMS sent to Complete Household (ICR)
Santi Mananel Al.	мснечен	26	7		7	7	3 days (10 hours,7 days)	5-days (3-days, 14 days)	24 days	18 days, a month)	A month (a month, a month)
Bakari Jama	LEBAN	20	4		4	4	4 days (3 days,5 days)	28 mendes (12 minutes,5 days)	S days (1	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)

Report Type	0 Weski	y Facility Report	ts from MEED	S or iSMS										
N/ 1-		acility	Reno	rts fro	m ME	EDS or	isms	addredated by	Month and	Zone ·				
Veek	IV F	ALC: UNIV												
veek	IY F	actinty	Repo	113 110				55 5						
how 50 ·	entries	aciiity	Repo	113 110				55 5 5		Search		0	py CS	V P
how 50 ·	entrio:	* ALCOND+4	Multos<6	Mai NEG < 5	As OPD ~5	Mat POS 5	Mail NEG >> 6	Facility Followed-Up Positive Cases	Weekly Reports Positive Cases	Search	<5 POS Rate	Co	¢y CS	V P
Neek	entries	* ASOPD * 5 .	Mairos <s< td=""><td>Mari NEG &lt; 5 575</td><td>AE OPD &gt;= 5 1812</td><td>Mint POS &gt;== 6</td><td>Mar NEG &gt;= 6 342</td><td>Facility Followed Up Positive Cases</td><td>Weekly Reports Positive Cases</td><td>Search -5 Test Rate 10%</td><td>es POS Rate D%</td><td>Co ords Test Rate</td><td>py CS HelP Th</td><td>N P</td></s<>	Mari NEG < 5 575	AE OPD >= 5 1812	Mint POS >== 6	Mar NEG >= 6 342	Facility Followed Up Positive Cases	Weekly Reports Positive Cases	Search -5 Test Rate 10%	es POS Rate D%	Co ords Test Rate	py CS HelP Th	N P

rpOrt Type Weekly Trends compared to previous 3 weeks		
ata Summary		
Period	Average for previous 3 periods	2016-04-18 -> 2016-04-24
to, of cases reported at health facilities	a	0
In of cases reported at health facilities with complete household visits	2 1 2 a	0 +-+
Intal No. of cases (including cases not reported by facilities) with complete household with	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0
Is, of additional household members tested	2 2 2 0	0
ia, of additional household members tested positive	2. J. J. 0	0 ()
S increase in cases found using MCN	2 1 6 NoN	
Is. of positive cases (index & household) in persons under 6	0	0 ()
Postive Cases (index & household) with at least a facility followup	0	0
Positive Cases (index & household) that wept under a net night before diaptosis	· · · ·	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 1-1
Positive Cases (index 5 household) that traveled but only within Zanzibar last month	0	0 ()
Positive Cases (index & household) that traveled outside Zangibar last month	2 P	0

#### 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  $\geq$ 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.