Dedza District, Malawi

Universal LLIN Distribution

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Final Report

Prepared by: Chimwemwe Nyoni and Nelson Coelho (CU)
Rob Mather (AMF)

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1. Executive Summary

245,489 long-lasting insecticidal nets (LLINs) were distributed in Dedza District, Malawi from 01Sep14 to 10Oct14 as part of a district-wide universal coverage* net distribution programme.

91.6% sleeping space coverage was achieved. A mop-up distribution of 33,723 LLINs will complete the coverage of the remaining 8.4% of sleeping spaces in Dedza District.

The mop-up areas comprise the Dedza Health Centre Area of 28 villages, and a further 116 villages across the district (of 1,999 villages) that did not receive nets due to more nets being required than anticipated.

The distribution and pre-distribution work was coordinated by the Dedza District Council, the office and staff of the District Health Officer (DHO) and Malaria Coordinator (MC), in collaboration with Concern Universal Malawi (CU). The distribution and was carried out by the district's 430 government health workers, Health Surveillance Assistants (HSAs) in conjunction with CU staff.

A pre-distribution phase preceded the distribution and involved, amongst other activities, visiting all 186,105 households in the district over a three week period to establish net need per household. The data collected on paper was put in electronic form and once cleaned and a draft registration list verified by the communities themselves (and any errors and omissions corrected), was printed and formed the basis on which the distribution were conducted.

This distribution was part of the National Malaria Control Program (NMCP)'s national strategy to achieve universal coverage on a three year distribution cycle.

*all sleeping spaces covered

2. Preparation

In advance of the distribution, a pre-distribution phase that took place in February 2014, during which all 186,105 households in the district were visited by the team of 430 Health Surveillance Assistants (HSAs) to establish net need per household in order to achieve universal coverage. This phase of the distribution is reported on separately in the Dedza Pre-distribution Report.

In preparation for the district-wide distribution a number of activities were carried out.

1. Liaising with local leaders

The project team briefed the Dedza District Assembly, through the District Executive Committee. This initiative was pursued to inform the district's stakeholders about the project details as well as appeal for their commitment to support the project.

2. Community sensitization

The project team conducted community sensitization sessions to all villages through the decentralized structures of the 8 Area Development Committees (ADCs) of Chauma, Chilikumwendo, Kachere, Kachindamoto, Kamenyagwaza, Kaphuka, Kasumbu and Tambala. These committees involve all of the Village Development Committees (VDCs) and allowed the community and its leaders to be made aware of and consulted on the upcoming Universal Coverage Long Lasting Insecticidal Net (LLIN) Distribution Project.

Items covered included the objective of the mass net distribution initiative and procedures to be followed to identify the beneficiaries.

During the sensitization meetings communities were informed that nets were provided by AMF to be distributed free of charge to the beneficiaries and made aware of the importance of their participation for the success of the project.

3. Training of staff

The project team conducted orientation training of all 462 Health Surveillance Assistants (HSAs) in the district on the procedures of beneficiary household registration as the HSAs would be carrying this out. HSAs carry out their full time work in the villages in the district, with each being assigned to a Health Centre Catchment Area.

During the orientation training the HSAs were introduced to the registration forms and all the parameters that are part of the registration exercise. The need to correctly identify the number of sleeping spaces and the number of existing usable LLIN nets in each of the households was emphasized. The HSAs were also informed of the need to involve the local leaders in the registration process in order to corroborate the collected information and make sure that no household was left unregistered.

4. Beneficiary registration

The beneficiary household registration was carried out in all villages and households regardless of religious beliefs, economic or marital status, using a standard beneficiary form.

The form captured the name of the household head, total number of people in the household, number of beneficiaries, both under five and over five years old, total number of existing usable LLINs and number of sleeping spaces in the household.

The number of nets required per household was calculated by subtracting the number of usable LLINs from the total number of sleeping spaces in the household.

5. Data entry

The forms containing the registration data collected from the villages were sent to the data entry clerks and captured in an MS Access database. Upon completion of the data entry, the respective draft registers were printed.

6. Data verification

The project team, in collaboration with the Ministry of Health staff, HSAs and the local leaders, conducted the beneficiary household data verification exercise in all the villages, which were divided into clusters of two or more villages, based on proximity.

This exercise was aimed at verifying that all households had been duly registered, to check if all those who were registered had been entered into the database and eliminate any duplicates from the database.

During the verification process, CU staff roll-called the beneficiaries from the printed registers whilst the HSAs cross-checked with their list compiled from the registration forms in order to detect any mismatch. This verification exercise revealed that a total of 32,183 households had been skipped during the registration.

Data collected upon registration – and verification

		Registration	Verification	Delta
1	**Population**	**654,471**	**792,422**	**+137,971**
2	**Number of households**	**153,922**	**186,105**	**+32,183**
3	**Number of LLIN Available**	**113,287**	**123,808**	**+10,521**
4	**Number of sleeping Spaces**	**335,052**	**403,020**	**+67,968**
5	**Number of Nets Required**	**221,871**	**280,057**	**+58,186**

After the village household verifications, the corrected and edited registers were referred back to the data entry team and the corrections made to the database. After making the changes in

the database, the distribution registers were printed in preparation for the distribution process.

This process emphasised the importance of the verification element in the registration process.

In total the data entry task was carried out by 7 data entry staff working 8 hours per day for 30 days. The correction of data from the verification process took 1 data officer 20 days.

7. Logistics and security of LLINs

i) Storage and movement of nets

Upon arrival in-country and after completing all custom clearance formalities, the nets were stored in the main warehouse located within the premises of the District Hospital in Dedza Town pending relocation to the respective Health Centres.

ii) Security of nets

In order to ensure the security of nets, new padlocks were installed on all warehouse doors and the keys kept by CU's storekeeper. Comprehensive insurance was contracted to cover potential losses caused by theft, fire or water damage and security guards were deployed throughout the distribution period, until all nets were distributed. All movements of nets were supervised by at least two CU staff members and the security guard.

3. Distribution

1. Dates

Following the revision of the distribution plan, messages were sent to the stakeholders and local leaders informing them of the distribution schedule and the distribution commenced on the 1st of September 2014 and was completed on the 31st October 2014.

2. Participants and roles

The following took part in the distribution of nets:

- 5 project management and other staff from Concern Universal and 2 field supervisors (senior members from the district including the Malaria Coordinator and Environmental Health Officer) responsible for coordinating the distribution and acting as independent monitors during the distribution.
- 462 Health Surveillance Assistants (HSAs), including senior HSAs, responsible for verifying the identities of the beneficiaries and ensuring that all households received the required nets.

At each distribution site there were typically 2 to 4 HSAs, 5 CU staff and 2 senior district health staff. The CU staff conducted the distribution ensuring nets were only given to beneficiaries listed on the register and in the quantities listed. Any nets not distributed at the end of the day were placed back in secure storage or returned to the distribution hub for the next day's distribution.

3. Distribution activities

i) Movement of nets

One or two days prior to distribution, the required quantity of nets was ferried to the health center for temporary safe keeping pending relocation to the distribution points on the day of distribution. Two vehicles were used to carry the distribution personnel and nets.

A truck to ferry nets to a health facility for distribution

Vehicles carrying nets to the distribution points

ii) Community net use demonstration and malaria education

Health talks were given to the communities on malaria education elements, correct net usage and how to take good care of the nets. The project team demonstrated how to hang the nets.

Net hung display during a distribution's health talk

iii) Handover of nets

After the health talk, beneficiaries in groups by village lined up to receive nets and sign the distribution register to document the handover of nets.

A beneficiary receiving her nets

Beneficiaries receiving nets

A total of 245,489 nets were distributed in 33 of the 34 health facilities over a period of 9 weeks. The distributions were conducted through the same clusters that were created during the household verification process.

iv) Nets not distributed

At any distribution point there were usually some beneficiaries who were not present for any one of a number of reasons. In order to ensure those beneficiaries receive the nets they were due, a mop-up distribution was carried out after the conclusion of the scheduled distribution.

4. Data management

Distribution lists indicating the total numbers of nets distributed per household/village were sent back to the data entry team and captured in the MS Access database. This task was carried out by 2 data entry staff working 8 hours per day for 20 days.

5. Mop-up distribution

Not enough nets were available to achieve 100% coverage so a mop-up phase will be required.

There were not enough nets for two reasons. First, there was a significant time-lag, seven months, between the pre-distribution registration survey (PDRS) being carried out (February 2014), which established specific net need per household, and the distribution of nets (Sep/Oct 2014). Typically this time lag is one to three months. This was due to management resource and planning issues both within CU Malawi and the district health office. Second, data verification was not as accurate as it should have been, with a variety of errors including missed villages and data not being checked by some community leaders which would have identified additional nets required in a material number of households.

During the distributions 1,855 of the district's 1,999 villages (93%) received nets bringing to 91.6% the coverage of the district's sleeping spaces.

Total sleeping spaces in district: **403,020**
Total # of existing usable nets: **123,808** (**30.7%** existing coverage)
Total # of nets required: **279,212** (**69.3%**)
Total # of nets distributed: **245,489** (**87.9%** of those required to be distributed)
Coverage achieved at end of main distribution: **369,267** sleeping spaces (**91.6%** of district)

Mop-up distribution of **33,723 LLINs** will complete the coverage of the remaining **8.4%** of the sleeping spaces in Dedza District.

144 villages did not receive nets of which 116 were within the 33 Health Centre Areas (HCAs) where nets were distributed and 28 villages were within the one HCA, Dedza Health Area that did not receive nets.

Note: 5,889 nets left over from the distribution in Balaka District were added to the stock of 240,000 nets received for Dedza District enabling to distribute the total number of 245,489 nets.

4. Lessons learned

The single most significant issue during this distribution was a material shortfall, some 45,000 LLINs or 15% of the total ordered, in the number of LLINs required to achieve district-wide universal coverage.

This was due to two factors.

1. Importance of sticking to established project timeline

First, there was a significant time-lag, seven months, between the pre-distribution registration survey (PDRS) to establish specific net need per household being carried out (February 2014) and the distribution of nets (Sep/Oct 2014). Typically this time lag will be one to three months. This was due to management resource and planning issues both within CU Malawi and the district health office.

2. Importance of following data verification procedures

Second, data verification was not as accurate as it should have been, with a variety of errors including missed villages and data not being checked by some community leaders which would have identified additional nets required in a material number of households.

It is clear to all involved these were failings and the consequence was a significant number of community members not protected against malaria as a result of the distribution and the need for additional funding and resource allocation for a mop-up distribution.

In addition, the following lessons were learned from the distribution:

3. Improved communication to villages

There were a few cases of communication issues with villages which caused confusion and presenting scheduling and net management issues.

Example 1: Some villages turned up at different distribution points to those to which they had been assigned, causing confusion and presenting scheduling and net management issues.

Example 2: Some villages were not informed of the distribution schedule or the information reached them too late.

It is important to ensure all villages are aware of distribution locations and timing and, if there are changes, are verifiably informed of those changes.

4. Establish contingency plans for potential operational issues

A number of unexpected operational problems were experienced during the distribution. While it is often not possible to predict specific problems at particular times, contingency plans discussed as a team before the distribution could improve the responses when issues do arise.

Example 1: Some villages posed challenges due to some beneficiaries turning up for the distributions while under the influence of alcohol, disrupting the activities.

Example 2: Initiations, wedding celebrations and funerals made some villages turn up late or miss the respective distributions. This led to unexpected additional costs related to returning a high number of nets to the warehouse and affected the distribution schedule. Additional distribution days had to be scheduled, increasing the overall cost of the distribution exercise.

Example 3: Mechanical issues due to poor road conditions were another challenge, in particular with the lorry used to ferry the nets from the warehouse to the health centres. Some distributions had to be postponed in absence of a replacement vehicle, causing additional delays on our distribution schedule.

Example 4: Other sporadic activities or meetings involving the local leaders or health staff forced our distribution schedule to be rearranged.

5. Appendix

1. Pre-distribution and Distribution data

Health Centre Area (HCA)	Total Number of Villages	Villages distributed	% Villages covered	# Households	# People	# Sleeping Spaces	# Usable LLINs	# LLINs required	# LLINs distributed	Difference (for mop-up phase)	% of Sleeping Spaces covered (pre mop-up)
Nakalanzi	16	16	100%	1,662	7,362	3,245	708	2,537	2,380	-157	93.8%
Kachindamoto	20	19	95%	2,288	11,076	5,136	1,308	3,827	3,648	-179	95.3%
Mtakataka	52	50	96%	4,765	20,803	10,419	2,285	8,134	7,945	-189	97.7%
Police College	11	5	45%	1,066	4,555	2,258	278	1,980	1,918	-62	96.9%
Mua	23	23	100%	5,769	26,974	12,951	2,964	9,987	9,531	-456	95.4%
Kaundu	62	60	97%	4,708	22,487	10,078	3,187	6,898	6,814	-84	98.8%
Golomoti	62	61	98%	8,208	37,571	17,820	6,130	11,697	10,821	-876	92.5%
Mganja	9	9	100%	1,348	5,742	2,845	1,125	1,721	1,667	-54	96.9%
Dzindevu	55	45	82%	7,531	30,793	16,708	3,411	13,304	9,564	-3,740	71.9%
Kanyama	63	58	92%	4,818	18,868	9,887	3,299	6,589	5,711	-878	86.7%
Chikuse	57	46	81%	6,217	25,904	13,303	5,134	8,287	7,356	-931	88.8%
Mjini	109	90	83%	3,532	15,653	7,703	1,941	5,755	4,952	-803	86.0%
Chiphwanya	38	36	95%	2,911	12,477	6,411	2,229	4,245	3,485	-760	82.1%
Mayani	65	54	83%	5,891	25,462	13,810	6,900	6,905	5,345	-1,560	77.4%
Kaphuka	98	78	80%	9,058	36,852	20,442	5,060	15,382	12,231	-3,151	79.5%
Tsoyo	93	90	97%	5,030	20,302	10,800	4,406	6,393	5,968	-425	93.4%
Kasina	71	69	97%	7,801	32,436	16,748	5,714	11,037	10,701	-336	97.0%
Mdeza	72	72	100%	3,710	15,072	7,984	2,058	5,926	5,815	-111	98.1%
Chitowo	61	59	97%	7,375	31,133	15,560	4,604	10,994	10,202	-792	92.8%
Mphati	29	28	97%	2,859	11,789	6,039	2,590	3,442	3,135	-307	91.1%
Maonde	45	45	100%	4,486	19,695	10,036	4,019	6,017	5,213	-804	86.6%
Mtendere	101	100	99%	15,223	65,934	33,750	7,688	26,060	24,524	-1,536	94.1%
Lobi	54	53	98%	5,833	24,794	11,974	3,730	8,245	8,002	-243	97.1%
Chongoni	60	58	97%	5,565	22,846	12,109	2,521	9,586	8,418	-1,168	87.8%
Kalulu	46	46	100%	2,651	10,875	5,364	2,660	2,763	2,671	-92	96.7%
Mikondo	73	70	96%	4,662	18,856	9,017	2,606	6,411	6,233	-178	97.2%
kafere	82	79	96%	2,648	11,871	5,897	2,703	3,196	3,114	-82	97.4%
Matumba	116	114	98%	10,164	42,592	20,434	5,006	15,434	15,093	-341	97.8%
Chimoto	83	83	100%	8,219	33,484	16,708	6,812	10,073	9,987	-86	99.1%
Kanyezi	88	87	99%	6,806	28,105	14,217	3,682	10,534	10,193	-341	96.8%
Mphunzi	34	33	97%	5,025	21,774	11,222	3,632	7,593	7,438	-155	98.0%
Mlangali	35	35	100%	4,449	18,386	9,710	3,555	6,249	6,068	-181	97.1%
Bembeke	88	84	95%	7,073	30,214	15,447	5,639	10,095	9,346	-749	92.6%
TOTAL 1	**1,971**	**1,855**	**94%**	**179,351**	**762,737**	**386,032**	**119,584**	**267,296**	**245,489**	**-21,807**	91.8%
HCA that did not receive nets:											
Dedza	28	0	0	6,754	29,685	16,988	4,224	12,761	0	-12,761	0.0%
TOTAL 2	**1,999**	**1,855**	**93%**	**186,105**	**792,422**	**403,020**	**123,808**	**280,057**	**245,489**	**-34,568**	87.7%