**Project Title/Name:** Universal LLIN Distribution Campaign in Greater Accra, Northern and Upper West Regions, Ghana

**Contract Number**

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Introduction / Background

Episcopal Relief & Development and its partner, the Anglican Diocesan Development and Relief Organization (ADDRO) with support from Against Malaria Foundation (AMF) are supporting the implementation of the universal Long Lasting Insecticidal Nets (LLINs) campaign and long-term monitoring of net use in three regions in Ghana, namely, Northern, Greater Accra and Upper West Regions.

The campaign activities are in three phases: pre-distribution, distribution and post-distribution. The pre-distribution and distribution phases of the campaign which were led by the National Malaria Control Programme (NMCP) with support from Episcopal Relief & Development, ADDRO and other partners were successfully completed in 2016. The current ongoing activities fall within the post-distribution phase, which is led by Episcopal Relief & Development and ADDRO.

This report highlights activities carried out under the AMF-funded LLIN Campaign Program from November 2016 to January 2017.

Overview of Key Activities Implemented from November, 2016 to January, 2017

From November 2016 to January 2017, Episcopal Relief & Development/Anglican Diocesan Development and Relief Organization (ADDRO) worked in collaboration with the Ghana Health Service (GHS) to implement the following major activities:
• Training of Sub-district Volunteer Supervisors and Enumerators on Post Distribution Check-Up (PDCU) for Northern and Greater Accra Regions
• Training of Data Entry Clerks
• Northern Region PDCU data entry
• Recruitment of supervisors and enumerators for Greater Accra Region PDCU
• Training of ADDRO Greater Accra regional staff on the PDCU
• Post Distribution Check-Up (PDCU) exercise in Northern and Greater Accra region
• 2017 Planning and Budgeting

The table below provides a detailed update of activities implemented within the reporting period:
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<tr>
<th>№</th>
<th>Date(s)</th>
<th>Location</th>
<th>Activity</th>
<th>Brief Description of Activity</th>
<th>Stakeholders involved</th>
<th>Outcome / Findings / Comments</th>
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| 1 | 31st October – 4th November, 2017 | Northern region | Training of Sub-district Volunteer Supervisors and Enumerators on PDCU | ADDRO organized a training workshop for Sub-District Supervisors (SDS) and Enumerators in 20 selected districts of the Northern Region to effectively carry out the first Post Distribution Check Ups (PDCUs). Three teams of ADDRO HQ and Northern Regional staff were formed with each team assigned to a specific number of districts to train the Sub-District Supervisors and Enumerators. In all, 200 enumerators and 93 sub-district supervisors were trained. Training topics included the following:  
• Roles and responsibilities of Enumerators and sub-district supervisors  
• Community entry and how to establish rapport with household heads and seek consent before administering questionnaire  
• How to fill the PDCU Form | Episcopal Relief & Development, ADDRO | 200 Enumerators and 93 Supervisors were successfully trained and adequately prepared to carry out the PDCU data collection exercise in 20 districts in the Northern Region. |
| 2 | 7th - 17th November, 2016 | Northern Region | NR PDCU Data Collection | The Northern Region PDCU data collection was carried out by 200 trained enumerators in all 20 AMF supported districts. The Regional team visited all the SDS and ADDRO and Episcopal Relief & Development. | A total of 20,949 households were visited and data collected accordingly. |

1 Due to the change in schedule for the LLIN Distribution in the Upper West Region which took place in September, the subsequent dates of the PDCU has been changed to March, 2017 and PDCU reporting to May, 2017.
enumerators on the field and checked the forms to ensure that they were correctly filled before receiving them. Enumerators were paid based on number of correct forms turned in.

The forms were properly packaged by ADDRO team and sent to the regional office. Forms from each community together with the HH list were packed separately. The sub-district forms were also packed separately and districts forms separately packed. The forms were transported using ADDRO vehicles from the Northern Region office to the Data Entry Centre in Bolgatanga

For further information on the Northern Region PDCU, refer to the detailed PDCU report submitted to AMF on January 28th, 2017.

ADDRO organized a training for data entry clerks at the Data Entry Centre prior to data entry of the Northern region PDCU data. During the training, the data entry clerks were first taken through the PDCU form to understand all data on the form. They were then trained on relevant portions of the AMF database (DES) to understand how to enter data in each field. They were asked to ensure accuracy throughout the process.

ADDRO and Episcopal Relief & Development with technical support from AMF

- All the 63 data entry clerks expected were present and trained.
- The clerks demonstrated very good understanding of the PDCU form and the AMF DES at the end of the training workshop.

Within the reporting period, ADDRO continued to monitor the process of data entry at the Data Entry Centre. ADDRO and Episcopal Relief & Development supervisors checked the database for consistencies in LLINs distribution data, often referred to as Pre-Distribution Registration Survey (PDRS) and PDCU

ADDRO and Episcopal Relief & Development with technical support from AMF

- At the end of the data entry on 12th January 2017, the DES system showed inconsistencies on the following.
  - The total number of LLINs given during distribution in the PDRS data was 52,964 whilst 64,802 LLINs were reported as
data and worked on cleaning the database. The main focus at the data entry centre within this period was the Northern Region PDCU data.

AMF received in the PDCU data. This represented an overall variation of 22.35% of the number of LLINs given.

- Similarly, the total number of people in households at registration in the PDRS data was 96,676 whilst 128,986 people in households was reported in the PDCU data. This gave an overall variation in the number of people in households as 33.42%.

- To better understand the issues, find solutions and avoid/minimize its recurrence, there has been ongoing dialogue with AMF, and at the closing of the reporting period, the issues were being addressed. A formal report on this will be included in the next quarterly activity report due May 15, 2017.

• There existed some data mismatches at the end of the data entry process. On the system, 1,400 records needed checks for location mismatches. The system displayed the list of PDCU records where there were inconsistencies between location recorded for the PDCU and PDRS. ADDRO and Episcopal Relief & Development supervisors went through the DES screen to cross-check the PDCU record and correct either the Household ID or the location.

• There were 8,500 PDCU records where the householder's name and locations differed from those recorded at the time of the PDRS. In most cases, this was due to spelling differences in the input process. These spelling and location were
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<td><strong>5</strong></td>
<td>19&lt;sup&gt;th&lt;/sup&gt; December 2016 - 10&lt;sup&gt;th&lt;/sup&gt; January, 2017</td>
<td>Greater Accra Region</td>
<td>Recruitment of supervisors and enumerators for the paper based PDCU</td>
<td>Recruitment of supervisors and enumerators for the paper based PDCU in Greater Accra was carried out in all the 11 districts. 244 applicants were successfully recruited for the paper based PDCU data collection. This number is made up of 195 enumerators and 49 supervisors.</td>
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| **6** | 9<sup>th</sup> January, 2017 | Greater Accra Region | Training of ADDRO regional staff | ADDRO headquarters staff organized a one day Training of Trainers (ToT) for the ADDRO Greater Accra Region staff. The training was carried out using the following methods:  
• Going through the PDCU form  
• Practice filling PDCU forms using scenarios  
• Sharing of experiences, lessons and best practices from Northern Region PDCU exercise  
• Discussing the strategies for the data collection | ADDRO/ Episcopal Relief & Development |
|   |   |   |   |   |
| **7** | 11th - 28th January, 2017 | Greater Accra Region | Training of supervisors and enumerators for PDCU | The training of supervisors and enumerators for the paper based PDCU exercise was carried out in all the 11 districts. More details on the training will be in the GAR PDCU report to be submitted April 12, 2017. | ADDRO and Episcopal Relief & Development |

• Again the ADDRO and Episcopal Relief & Development supervisors had to go through and marked those as acceptable matches.

• 195 numerators and 49 supervisors were successfully recruited for the paper based PDCU data collection.

All the three regional staff were successfully trained. The training was participatory and practical. Experience from the Northern region PDCU was also shared.

• The training was successful  
• In all 244 people were trained, comprising 49 supervisors and 195 enumerators.
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<th>Description</th>
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<td>8</td>
<td>Greater Accra Region Data collection</td>
<td>The PDCU data collection was in two-fold: one using hard copy forms and the other using mobile devices. The mobile pilot was done only in the Shai Osudoku district of the Greater Accra Region. The paper based PDCU data collection started in each of the districts after training of enumerators and supervisors was completed. The monitoring and supervision of the data collection in the districts was done by two teams made up of Episcopal Relief &amp; Development Program Officer and the ADDRO staff. The monitoring team visited all the 44 sub-districts of the 11 districts.</td>
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<td>ADDRO and Episcopal Relief &amp; Development with technical support from AMF</td>
<td>• Data was collected from 21,180 households</td>
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<td>• All the trained 195 enumerators collected data for the 5% main and the 5% checks and were supervised by the 49 trained supervisors</td>
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<td>• With the challenges encountered during the PDCU exercise in the Northern Region (forms incorrectly filled by some enumerators and difficulty in locating some households), a new strategy for data collection was introduced and incorporated into the Greater Accra Region PDCU. With this strategy, supervisors and their enumerators worked together in one community to identify and interview sampled households before moving to the next community until all sampled communities were covered. This helped to reduce with the issues of incorrect filling of forms by some enumerators and difficulties in identifying sampled households.</td>
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<td>• Data collection period was extended by one week due to difficulties in meeting household heads at the time of visits</td>
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<td>The challenge in some cases however was that, some of the house numbers, contact names and cell phone numbers sampled could not be located.</td>
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<td>Recruitment of enumerators for the mobile PDCU</td>
<td>25 enumerators were successfully recruited for the PDCU mobile data collection.</td>
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<td>9</td>
<td>Greater Accra Region Recruitment of enumerators for the mobile pilot PDCU</td>
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<td>Recruitment of enumerators for the mobile PDCU data collection for the Shai Osuduko district in the Greater Accra region was done from the 16th to 20th of January, 2017. The required qualification of the enumerators included:</td>
<td>25 enumerators were successfully recruited for the PDCU mobile data collection.</td>
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| 10 | 21st January, 2017 | Greater Accra Region | Training of ADDRO and Episcopal Relief & Development staff on the use of mobile devices for data collection | A one-day training session was organized by DS Dayta Solutions (Consultant for the mobile pilot) for ADDRO and Episcopal Relief & Development staff on the use of the mobile devices for the mobile data collection. The aim of this training was to build the capacity of these staff to assist in the cascade training of the enumerators for the mobile data collection. The training topics included the following:  
• Use of the mobile device to collect the PDCU data  
• How to upload the PDCU form on the mobile device  
• How to upload completed data from the device unto the cloud system  
• How to troubleshoot the data collection devices when problems occurs  
• Mobile PDCU data interface  
The practical session involved the using the mobile devices to collect data on given scenarios | ADDRO |
|   |   |   |   |   |
| 11 | 23rd & 24th January, 2017 | Shai Osuduku, Greater Accra Region | Training of enumerators for the mobile pilot | Two days training was organized for the enumerators for the mobile data collection. The enumerators were from communities within the two sub districts in Shai Osuduku district. The training was jointly facilitated by ADDRO, Episcopal Relief & Development and DS Dayta solution staff. The training involved:  
• Ability to use an android phone  
• Resident in the communities  
• Must not be a Ghana Health Service staff  
• Should have at least completed Senior High School  
• The training was successful (all trainees could confidently use the tablet to collect data hence prepared to carry out the training of the enumerators.  
• The mobile training was practical and participatory.  
• In total, 7 staff (5 staff from ADDRO and 2 from Episcopal Relief & Development) were trained to organize and facilitate the training for the enumerators. | ADDRO, DS Dayta Solutions and Episcopal Relief & Development |

21 enumerators were successfully trained for the mobile data collection.  
It was relatively easy for enumerators to use the mobile devices for the PDCU since all of them knew how to use Android/smartphone.  
Also, a few of the enumerators had been involved
| 12 | January 25th to February 10th 2017 | Shai Osuduku, Greater Accra Region | PDCU mobile data collection | • Going through the paper based PDCU data form  
• Introduction to the mobile pilot and uploading the mobile PDCU form on the mobile devices  
• How to use the mobile device to collect the data  
• Practice collecting data with the mobile device from given scenarios  
• Collecting data with the mobile devices in nearby households  
• Discussion and sharing of experiences in using the mobile devices from the practical sessions  
Details of this training is in the GAR PDCU report to be submitted on April 12th 2017. | in mobile data collection exercise with other organizations which was helpful during the training. |
| | | | | • Mobile PDCU Data was collected from 1,171 households by 21 enumerators  
• On the first day of data collection, the PDCU mobile device software could not display profiles of the households because the final version of the PDCU form (revised after pretest) was not linked to the mobile device. This was quickly sorted out by visiting all enumerators and helping them upload the latest version.  
• DS Dayta Solutions reviewed the data collected at the end of each day and provided feedback. This helped to identify errors and rectify them quickly. E.g. three enumerators entered incorrect households IDs and this was communicated to the team and quickly rectified  
• Some household heads were farmers and leave early to their farms, so the enumerators visited such households either very early in the morning or late evening when they were at home to be interviewed |
Originally, enumerators were to return the mobile devices to ADDRO staff after each day’s work. However, this was not feasible since enumerators had to revisit some households late evenings and early mornings.

Enumerators had to travel long distances to locate certain households.

### 2. Project Planning & Miscellaneous Activities

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<th>Location</th>
<th>Activity</th>
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<td>13</td>
<td>December, 2016 – January, 2017</td>
<td>Accra</td>
<td>Mobile Pilot Contract</td>
<td>The mobile pilot began with the development of the terms of reference (TOR) which was drafted by Episcopal Relief &amp; Development and shared with ADDRO on the 9th December, 2016. The ToR was widely advertised for Expression of Interest by consultants. By the deadline, over 12 applications were received for the mobile technology consultancy. The Episcopal Relief &amp; Development team reviewed all submissions and shortlisted the top 3 candidates which included 1) JMK Consulting, 2) DS Dayta Solutions and 3) Justice Ajaari. These three consultancy firms were invited to an online interview which was conducted via Skype call on 21st December, 2016. The interview panel was made up of Episcopal Relief &amp; Development and ADDRO staff. At the end of the interview, DS Dayta Solutions emerged as the successful consultant, and therefore signed a contract with Episcopal Relief &amp; Development before commencement of the task. The key deliverables included guidelines to mobile devices acquisition, the design of the software, the training of staff, supervisors and enumerators, technical support during data collection and submission of report after the PDCU exercise.</td>
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<td>Mobile Pilot</td>
<td>DS Dayta Solutions, ADDRO and Episcopal Relief &amp; Development</td>
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The consultant, DS Dayta Solutions, set up an electronic data capture (EDC) system using the Open Data Kit (ODK) software which allows the use of android smart phones to collect and transmit data electronically to a data server.

Thirty (30) mobile devices (Samsung mobile tablets) were procured from Cellfonic Enterprise on the 18th January, 2017, for the training and actual data collection.
| 14 | 16th January – 13th February, 2017 | ADDRO HQ, Bolgatanga | Annual Planning and Budgeting | The ADDRO Team engaged in annual planning and budgeting process. Melissa Crutchfield (Director, Community Impact) and Hilary Abii Asiah (Program Officer) from Episcopal Relief & Development visited ADDRO to offer technical support to the 2017 programme planning and budgeting process from 30th January to 2nd February, 2017. The process begun with reflections on 2016 programs and activities (touching on activities implemented, achievements, challenges and lessons learnt). Melissa shared some highlights of Episcopal Relief & Development’s new strategy document. The team worked on 2017 budgets for both the Health (including the AMF program) and Food Security and Livelihood Support programs. The ADDRO team continued to work on the Program Planning documents and budget for 2017 and submitted a first draft in February to Episcopal Relief & Development. ADDRO and Episcopal Relief & Development | The plans and budgets were put on the 2017 revised templates and shared with Episcopal Relief & Development. |
Conclusions

Episcopal Relief & Development/ADDRO with support from Against Malaria Foundation have focused attention on the Post-distribution Check-Ups (PDCUs) in the three regions after successfully working with the NMCP/GHS to complete the implementation of all activities in the pre-distribution and distribution phases.

Currently, the first PDCU for the Northern Region and Greater Accra Region has been completed. The approach to the PDCU training and data collection for the Greater Accra Region was refined due to some inconsistencies noted in the first PDCU in the Northern Region.

In the Greater Accra Region, a mobile phone technology was piloted in the Shai Osudoku District for the first time and field work was generally successful. The data is still being processed and the outcome will be shared in the Greater Accra PDCU report and subsequent activity reports.