



**BALAKA District, Malawi**

**Post-Distribution Check-Up (PDCU)  
At 12 months**

**February 2017**

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For: Against Malaria Foundation**

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## 1. Purpose

The PDCU, at the health centre (HC) level, assesses the level of continued net use and provides statistically significant and locally-actionable information to the relevant health/NMCP leaders, including The District health officer (DHO), Malaria Coordinator (MC), to contribute to health intervention decisions and planning. Timely data-based information on net use and condition can help in allocating resources to maintain high levels of coverage. There is some evidence that community-awareness of the PDCUs also contribute to behaviour change and higher levels of net hang-up and correct use.

The 2016 mass distribution was carried out in March 2016 where a total of 278,237 nets were distributed in all but two health facilities of Mbera and Balaka DH which were covered by a mop-up distribution carried out at a later date. During the mop-up distribution a total of 53,226 nets were distributed adding up to a total of 331,463 nets distributed in Balaka District during the 2016 Mass Campaign.

This PDCU will provide data that will help determine the timing of the district-wide re-coverage campaign. Many universal re-coverage distribution campaigns take place 3 years after the prior distribution.

## 2. Frequency

The surveys are conducted every six months until 30 months post-distribution. Further PDCUs would be assessed depending upon their usefulness, taking into account anticipated levels of community coverage and the timing of any subsequent community-wide universal coverage campaign.

## 3. Sample size

5% of all households (HHs) that received nets in the universal coverage distribution are randomly-selected and visited unannounced.

## 4. Distribution catchment area

Population: **590,131**

Number of Households (HHs): **128,685**

5% of households: **6,520 (6,520 will be visited, representing 5.1%. See Appendix A)**

Number of Health Centre Catchment Areas (HCCAs): **14**

Average population per HCCA: **42,152**

Average number of HHs per HCCA: **9,191**

5% of HHs (average) per HCCA: **812**

## 5. Cost

The budget was \$10,807.

## 6. Information collected

A half-page, six-question form focuses on identifying the sleeping spaces present on the household, net presence, use and condition and how many people are present in the household and how many had blood test diagnosed malaria, See Appendix B.

## 7. Collection format

Sampled household data was collected in paper form, two households per landscape A4 page.

## 8. Locations

The survey was conducted in all the 14 HCCAs in Balaka District. All the health facilities catchment areas were involved in the 2014/15 Universal Coverage Net Distribution. In each HCCA between 225 and 1,400 (average 466) HHs were visited via selecting 8 to 40 (average 16) villages at random and for each randomly selecting 25 to 35 (average 28) HHs for an unannounced visit. In total, the PDCU collected information from 6,520 households.

## 9. Timing

The PDCU took place in February 2017. See Appendix C.

## 10. Personnel

Project Leader (1): Management and overall responsibility, providing support to the Project Manager and reporting to AMF. Nelson Coelho, MCU Manager, UP.

Project Manager (1): Management and overall responsibility, reporting to DHO, Ntcheu District and to the Project Coordinator. Chimwemwe Nyoni, Project Manager, UP.

Field Supervisors (2): Responsible for monitoring the enumerators and checking their work. These were senior members from the district Health Office comprising the Malaria Coordinator and the Environmental Health Officer.

Data collectors (Enumerators) (20): Responsible for collecting household information. They were each deployed to a sampled village thereby interviewing 25 households per day. The enumerators were privately sourced and trained on the questionnaire.

Data clerks (4): Responsible for checking and entering data. Each were assigned data from a set of HCCAs.

Drivers (2): There were two vehicles involved in the exercise. Responsible for carrying personnel and materials to the field and to the data center.

30 personnel were involved in the PDCU over Two weeks.

## 11. Specific roles and responsibilities

### Project Leader

- Ensure all logistical arrangements for the survey have been put in place
- Monitor, mentor and advise the Project Manager

- Produce reports

### **Project Manager**

- Facilitate printing of questionnaires
- Liaise with Ministry of Health officials on sampling of villages and households
- Facilitate transport and booking of sampled villages
- Train and orient all the data enumerators involved in the exercise
- Train and orient the data entry personnel
- Administer the survey process
- Collect and cross-check filled questionnaires from supervisors
- Submit filled questionnaires to the data clerks
- Facilitate availability of online internet accessibility for data entry
- Liaise and monitor data capturing with data entry clerks
- Link data queries with supervisors for follow up

### **Field supervisors**

- Facilitate and distribute questionnaires to the enumerators.
- Facilitate identification of sampled households at village level.
- Monitor how the data is being collected (quality, relevance and validity).
- Cross-check that forms have been correctly filled in by enumerators.
- Respond to on-the-spot queries from both sampled communities and enumerators.
- Visit 5% of households visited by each enumerator to check data accuracy and provide a list of HHs visited and data collected as well as the data collected for those households by data collectors so the comparison is clear.
- Submit filled forms to the team leader.

### **Data collectors**

- Identify and verify households to be visited
- Collect data from the sampled households and complete questionnaire as required
- Verify the data collected is a true reflection of the situation
- Submit filled questionnaire to the supervisor

### **Data Clerks**

- Cross-check collected data
- Enter collected data correctly online
- Liaise with the team leader regarding any logistical challenges

## **12. Operations**

### **i) Establish responsibilities and schedule**

This includes management and personnel selection and establishing a project timeline

## **ii) Data collection orientation**

A data collection orientation training was conducted to the 20 enumerators and two supervisors. During the orientation the participants were briefed and introduced on the content of the questionnaire and background of the objective of the survey as well as specific information how collect the data.

There were two supervisors both from the Health Sector of the District Assembly, namely the Malaria Coordinator and the ITN Coordinator (from the environmental Health) who played a role in checking how the enumerators are collecting the data and cross checking all the questionnaires from the enumerators before submitting them to the Survey Coordinator. The survey coordinator was responsible for accounting logistics and make sure that all forms have been verified and that they are fully filled before submitting them to the data entry team for online data entry.

## **iii) Data collection**

Data collection was planned to take place in all the 14 health facilities in the district for a period of 12 days. Each enumerator was allocated a sampled village in each health facility on a particular day, allowing the teams to cover the twenty villages per day. There were two teams of ten enumerators and a supervisor in each team.

Supervisors monitored their work and check forms. This was to ensure compliance with data collection procedures. Forms were then sent to the central data-entry location as soon as the set of household forms from the HC catchment area is complete.

## **iv) Data entry**

Data was entered from forms into an existing, online database provide by AMF. Three data entry clerks commenced entering data four weeks after the data collection starts (in the second week of November) to allow accumulation of forms for entry and easy coordination by the survey coordinator. Data entry was completed one week after end of the data collection phase.

## **v) Report to DHO/health leaders and AMF**

Upon completing entering the data, all data has been presented and made available to the Malaria Coordinator and AMF. A summary was sent to the District Malaria Coordinator. The complete data set has also been passed to the District Malaria Coordinator to act on recommendations.

## **Results and discussions.**

A total of 6,520 randomly selected households were interviewed representing 100% of the targeted households.

During the survey, it was established that from the 16,833 nets that had been distributed 13,005 nets were found to still be in hung use, representing 77%. The survey also found that out of the 16,833 nets that were distributed 2,437 AMF nets were present but not hung representing 14% while 789 AMF nets were missing representing 5%. 602 nets were found to have been worn out and not usable representing 4%. Refer the attachment 1.

### **Net Hung**

Ulongwe health facility recorded the highest number of nets hung by percentage since out of 617 received 510 were found to be in use representing 83%, while Kalembo recorded the lowest percentage of nets found in use with 68% as out of 1502 nets, 1026 were found to be still in use.

### **Nets Present But Not Hung**

Phalula health facility had the lowest number on nets that were found to be present but not being used, with 10% since out of 827 nets recorded there were 84 nets found, where as Kalembo health facility registered the highest percentage as out of 1502 nets received, 285 nets were present representing 19%.

### **Nets Missing**

Balaka health facility had the lowest number of nets missing as out of 3551 nets distributed it was leveled that 121 nets were missing representing, representing 3%. Kankao health facility had the highest number of nets recorded worn or not usable as out of 1068 nets received, 72 nets were found to be present representing 7%.

### **Nets worn out**

The district had an overall of 5% of the nets worn out, by health facility, it was revealed that Kalembo health facility had a highest number of nets worn out since out of 1502 nets distributed 113 nets were found to be worn out representing 8% while Balaka DH had the lowest number of nets worn out as out of 3551 nets received 45 nets were found to be worn out representing 1%.

## **NET CONDITION**

The survey was also conducted to assess the net condition so that it should determine the precautionary measures and resolve the questions why we are having malaria cases despite the distributions. The net condition were Categorized into very Good, Good, Viable and Worn out.

### **Very Good Condition.**

The district had an overall rating of 75% found in good condition.

Kwitanda health facility had the highest very good rate of nets in good condition as of 807 nets visited 710 nets were in good condition representing a 88%. Where as Kalembo health facility had the lowest rate of 59%.

### **Good condition**

The district overall rating of the nets in good condition was 18%.

Kalembo health facility had the highest rate of nets in good condition with 305 of 1139 nets representing 27%. However Kwitanda and utale 2 health facilities registered lowest good net condition levels as they both had 8% since they had 61 of of 807 and 47 out of 590 nets received respectively.

**Viable nets.**

The district had an overall rating of 2% nets in viable condition.

Kalembo and Nandumbo had the highest viable rating since they both had 5% of the visited nets. Kalembo had 52 nets in viable condition of the total 1139 nets while Nandumbo had 39 nets viable of the total 757 nets. Kankao and Phimbi had the lowest 0% rate as they both recorded 3 nets in viable condition of 850 and 793 nets visited respectively.

**Worn out nets**

The overall district worn out nets levels registered was 5%.

Kalembo health facility registered the highest worn out mosquito net rate as it recorded 10%. Of the 14 health facilities in the district the lowest health facility to register the least worn out nets was Balaka D.H. which registered 2%.

The survey also revealed 17% of the total sleeping spaces were occupied by children under 5 years old; 42% was sleeping spaces occupied by children aged 5 to 18 years; 1% of the total sleeping spaces occupied by pregnant mothers while those aged over 10years occupied 40%.

**Recommendations.**

- We recommend that post distribution sensitization meetings should be conducted to remind the beneficiaries on the best ways of taking care of the nets and net hang utilization.



## Appendix A – Data collection locations

A total of 6,520 households randomly selected from 228 villages, and visited unannounced were involved in the data collection.

	Health Centre	Health Facility registered Population	Health Facility registered HHs	Total Registered Villages per Health Facility	Villages to be sampled	% of Vllgs	HHs sampled per village	# of HHs sampled per Health Facility	% of HHs in HF
1	Balaka DH	124,813	27,267	135	40	30%	35	1,400	5.1%
2	Chiyendausiku	20,597	4,631	39	9	23%	25	225	4.9%
3	Kalembo	45,560	9,628	46	20	43%	25	500	5.2%
4	Kankao	37,537	8,204	84	17	20%	25	425	5.2%
5	Kwitanda	34,955	7,894	71	11	15%	35	385	4.9%
6	Mbera	70,238	15,263	189	25	13%	30	750	4.9%
7	Mwima	40,464	9,042	59	18	31%	25	450	5.0%
8	Namanolo	48,489	10,025	31	20	65%	25	500	5.0%
9	Nandumbo	34,313	7,116	29	12	41%	30	360	5.1%
10	Phalula	30,480	6,852	64	14	22%	25	350	5.1%
11	Phimbi	31,881	7,205	83	15	18%	25	375	5.2%
12	Ulongwe	24,699	5,465	26	8	31%	35	280	5.1%
13	Utale 1	21,640	4,833	40	10	25%	25	250	5.2%
14	Utale 2	24,465	5,260	39	9	23%	30	270	5.1%
Total		590,131	128,685	935	228			6,520	5.1%

# Appendix B – Post Distribution Check-Up (PDCU) data collection form



## POST-DISTRIBUTION CHECK-UP OF MOSQUITO NET USAGE

Country:	Health Centre name:
Date of distribution:	Village name:
Reference:	Date of this survey:

Form Number:

To the Householder in the past, you received mosquito nets for free in a community distribution. We are conducting a survey of randomly selected households to assess net usage and net condition. We would like to ask for your permission to enter your home to gather this information. Information is gathered anonymously: your personal details are not recorded.

I agree to allow you to enter my home, in my presence, to assess the use and condition of my mosquito nets. Signature of Householder

1. How many regularly used sleeping spaces are there in the household?

2. What is the condition of the HUNG nets?

	Brand of net (tick one)				Is it an AMF Net? <input checked="" type="checkbox"/>	Net condition (tick one)			How many slept under this net last night?				Net condition
	Olyset Plus	Permatat 2.0	3.0	Other		Very Good	OK	Poor	# Children Under 5	# Children 6 to 15	# Preg W	# Other adult	
Ex.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	1			1	Very Good fewer than 2 holes of less than 2cm each
Net 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>					OK fewer than 10 small holes
Net 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>					Poor more than 10 small holes or 1 big hole, larger than 10 cm
Net 3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>					If there are more than 10 nets continue on another form (and mark both forms).
Net 4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>					
Net 5	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>					
Net 6	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>					
Net 7	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>					
Net 8	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>					
Net 9	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>					
Net 10	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>					

3. Of the Against Malaria Foundation nets ONLY:

Number originally received	Hung (= # ticked above)	Present but not hung *	Not present	
			Worn out	Other *
=	+	+	+	+
*Reason:				

4. Does the householder know how to hang and use a net correctly?  Yes / No

5. How many people in this household have had blood-test diagnosed malaria in the last month?

6. How many people are there in this household?

CERTIFICATION: I certify the information in this form is correct

Surveyor's name and position:	Surveyor's organisation:	Official Stamp
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Form Number:

To the Householder in the past, you received mosquito nets for free in a community distribution. We are conducting a survey of randomly selected households to assess net usage and net condition. We would like to ask for your permission to enter your home to gather this information. Information is gathered anonymously: your personal details are not recorded.

I agree to allow you to enter my home, in my presence, to assess the use and condition of my mosquito nets. Signature of Householder

1. How many regularly used sleeping spaces are there in the household?

2. What is the condition of the HUNG nets?

	Brand of net (tick one)				Is it an AMF Net? <input checked="" type="checkbox"/>	Net condition (tick one)			How many slept under this net last night?				Net condition
	Olyset Plus	Permatat 2.0	3.0	Other		Very Good	OK	Poor	# Children Under 5	# Children 6 to 15	# Preg W	# Other adult	
Ex.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	1			1	Very Good fewer than 2 holes of less than 2cm each
Net 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>					OK fewer than 10 small holes
Net 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>					Poor more than 10 small holes or 1 big hole, larger than 10 cm
Net 3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>					If there are more than 10 nets continue on another form (and mark both forms).
Net 4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>					
Net 5	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>					
Net 6	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>					
Net 7	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>					
Net 8	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>					
Net 9	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>					
Net 10	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>					

3. Of the Against Malaria Foundation nets ONLY:

Number originally received	Hung (= # ticked above)	Present but not hung *	Not present	
			Worn out	Other *
=	+	+	+	+
*Reason:				

4. Does the householder know how to hang and use a net correctly?  Yes / No

5. How many people in this household have had blood-test diagnosed malaria in the last month?

6. How many people are there in this household?

**Appendix C – Timeline**

Feb-17					
	Mon	Tues	Wed	Thurs	Fri
<b>Activity</b>					
<b>Orientation</b>	6				
<b>Data Collection</b>		7	8	9	10
	13	14	15	16	17
	20	21	22		
<b>Data Entry</b>					
				16	17
	20	21	22	23	24
<b>Report Writing</b>	27-28				

## Appendix D- RESULTS



### Post-Distribution Check-Up (PDCU) for Balaka, Malawi: @

		Presence of AMF Nets		Condition of AMF nets		Usage of the nets		Miscellaneous data		Comments														
Job	Nets Used				Household used				People sleeping under nets				Coverage											
	Correctly		Not Correctly		Correctly		Not correctly		Children under 5	Children 5 to 18	Pregnant women	Other adults	Total	Sleeping spaces		People								
	#	%	#	%	#	%	#	%	#	%	#	%	#	#	Covered	%	#	Covered	%					
	13,799	99	133		15,989	99	62		14,704	17	11,758	42	268	1	11,102	40	27,832	15,162	13,932	92	29,793	27,832	93	
1	DP199 Malawi, Balaka District Hospital, Balaka District	2,957	98	51	2	1,279	98	24	2	889	15	2,503	43	45	1	2,401	41	5,838	3,250	3,008	93	6,207	5,838	94
2	DP199 Malawi, Chiyendausiku	452	100	0	0	195	100	0	0	134	16	304	37	19	2	363	44	820	525	452	86	951	820	86
3	DP199 Malawi, Kalembo	1,073	97	28	3	455	97	12	3	386	17	973	44	25	1	833	38	2,217	1,199	1,101	92	2,367	2,217	94
4	DP199 Malawi, Kankeo	855	100	0	0	379	100	0	0	311	19	668	40	12	1	680	41	1,671	957	855	89	1,843	1,671	91
5	DP199 Malawi, Kwitanda	821	100	0	0	365	100	0	0	260	16	741	45	8	0	650	39	1,659	908	821	90	1,801	1,659	92
6	DP199 Malawi, Mbera Health Centre, Balaka District	1,647	99	9	1	706	100	3	0	528	16	1,426	43	31	1	1,334	40	3,319	1,733	1,656	96	3,426	3,319	97
7	DP199 Malawi, Mwima	936	100	0	0	412	100	0	0	352	18	811	42	23	1	760	39	1,946	1,010	936	93	2,083	1,946	93
8	DP199 Malawi, Namandolo	1,109	100	1	0	471	100	0	0	402	17	1,008	44	27	1	861	37	2,298	1,211	1,110	92	2,462	2,298	93
9	DP199 Malawi, Nandumbo	732	95	39	5	320	94	19	6	319	20	678	42	19	1	607	37	1,623	818	771	94	1,714	1,623	95
10	DP199 Malawi, Phalula	721	100	0	0	320	100	0	0	237	16	612	42	12	1	606	41	1,467	809	721	89	1,599	1,467	92
11	DP199 Malawi, Phimbi	812	100	0	0	348	100	0	0	280	18	630	40	22	1	645	41	1,577	877	812	93	1,667	1,577	95
12	DP199 Malawi, Ulongwe	545	100	0	0	256	100	0	0	230	20	477	41	7	1	462	39	1,176	617	545	88	1,294	1,176	91
13	DP199 Malawi, Utale I	539	99	5	1	226	98	4	2	148	14	480	45	9	1	421	40	1,058	605	544	90	1,141	1,058	93
14	DP199 Malawi, Utale II	600	100	0	0	257	100	0	0	228	20	447	38	9	1	479	41	1,163	643	600	93	1,238	1,163	94

Used correctly **0% > 90% > 95+%**      The green, orange and red traffic-light system indicates 'very good', 'OK' and 'recommend action is taken'.  
 Coverage **0% > 90% > 95+%**              They are based on an educated assessment of what figures would represent very good, OK, and not so good use and condition of the nets.  
 We are currently liaising with a number of individuals to gain further advice on where these bands should fall.